User Guide

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The Company the Whole World Watches[®]





Version 5.0

User Guide

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Table of Contents

1.	What's New?	1-1
	· New Features - Lyric v5.0	1-1
	· Bug Fixes - Lyric v5.0	1-5
	· Known Issues - Lyric v5.0	1-8
2.	Getting Started.	2-1
	· Getting Started	2-1
	About Lyric and Duet	2-1
	Lyric Font Support and Font Creation	2-2
	About Optional Internal and External Hardware	2-2
	Lyric and External Systems	2-3
	Using Lyric	2-3
	Animation in Lyric	2-3
	Compatibility with iNFiNiT! Files and Fonts	2-3
	License Code	2-4
	The Lyric Interface	2-5
	Save/Load User Profile	2-32
	· Creating a Simple Lyric Composition	2-34
	Navigating and Entering Information in Lyric	2-42
	Accessing Lyric Functions	2-42
	About Mouse Selection	2-43
	Entering Information in Lyric	2-43
	Typing Text in Lyric - Standard and Translation Modes	2-46
	Selecting and Grouping Objects	2-47
	Object Name and Type	2-49
	Scroll Bars	2-49
	About Transparency Settings	2-49
	· Edit Menu	2-50
	Common Editing Functions	2-51
	Undo/Redo	2-51
	Cut, Copy, Paste	2-52
	Paste in Place	2-53
	Delete	2-53
	Select All	2-53

· View Menu and Toolbars	
The View Menu	2-54
Displaying Toolbars	2-54
Moving/Docking/Floating/Hiding a Toolbar	2-54
· Help Menu - Using Lyric's Online Help System	
Help Topics	2-56
Browse Sequences	2-57
Printing Help Topics	2-57
Context-Sensitive Help	2-58
More Info	2-58
About Lyric	2-59
· Window Menu	
· Tools and Canvas/Scene Graph Context Menu	2-61
· Chyron Tools	
Erase	2-66
Set Default Background Color	2-67
Turn On/Off Text Window Frames	2-67
· Properties	
· Recording/Reading Lyric Messages	
About the Address Keypad	2-71
Record and Read Operations	2-72
Selective Recording	2-74
About Other File Saving Methods	2-79
· Graphic Display and Animation Playout Overview	
Read	2-81
Read Next	2-81
Read Previous	2-81
Transport Controls	2-81
Playlists	2-82
Transfer Mode - Duet LE/LEX/PCI/PCI+ Only	2-82
Load-and-Play Mode - Duet LE/LEX/PCI/PCI+ Only	2-82
Streaming Animation Mode - Duet LEX/PCI+ Only	2-82
· Updating Messages in Lyric	
Templates	2-83
Pop-On Text	2-84

	Internal Properties	2-85
	Overview	2-85
	Internal Properties Applied to an Object	2-85
	Internal Properties Applied to a Message	2-92
	· Lyric Control of Internal and External Devices and Events	2-97
	· Lyric File Formats	2-98
	· Using Audio in Lyric	2-101
3.	Duet SD Hardware Configuration	3-1
	· Duet Hardware Configuration	3-1
	· Duet SD Video I/O Board	3-1
	Overview	3-1
	Setup	3-2
	Duet Hardware Configuration	3-5
	Video	3-7
	Configuration for Display of Video Source	3-9
	Device Control	3-10
	GPI	3-12
	Timecode	3-15
	MPx	3-17
4.	Duet HD Hardware Configuration	4-1
	· High Definition Video I/O Settings and Hardware Overview	4-1
	Overview	4-1
	Setup	4-4
	Duet Hardware Configuration	4-9
	HD Video	4-11
	Configuration for Display of Video Source	4-14
	Device Control	4-15
	GPI	4-17
	Timecode	4-20
	MPx	4-22
	· Duet HD Dual Board Operations	4-25

5.	Duet LE/LEX/PCI/PCI+ Hardware Configuration	5-1
	· Cabling Options - Duet LE/LEX/PCI/PCI+	5-1
	Introduction	5-1
	VPB and Internal Clip Player	5-2
	VPB, PCI-Squeezeback and Internal Clip Player - Clip as Background Video	5-4
	VPB, PCI-Squeezeback and Internal Clip Player - Clip in Squeezeback Window	5-6
	Duet LE/LEX/PCI/PCI+ Hardware Configuration	5-8
	Configure Board Use	5-9
	Setup Board Configuration	5-11
	Overview	5-11
	Setup Board Configuration Parameters	5-12
	Configuration for Display of Video Source	5-16
	Setup GPI	5-17
	Timecode	5-19
	Device Control	5-21
	· Common Board Configurations - Duet LE/LEX/PCI/PCI+	5-23
	Single Board Configuration	5-23
	Dual Board Air/Air Configuration	5-27
	Dual Board Air/Preview Configuration	5-28
	Dual Board Link Mode Configuration	5-29
6.	Optional Duet Hardware	6-1
	· Overview	6-1
	· Duet Keyboard	6-2
	Keyboard Layout	6-2
	The Numeric Keypad on the Duet Keyboard	6-4
	Reset Duet Keyboard	6-5
	Keyboard Map	6-5
7.	Triggering Events: GPIs, RS-422/232 Serial Protocols	7-1
	· GPI Overview	7-1
	· RS-422 Serial I/O & GPI/O Board	7-2
	Overview	7-2
	System Differences	7-2
	Installation Order	7-2
	Installing the RS-422 Serial I/O & GPI/O Board	7-3
	Dip Switch Settings for Multiple RS-422 Serial I/O & GPI/O Board Installation	7-5
	Installing the GPI/O Extension Bracket - Duet SD/HD Only	7-5
	RS-422 Serial I/O & GPI/O Board Driver Installation	7-6

	Establishing and Testing Connections	7-7
	Device Control	7-10
	Global GPIs	7-12
	· KwiKeys GPI/O Trigger Device	7-14
	· ReCall Keys	7-15
	Overview	7-15
	ReCall Keys Functions	7-16
	Installation	7-16
	Communications Setup - Windows 2000, XP	7-18
	Communications Setup - Windows NT	7-19
8.	Preferences	8-1
	· Preferences	8-1
	· CG Preferences	8-3
	Cursor Shape	8-3
	Show	8-4
	Initial Edit Mode	8-6
	Confirm	8-7
	Save/Recall Options	8-8
	Shift Page	8-9
	Xfer Mode	8-9
	Tab Width	8-9
	Unicode Only	8-9
	· Spelling Preferences	8-11
	· Default Paths Preferences	
	· Alignment Preferences	8-18
	· Windows Preferences	8-19
	Basic Windows	8-19
	Canvas	8-19
9.	File Menu	9-1
	· File Menu	9-1
	· New	9-2
	· Open	9-2
	· Close	9-3
	· Save	9-4
	Saving a Lyric Message	9-4
	Saving a Playlist	9-4

Saving a Macro	9-4
Additional Save Methods and File Types	9-4
· Save As	9-5
Print/Print Preview	
Printing a Lyric Composition	9-7
Printing Online Help	9-7
· Print Setup	
· Backup Utility	
· Restore Utility	
· Summary Info	
· Recently Used File List	
· Exit	
10. Browsers	10-1
· Overview	
Introduction	
The Browser Window and Browser Menu	
Troubleshooting Browser Database Display	
Navigating the Browser Window	
Browser Assets	
About Data Sources	
Browser Commands	
Deleting a Browser Asset	
Updating a Browser Asset	
Editing a Browser Asset	10-12
Searching Browser Assets	10-12
Aspect Ratio and Graphic Import	
· Browser Message Asset Operations	
Adding (Saving) a Lyric Message to the Browser Database	
Loading a Lyric Message from the Browser to the Canvas/Playlist	10-14
The Message Asset Context Menu	10-14
Searching Message Assets	10-18
· Browser Preferences	
Name, File Name	
Set Font Source	
Set Message Source	
Create New	
Import	

Delete	
Advanced	
File Save Adds to Browser	
Sync TrueType Fonts on Load	
· Creating/Selecting/Importing/Deleting/Repairing a Database	
About Data Sources	10-21
Creating a Data Source	
Selecting A Database	
Importing a Database	
Advanced	
Deleting a Database	
Repairing a Damaged Database	
· Searching the Browser	
Searching Font, Message Bitmap and Aprisa Assets	
Searching Quantel Assets	
11. Creating and Using Fonts in Lyric	11-1
· Creating and Using Fonts in Lyric	11-1
· Font Tools	
· Font Properties	11-4
Font Properties	11-4
TrueType Font Preview	11-8
· 2D Font FX Properties	11-10
· 3D Font FX Properties	11-13
Character Depth	11-15
Bevel Mode	11-15
Bevel Depth	11-16
Bevel Types	11-16
Smoothness	11-16
· Lyric Font Asset Overview	11-17
Indexed Fonts	11-17
The Font Asset Context Menus	11-17
Sync Fonts on Load	11-18
Creating a TrueType® Font and Adding It to the Database	11-18
Loading a TrueType or RGB Font	11-21
Searching Font Assets	11-21
TrueType® Font Context Menu	
Edit	11-23

Deleting a Font from the Browser	
Updating a Font	
Create RGB Font	11-26
Import RGB Font	
Style, Typeface, Comments and Keywords	11-26
 Sync TrueType® Fonts on Load 	
· RGB Font Asset Operations	
Create RGB Font	11-31
Font Browser	
Custom Font Editor	11-38
Delete	
Update	
Add/Modify Character	
Import RGB Font	11-40
· Custom Font Editor	
Launching the Custom Font Editor	11-41
File Menu	11-42
Selecting Characters	11-49
Logo Clipboard	11-50
Assigning an Image to a Key Combination	11-55
Character Attributes	11-56
Character Context Menu	
Edit Menu	11-61
Tools Menu	
Window Menu	11-65
Other Buttons On The Toolbar	11-65
Creating an iNFiNiT! Machine Font from a Lyric RGB Font	11-70
Using an iNFiNiT! RGB Font in Lyric	11-71
Palette Designer	11-71
Printing Font Sets	11-77
12.2D Text	12-1
· Overview	
About 2D Text	
Initial Edit Mode, Placing a 2D Text Window on the Canvas	
Setting 2D Font Attributes	
Enable Word Wrap	
Insert/Overwrite Mode for 2D Text	12-4
Row Shift Locked/Unlocked	

Normal/Modified Space	
Use Scene Camera	
Updating 2D Text - 2D Text Templates and Pop-On Messages	
 Selecting and Editing 2D Text 	
Selecting Text	
Resizing Selected Text	
Resizing Text via Keyboard Shortcuts	
Using Tab Spaces within 2D Text	
Repositioning Selected Text	
Shift Character	
Shift Row	
Super Shift	
2D Text Editing Tips	
Additional Editing Functions	
Squeeze/Expand	
Paste Unicode Text	
Find/Replace	
Insert Row/Delete Row	
Swap Row Up/Down	
Swap Row Priorities Up/Down	
Color/Font Functions	
Spell Check	
· 2D Text/Template Context Menu	12-22
· Row Tab Functions	12-25
· Row Tab Functions	
Setting up a Row Tab	
Tab Columns	
Row Tab Navigation, Selection and Deletion	
· Row/Tab Properties	
Setting Row Properties	
Setting Tab Properties	
· Pop-On Messages - Recording 2D Text-Only Messages	12-30
13.2D Text Templates	13-1
· 2D Text Templates	
Overview	
Creating a Template	
Editing Templates	
Setting Template Properties	
	TOC-9

· Alignment Toolbar	
· Template Update	
· Database Link (DB Link)	
Using DB Link to Replace Text	
Using DB Link to Replace Graphics	13-24
Registering an ODBC Data Source	
Lyric Browser Databases and ODBC Registration	13-26
Registering a Database	13-26
· Creating Templates from Existing 2D Text	13-31
14.2D Text Animation	14-1
· Roll	
· Crawl	
· Type On/Slow Reveal	
· Spline Window	
Setting Up a Spline Animation	14-12
Modifying a Spline Animation	14-24
· 2D Character Animation	
· Advanced Text Effects	
Introduction	14-26
Basic Advanced Text Effects Setup	14-28
Previewing/Executing/Stopping an Advanced Text Effect	14-29
What Happens When an Advanced Text Effect is Applied?	14-30
Removing/Clearing an Advanced Text Effect	14-31
Preserving/Not Preserving Advanced Text Effect Settings	14-31
Saving/Recalling an Advanced Text Effects Message	14-32
Creating a Custom Advanced Text Effect	14-32
Kern Rate Example	14-36
15. Clocks and Timers	15-1
· Clocks, Timers and Clock/Timer Properties	
Clock/Timer Setup	15-1
Clock and Timer Functions	15-8
Unsupported Clock/Timer Functions - Duet LE/LEX/PCI/PCI+	15-9
· Clock/Timer Formats	
Clock Formats	15-10
Timer Formats	15-11
Flexible Display Formatting for Clocks and Timers	15-12

16.2D Objects	16-1
· 2D Objects	16-1
Supported Graphic Formats	
Importing a 2D Bitmap Graphic	
About Imported Graphics	
Enable Bounding Box - Selecting 2D Graphics	
Saving a 2D Bitmap Graphics File	
· Bitmap Asset Operations	16-7
Adding a Lyric Bitmap to the Browser Database	
Loading a Bitmap Graphic from the Browser	
The Bitmap Asset Context Menu	
Searching Bitmap Assets	
· 2D Object Templates	16-12
Overview	
Setting 2D Object Properties	
· 2D Object Context Menu	16-16
Movie Objects - Duet LE/LEX/PCI/PCI+	16-18
Flipbook Animation	16-22
17.3D Characters and Objects	17-1
· 3D Characters and Objects	17-1
About 3D Characters	
2D Text vs. 3D Characters	
Adding 3D Characters to the Canvas	
Repositioning 3D Characters	
Setting 3D Font Characteristics	
About 3D Objects	
Importing a 3D Object	17-3
3D Character/Object Antialiasing	17-3
· 3D Text Templates	17-4
· Template Update	17-5
· 3D Character/Object/Template Context Menu	17-7
18. Color/Transparency/Background/Lighting/Texture	18-1
· Color, Transparency, Background, Lighting and Texture	
Color Selection for 2D/3D Text and Backgrounds	
Quickly Setting Text Color	
Accessing the Color Select Dialog Box and the Palette	

Applying Color to Background and Text	18-5
Color Anchors - Buddies, Copy, Paste, Add/Remove	18-11
Picking Up a Color	18-14
Performing a Hot Color Test	18-15
Saving/Recalling a Palette	18-16
Resetting a Palette	18-17
· Color Selection for Light Sources and 3D Characters/Objects	
Setting HSL and RGB Color Values	
HSL Settings	
RGB Settings	
Sample Color Settings	
· Background	
Selecting the Element to Which to Apply the Background	
Selecting Background Type	
Applying a Solid/Gradient Background	
Applying a Graphic File Background	
Background Examples	
Deleting a Background	
· Lighting Properties	
· Surface Properties - Applying Color, Transparency and Texture	
About Objects and Surfaces	
Setting Surface Properties	
Selecting a Surface to Which to Apply Settings	
Color	
Transparency and Shininess	
Texture	
Antialiased – Duet SD Only	18-46
Tri (Triangles)	
19. Position, Rotation, Scale and Orientation	
· Object Orientation and Point of View	
Overview	19-1
Position Lock On	19-1
· Transform Tools	
Edit Position	19-2
Edit Rotation	19-2
Edit Scale	19-3
Edit Center of Rotation	

· XYZ Properties	19-5
· Camera Properties	19-9
20. Animation	20-1
· Overview	20-1
Setting Up a Simple Animation	
Saving an Animation	20-8
· Animation Settings Preferences	
Animation Length, Stream Size and Streaming	
Default Interpolation	20-11
Options	20-11
Rendering Mode	20-14
Duet LE(X)/PCI(+) Settings	20-14
Animation Playback - Transport Controls, Reverse Animation	
Transport Controls	20-15
Reverse Animation	20-15
· Copy/Paste Animation State	
· Scene Graph	
Color-Coding an Object Listing	
Selecting Canvas Objects via the Scene Graph	20-19
Selecting Overlapping Objects on the Canvas (ALT + Click)	20-19
Display Priority	20-19
Grouping and Ungrouping Objects	20-21
Renaming/Deleting Objects On the Scene Graph	20-21
Shortcuts for Navigating the Scene Graph and the Timeline	
· Timelines	
Introduction	20-23
Viewing a Timeline	20-23
Adding an Object	
Deleting an Object	
Expanding/Contracting an Object Timeline to View/Hide Its Attributes Timelines	20-24
Selecting an Object or Attribute Timeline	20-24
The Time Indicator	20-24
Zooming In and Out of the Timeline	20-25
Modifying the Duration of an Animation	20-25
Adding a Keyframe	20-25
Keyframe Selected Objects	
Keyframe All Objects	20-28

Timeline Entries	20-29
Adjusting and Aligning Timelines	20-29
Saving the Timeline - Scene, Object	20-34
Additional Notes Regarding Specific Objects and Timelines	20-35
\cdot Modifying the Duration of an Animation from the Timeline or Keyframe Graph	
· Keyframe Graphs	
Basic Operation	20-38
Navigating the Keyframe Graph	20-41
Modify Animation Length	20-42
Simultaneously Viewing More Than One Attribute	20-42
Using the Keyframe Graph to Edit Animations	20-45
· Motion Paths	
Overview	20-49
Turning On/Off Motion Paths	20-53
Displaying Multiple and Grouped Object Motion Paths	20-53
Adding a Keyframe to a Motion Path	20-55
Selecting a Frame or Keyframe in a Motion Path	20-55
Interpolation	20-56
Applying an Interpolation to an Individual Keyframe	20-62
Modifying/Deleting/Copying/Pasting a Keyframe	20-63
Copying and Pasting a Motion Path	20-64
Breaking/Unbreaking the Tangent - Spline Interpolation Only	20-66
Clearing a Motion Path	20-67
· Ease	
Interpolation Modes	
Setting Interpolation Mode	20-69
Interpolation Modes	20-71
· Loops/Pauses Properties	
Overview	20-75
Loops Properties	20-76
Pauses Properties	20-77
Pause Options	20-78
· Animation Properties	20-80
Options	20-83
Pause Options	20-83

· Read Effects	20-88
· Read Effects - Duet SD/HD	
· Read Effects - Duet LE/LEX/PCI/PCI+	
21. Advanced Image Effects	21-1
· Advanced Image Effects	
Accessing and Applying Advanced Image Effects	21-1
Effect Parameters Common to All Effect Types	21-3
Effect Types	21-4
22. Transition Effects	
· Default Effect Configuration	22-1
Default Effect Configuration - Duet SD	22-1
Default Effect Setup	22-1
Using Default Effects in a Playlist	
· Default Effect Configuration - Duet HD	
 Message Effects Configuration - Duet LE/LEX/PCI/PCI+ 	
Comparing Default Effects on Various Duet Systems	22-5
Message Effect Setup and Execution	22-5
Executing a Message Effect	22-8
Functions Specific to Duet LEX/PCI+	
· Multi FX - Duet SD	22-10
Multi FX Setup	
Multi FX Types	22-15
Message Sequences	22-18
Test and Scrub	22-19
Editing In Multi FX	
Saving a Multi FX Message	
23. Masks	
· Overview	23-1
Mask Objects	23-1
Mask Characters	23-1
Mask Scene	23-1
Masked	23-1
· Mask Scene - Duet SD	23-2
Mask Character (Duet SD/HD/Offline)	23-4
Mask Objects - Duet SD/HD/Offline	23-5

 Mask Objects - Duet LE/LEX/PCI/PCI+ 	
Introduction	23-6
Mask Object Setup	23-7
Assigning a Mask Object or Element to a Layer	23-7
Mask Inside	23-9
Alpha Trim Mask	23-10
Mask Object Tutorial	23-10
Soft Mask	23-13
Removing Mask or Layer Functionality	23-13
Soft Masks - Duet LE/LEX/PCI/PCI+ Only	
Creating a Graphic to Use as a Soft Mask	23-14
Using a Soft Mask Object in Lyric	23-17
Hints on Creating Soft Masks	23-20
24. Duet Tools - Playout to Output	
· Duet Tools	
· Duet SD/HD Tools	24-1
Outputs	24-1
Live	24-2
Xfer to Frame Buffer	24-2
Swap	24-3
Change	24-3
Xfer	24-3
Changing the Speed of an Animation During Execution	24-3
· Duet LE/LEX/PCI/PCI+ Tools	
Outputs	
Live	24-5
Xfer to Frame Buffer	24-5
Swap	
Change (Change)	24-6
Xfer to Output	24-7
Load, Quick Load	24-8
Free	24-8
Play - Animation Playback	24-8
Stop	24-9
Changing the Speed of an Animation During Execution	
Streaming Animation - Duet LEX/PCI+	
Setup and Playout	24-10
Message-Specific Preload Setting	24-10
Streaming Animation Execution	24-11

25. Playlists	25-1
· Playlists	25-1
Creating and Opening a Playlist	25-1
Playlist Layout	25-3
Playlist Configuration	25-12
Setting Up a Squeezeback Effect in a Playlist - Duet LE/LEX/PCI/PCI+	25-16
Using Timecode in a Playlist	25-16
Saving and Recalling Playlists	25-18
26. Internal Clip Player and Clip Control Panel	26-1
· Internal Clip Player - Hardware and Connections	26-1
Overview	26-1
Internal Clip Player Connections	26-2
Connecting the ICP to the Duet Video I/O Board	26-11
Audio Configuration	26-11
Audio and the Internal Clip Player	26-12
· Clip Control Panel	26-13
Overview	
Accessing the Clip Control Panel	26-14
Clip Control Panel and Clip Menu Controls and Parameters	
· Previewing, Creating and Playing a Clip	26-26
Overview	
Internal Clip Player - AVI File	
Audio Hardware - WAV File	
Aprisa DDR - Aprisa Clip	
External Playback System	
· Saving/Recalling a Clip File, Clip Behavior in Lyric	26-29
Saving a Clip File	
Recalling a Clip	
Clip Behavior in Lyric	26-31
· Clip Timeline Operations	26-32
Adding a Clip to the Timeline	
Editing and Updating the Clip on the Timeline	
· Recording Video/Audio to Video/Audio Files	26-34
Overview	
About Video, Key and Audio Sources	
Internal Clip Recorder Parameters and Controls	
Recording	

Playback	
Creating a Matte File	
27. Video Mixing	27-1
· Video Mixing	
· Video Mixer - Duet SD/HD	
· Video Mixer - Duet SD	
Overview	27-1
Video Source	
Layer 1/Layer 2/Layer 3 Sliders	27-3
Output Router	
Effects	
Other Controls	
Selecting Frame Buffers	
· Video Mixer - Duet HD	
· CMix - Duet SD/LE/LEX/PCI/PCI+, Offline	
Overview	
Setup	27-12
CMix Control	27-14
· CMix Installation and Connections	
Introduction	
Software Installation	
CMix Connections	
Hardware Topology	
28. Video Capture	
· Video Capture	
· Video Capture - Duet SD	
View/Hide Live Video	
· Video Capture - Duet HD	
Executing and Saving a Video Capture	
View/Hide Live Video	
Load/Clear/Show Buffer	
Video Capture - Duet LE/LEX/PCI/PCI+	
Frame Delay	
Capture Channel	
Capture Sample	
Display Sample	
Save Display	

Transfer to Air	
Page Blank	
Video Display Preview	
Transfer to Canvas	
29. Video Regions and Squeezeback Objects - Duet SD	
· Video Region - Duet SD	29-1
· Squeezeback Object - Duet SD	
Overview and Setup	
Interpolation Mode	
Squeezeback Effects	
30. Video Squeezeback - Duet LE/LEX/PCI/PCI+	
· Overview	30-1
Introduction	
About the PCI-Squeezeback Board	
Unsupported Functions	
· PCI-Squeezeback Board Hardware Topology	
Duet LE/LEX/PCI/PCI+ Hardware Configuration	
· Genlocking PCI-Squeezeback Boards	
Analog Genlock	
Digital Genlock	
· Squeezeback Panel - Getting Started	
Effect Active Board Settings	
Slot	
Active Board	
· SQZ Board Tabs	
Position: Starting/Ending X, Y	
Dimensions: Starting/Ending Width, Height	
Clipping: Left, Top, Bottom Right	
Hold Control for Both Video A and B	
OUT/IN and Frame Display Field	
Ease	
Fade	
Frames	
ON	
Interpolate	

· Mixer Controls	30-13
A Over B, B Over A	
Background On	
Dissolve Effect	
Graphic On Top	
Graphic Plane On	
· STARTING/ENDING SQUEEZE VALUES - Squeezeback Designer	30-14
Position: X, Y	
Dimensions: Starting/Ending Width, Height	
Clipping: Left, Top, Bottom Right	
Lock Aspect	
Anchor	
Copy/Paste	
Video A/B Mixer Controls	
Justify	
Graphic Plane/Background Video Mixer Controls	
Start/End	
OK/Cancel	
· Additional Settings	30-21
Set Primary Video	
Frame Delay and Ancillary Data	
Sqz Version SDRAM-MIXER	
· Executing a Squeezeback Effect	30-23
Triggering a Squeezeback Effect from the Squeezeback Panel or Squeezeback Kwik Tool	
Triggering a Squeezeback Effect from the Playlist	
Triggering a Squeezeback Effect from Intelligent Interface	
· Squeezeback Effect Message Operations	30-25
Effect Name	
SAVE SQZ MSG - Save Lyric Squeezeback Effect Message	
READ Lyric Squeezeback Effect Message	
Clear Effect	
OK/Cancel	
· Copy/Paste Operations	30-27
COPY A/B	
COPY START	
COPY END	
PASTE A/B	
PASTE START	
PASTE END	

· Lyric Graphic Message Import	
READ Lyric Graphic for Effect	
Store MSG - Lyric Graphic	
Clear MSG - Lyric Graphic	
Erase/Replace a Squeezeback Graphic	
31. Intelligent Interface	31-1
· Intelligent Interface®	31-1
Overview	31-1
Serial Port Connection	31-1
Opening a Telnet Session	
· Intelligent Interface® Configuration	31-5
· About Template Description and Template Data Messages	31-8
Template Description and Template Data Messages	
Template Description Message Setup	
Template Data Message Setup	
Recalling a Combined Message	31-10
· Command Set and Syntax	31-11
Command Set	31-11
Command Syntax	31-11
Command Examples	31-12
Checksum Calculation (Optional)	31-12
Error Handling	31-12
Host Acknowledgment	
Double-Byte Character Support	31-12
· Embedded Commands	31-13
Changing Font, Color or Background of a Template	31-13
Alternative Method for Changing Font and Color in Embedded Commands	31-13
· Graphic Update	31-14
Enabling II Update and Ext. Update	31-14
2D Text Template and 2D Object Update Order	31-15
Example	31-15
· C Command - Set Font Color for Template	31-18
· E Command - Send and Execute Macros	31-19
· F Command - Specify Font Index	31-20
· M Command - Select Message Directory	31-21
· Q Command - Resend Last Transmission	31-22

Lyric User Guide

· U Commands - Update Template Data	
U Command - Update Template in Specified Message	31-23
U* Command - Update Template in Current Message	31-24
· V Commands - Special Effects and Control	
V\5\3\ Command - Read	31-26
V\5\13 Command - Read Message, Update All Intelligent Interface Fields	31-27
V\5\14 Command - Read Message, Update External Update Fields	31-27
V\6 Command - Trigger Animation	31-28
V\ <buffer>\U Command - Use Message</buffer>	31-28
V Commands - Completion Status	31-29
· V Commands - Multi FX Setup Commands (Duet SD)	
Multi FX Setup Commands	31-30
Method of Operation	31-32
About Effect Direction	31-33
Focus	31-34
Slide	31-35
PageTurn	31-36
Static (Fade)	31-37
Use Message	31-38
Zoom	31-39
· V Command - Trigger Squeezeback Effect	
· W Command - Create Template Data Message	
· X and R Commands - Request for External Update, Reply	
Examples	31-43
Disabling External Update	31-44
· Y Commands - Assorted	
About Y Commands	31-45
iNFiNiT!® Family Compatibility	31-47
· iNFiNiT!® Family Keyboard Codes	
· Error Codes	
32. Macros	32-1
· Overview	
About VB (Visual Basic) Script	32-1
The Macros Dialog Box	32-1
Creating and Playing Back a Macro	
Right-Pane Context Menu	
Left-Pane Context Menu	

Saving Macros	
Opening/Reading a Macro	32-7
Script Code Window and Editing Script	
Deleting a Macro/All Macros	
Setting Hot Keys and Macro Symbol Colors	
Renaming a Macro	
Global Variables	32-11
Resetting the Macro Engine and Global Variables	
Supported Functions For Macros	32-13
Advanced Macro Scripting	32-14
VBScript Built-Ins	
Examples of Macros	
Using ActiveX Objects In Macros	
· Using SendKeys to Specify Keystrokes in a Macro Script	
· Macro Declarations	32-22
· LEIF Help	
33. Plugins	33-1
· Overview	33-1
· Harvester Lite	33-3
· Commonly-Used Plugins	
Harvester Pro	
BizGraph	
Quarterback	
Liberty Twister Paint	
34. Aprisa Systems and Lyric	34-1
· Aprisa Systems	34-1
Overview	34-1
Aprisa 100/250 Still Store	34-1
Aprisa 200/250 DDR	
· Aprisa Interface Configuration	34-3
Configuring the Aprisa Interface	
· Aprisa Still Asset Operations	
Loading an Aprisa Still from the Browser	
The Aprisa Still Asset Context Menu	34-11
The Aprisa Export Dialog Box	34-12
Updating a Still	
Adding a Still	
Searching Aprisa Still Assets	34-14 TOC-23

· Import from Aprisa	
· Export to Aprisa	
Aprisa Clip Asset Operations	
Searching Aprisa Clip Assets	
35. External VTR/DDR Systems and Lyric	35-1
· External VTR and DDR Systems	
Setup, Digital vs. Analog Video	35-1
Displaying VTR Video with Duet Output	35-1
36. iNFiNiT! Family Systems and Lyric	36-1
· iNFiNiT!® Font Asset Operations	
About iNFiNiT! Font Hotkeys and Font Keys	
The iNFiNiT! Fonts Context Menu	
Browse for Fonts - Loading iNFiNiT! Fonts	
Delete iNFiNiT! Font	
Custom Font Editor	
About iNFiNiT! Font Names	
Transferring Fonts to the iNFiNiT!	
Import from iNFiNiT!	
Copying iNFiNiT!® Files to Windows-Formatted Directories	
Reading iNFiNiT! Messages without Conversion to Lyric Format	
Converting iNFiNiT! Messages to the Lyric Format	
iNFiNiT! Message Import Read, Save and Batch Convert Errors	
Using Tab/Template Description and Data Messages in Lyric	
· Export To iNFiNiT!	
About Fonts and 2D Text Windows/Templates	
Exporting a Single File	
Batch Export	
Export Errors	
· iNFiNiT! Import/Export Example	
Importing and Modifying an iNFiNiT! Message	
Saving the iNFiNiT! Message as a Lyric Message	
Exporting the Modified iNFiNiT! Message	
· FTP - Transferring Files to/from an iNFiNiT!® System	
About FTP File Transfer	
Duet/Aprisa/PC-to-iNFiNiT! Family System File Transfer	
Using iNFiNiT! Machine Fonts in Lyric	
Using DOS to Execute FTP Operations	

37. Quantel Systems and Lyric	37-1
· Quantel® Interface Configuration	
Adding/Deleting a Quantel System	
Enabling/Disabling the Browser	
Selecting a Quantel System for Lyric Operations	
Applying/Canceling Configuration Settings	
· Quantel® Asset Operations	
About Viewing and Updating Quantel Assets	
The Quantel Assets Context Menu	
Importing a Quantel Graphic	
Exporting a Lyric Message to Quantel	
Searching Quantel Assets in the Browser	
· Import from Quantel®	
Connecting to a Quantel System	
Displaying Quantel Files and Viewing Thumbnails	
Importing a Quantel Graphic to the Lyric Canvas	
The FID Context Menu	
Searching Quantel Assets	
· Export to Quantel®	
38.iTV	
· iTV	
· iTV Composition	
Insert TV Object - iTV Composition	
Insert iTV Hotspot	
· Export to iTV	
39. Networking and File Transfer	39-1
· Finding the IP Address or Computer Name of a System	
· FTP	
40. Keyboard/Mouse Shortcuts	40-1
· Keyboard/Mouse Shortcuts Overview	40-1
 Keyboard/Mouse Shortcuts - 2D/3D Text, Text Templates and Row Tabs 	40-1
Typing 2D/3D Text and RGB Fonts	
2D Text/Template Selection and Navigation	
2D/3D Color/Font Selection	
Cursor Positioning, Text Editing Functions	40-5

Row Tab Functions	40-7
2D Text Template Update Functions	40-7
2D Text Shift/Squeeze/Expand Functions	40-8
2D Text Record Options	40-11
· Keyboard/Mouse Shortcuts - Except 2D Text/Templates	40-12
General	40-12
Manipulating and Editing Objects on the Canvas	40-14
Browser	40-15
File Operations	40-16
Buffer and Output Operations	40-18
Animation Playback (for Testing)	40-19
Playlists	
Internal Clip Player	40-22
41. Support	41-1
· Support and License Agreement	
Internet Support	41-1
Email Support	41-1
Telephone Support	41-1
Microsoft Data Access Components 2.0	41-1
Index	Index-1

New Features - Lyric v5.0

- Backup & Restore: Provides a convenient way to backup assets associated with a Browser or Directory and move these to another system. Backup collects assets (bitmaps, messages, TrueType® Fonts, etc.) into user-specified folders. Restore allows specification of folder locations for each asset type. Accessed from the Lyric File menu.
- Soft Masks (Duet LE/LEX/PCI/PCI+ Only): Accessed from the context (right-click) menu for the object in the Scene Graph or Canvas.
- Center of Rotation can now be displayed on an object. Accessed from the context (right-click) menu for the object in the Scene Graph or Canvas.
- 3D Canvas Scene Views (XY, YZ, XZ, Perspective): In addition to the normal Lyric Front view, the Canvas now has Top, Perspective, Left and Multi views available. Two related preferences: Show Viewport Labels in CG Preferences, and Lock Viewport Sizes in Windows Preferences. Preferences are accessed from the Lyric Config menu. A Multi View on/off toggle is also available from the View menu.
- New internal clip player hardware supports multi-channel clip playout. Clear Output button has been added to the Clip Control Panel. Also, pressing Ctrl + Alt + Q (PC keyboard) or Alt + Erase (Duet keyboard) can clear the current clip player channel and frame buffer output. The following should be noted:
 - The minimum offset of a clip on the **Timeline** is **3** frames. Anything less than **3** frames is ignored, and treated as if set to **0** frames.
 - The minimum number of frames that can be looped to from the end of a clip is **15**. Output is unpredictable if the loop frame is set to less than 15 frames from the end of the clip.
 - Default Operation Selection: The first frame of a clip is not displayed in output when a message containing a clip is loaded. When the message is played, the clip starts playing and is then visible on output.
 - To change default behavior so that the first frame of the clip is displayed on output when the message is read, navigate to folder in which Lyric is installed. Doubleclick on the file *DisableMatroxSourceSwitcher.reg*. Displaying the first frame of the clip was the default behavior of messages read in versions of Lyric predating Lyric v5.0. Note that clips contained in messages created in these earlier versions behave according to the *current* default setting in Lyric v5.0 when read. Note that if Lyric is running at the time that *DisableMatroxSourceSwitcher.reg* is run, the Lyric **Canvas** must then be cleared (erased) in order for the new behavior to take effect.
 - To revert back to the default behavior for Lyric v5.0, navigate to folder in which Lyric is installed, and then double-click on the file *EnableMatroxSourceSwitcher.reg*. Note that if Lyric is running at the time that *EnableMatroxSourceSwitcher.reg* is run, the Lyric **Canvas** must then be cleared (erased) in order for the new behavior to take effect.

Refer to **What's New in Lyric v4.14**? and **What's New in Lyric v4.15**? for additional information on clip player enhancements. Refer also to **Internal Clip Control Player** and **Clip Control Panel** for detailed information on clip operation. Note that the content in these two sections is superceded by the enhancements in the release notes.

 New Advanced Image Effects have been added: Assemble/Disassemble; Flipboard; Crumble; Detonate; Flag; Bulge (Duet LEX/PCI+ only); and Globe (Duet LEX/PCI+ only).

- Motion Path: A Motion Path can be displayed for any 2D bitmap, 3D character or 3D object that contains more than one keyframe. The Motion Path is accessed from the context (right-click) menu for the object in the Scene Graph or Canvas.
- Rendering performance has been improved on Duet LEX/PCI+ systems.
- Movie Objects (Duet LE/LEX/PCI/PCI+ Only): Adds the ability to import AVI or Quicktime movie files (RGB only) into the scene as animatable objects. Image Effects can be applied to Movie object.
- Scene Graph: Objects in the Scene Graph can now be color-coded. The text/highlight color in the Scene Graph for an object can be changed from the context (right-click) menu for the object in the Scene Graph or Canvas.
- Animation Rate: Can now maintain the animation rate (i.e., the number of characters displayed per second) by automatically modifying the animation in a **Type On**, **Roll**, or **Crawl** window. This feature is accessed from the **Animation** tab of the **Properties** window, and is made active by enabling the **Speed** or **Rate** buttons.
- Keyframe All Objects and Keyframe Selected Objects on the Edit menu now include all applicable attributes for each object.
- The Font Sample chip in the Font Properties and 2D Font FX Properties tabs and on the 2D Text Template dialog box is now red-slashed if the TrueType Font is not available.
- Playlist: New features have been added to the Playlist:
 - The **Playlist Configuration** dialog has been expanded to include **GPI** triggers for **Line Up** and **Line Down**.
 - Default **Playlist** Attributes.
 - Scroll Offset.
 - Preview Options.
 - Cue Clip. Cue Clip was moved from the Control column of the Playlist.
- Read Next mode is now maintained per frame buffer. That is, changing to a different frame buffer no longer clears the Read Next status of the inactive frame buffer. Read Next is still in force when the original frame buffer is reactivated.
- Advanced Image Effects now keeps the object on screen based on the duration of the object on the Timeline, not the duration of the effect.
- GPI Pauses are now supported for nonstop Flipbook animations on Duet LE/LEX/PCI/PCI+ systems.
- Enhancements to Selective Recording (Ctrl + Record):
 - Record a Template Data Message from within Lyric: Multiple Template Data Messages can reference the same Template Description Message and therefore the format of all Template Data Messages can be changed by simply modifying the underlying Template Description Message.
 - **Preview Frame:** Specify which frame should be shown in VGA (Canvas) preview if this preference is enabled.
 - Embedded Macro: Embed a macro in a message. The macro auto-executes when the message is read.
 - **Ctrl + Alt + Record:** New accelerator key combination added to selectively record (**Ctrl + Record**) to the same message number as that loaded in **Canvas**.

- The Load, Quick Load, Load Saved, Save, Stop and Play icons have been removed from the Duet LE/LEX/PCI/PCI+ Tools toolbar. Load (Alt + L), Quick Load (Alt + Q), Stop (Esc) and Play (Alt + Y) functionality are still available from the accelerator keys as noted above. The Save and Load Saved functions have been removed.
- Changes to display priority via drag-and-drop in the Scene Graph view are now possible even if a group is present. Drag-and-drop within a group is also now supported. To facilitate these changes, a group added to a new message will now dictate display priority of all its members of equal Z value. This is enabled/disabled via Use Group Priority, accessed from the context (right-click) menu for the object in the Scene Graph or Canvas, and then selecting Internal Properties.
- Texture compression is now supported for Flipbooks and 2D Bitmaps. An nVIDIA[®] GeForce FX or better board is required. Duet LE/LEX/PCI/PCI+ systems will be able to create and record messages which have compressed Flipbooks/2D bitmaps. Duet SD systems will be able to read messages with compressed Flipbooks but will uncompress them before playback. Using compressed textures will speed up message Read and Record.
- Advanced Text Effects: Duration of an Advanced Text Effect will now automatically increase when necessary so that effect can be completed on all applicable elements of the 2D Text Window. This adjustment is applied *only when configuring* the effect.
- Clocks/Timers:
 - Support new clock/timer format specifier **-0** which will strip the leading zero off of such formats as **h:mm**, causing timer to display **:59** instead of **0:59**.
 - Allow clocks/timers to support justification to prevent digits from moving to the left when the new format above is used.
- **Message Record** and **Delete** information on the **Status Bar** is now more prominently displayed with a green background.
- A particular surface on a 3D object can now be selected with the mouse. **Reflective**, **Masked** or neither can now be set in **Properties > Surface** for each individual surface.
- Graphic Import:
 - Import Graphic now supports the import of 32-bit Photoshop, PNG and LZW files.
 - The **Import Graphic** dialog now has a **Merge Layers** checkbox for Photoshop files. If not selected (checked), each layer in the Photoshop file is imported as a separate image, and is displayed as such in the **Scene Graph**.
- An animation on a Duet LE/PCI system now plays out to scene **Duration** instead of the length of the **Camera Timeline**.
- Paste Unicode Text now immediately adjusts to existing Row Tabs.
- A variety of Internal Properties can now be set per object or per message. Internal Object
 Properties can be accessed from the 2D Text Window, 2D object, 3D character and 3D object
 context (right-click) menus. Internal Message Properties can be accessed from the Light, Global
 Light and Camera context (right-click) menus. Internal Message Properties can also be accessed
 from Tools Menu > Set Message Properties.
- The Config Menu > Duet Hardware > Setup Board Configuration tab has been reformatted. The Video Insert/Video Only controls are no longer present; Video Insert is always set. If you wish to disable the graphics layer, you should instead erase the frame buffer. NOTE: Certain configuration settings have been deprecated in the registry. Therefore, if you attempt to go back to a previous version of Lyric after using this version, you may need to reset the Video Standard, Genlock, and Video Insert settings for each board in the system.

- Chinese, Japanese, and Korean 2D and 3D text input to the Canvas is now supported. Also support Template Update and Spline Edit Window for these languages. Note that Unicode Only must be selected (checked) in the CG Preferences to enable Asian language support. CG Preferences is accessed from Config Menu > Preferences.
- Analog Lantern 64 PCI cards are now supported. Configuration of Analog cards is subject to certain limitations: Video In layer cannot be turned off; Video Out cannot be delayed horizontally or vertically; and Ancillary Data settings cannot be modified.
- When reading a Template Data Message (Intelligent Interface W file), the Template Description Message will now be read from the same directory (i.e., the Intelligent Interface directory, if read by Intelligent Interface). This directory is also the Default Message Directory, which is set from Config Menu > Preferences > Default Paths. The Intelligent Interface Message Directory path can also be viewed from Config Menu > Intelligent Interface.
- Ctrl + Tab in 2D Text Windows is now supported in pasting and DBLink.
- New compositing (i.e., blend) modes are now supported in the Animation Settings Preferences:
 - **Fast:** Produces fastest rendering times, but sacrifices quality on overlapping transparent pixels.
 - **Normal:** Accurate compositing of transparent overlapping pixels, but slower render times than **Fast**. Also requires GeForce FX or better VGA card.
 - **Depth (2 Pass):** Accurate compositing of intersecting transparent objects, but yields slowest rendering times.
 - **Fast/Fix Key:** Fast rendering plus improved alpha blending for overlapping transparent pixels and **Key** signal.
- Macros/LEIF Additions and Modifications:
 - Font on Text object is now settable, i.e., the default font for a 2D Text Template can be changed from a macro/plugin.
 - Calling the **Update** method on a **Font** object will now apply changes to selected characters as well as update active font.
 - Calling the **Load** method on an **Image** object with an empty string for the filename will cause the **Graphic Import** dialog to pop up.
 - A new method **IICommand** on Lyric object will accept and process an **Intelligent Interface** command.
 - New **Surface** object for 3D characters/objects allows get/set color and texture filename.
 - Enhanced Row object to support retrieval of text, font, character position, etc.
 - Added method **NextTemplate** on **Template** object to return the next template in numerical sequence.
 - Added **Move** method to Image and **Template** objects.
 - Added method **Message to Scene** object to return the message number of the current scene. This will be accurate on read and record, while Lyric.Message is not.
 - Added MessagePath property to Lyric object to get/set the preferred message path.

Bug Fixes - Lyric v5.0

- Resolved problem where a **Template** field was auto-erased erroneously when reading a **Template Data Message (W** file) which contained fewer updates than were **Templates** available.
- Resolved issue when the font edge was changed from a file-based texture to a gradated texture.
- Clocks/Timers:
 - Synchronized **Clock/Timer** display with Lyric objects on transfer to Duet LEX/PCI+ output.
 - All Clocks/Timers on Duet SD output are now stopped if an animation error occurs with any one of them.
- The Duet LEX/PCI+ Video setting is now maintained upon exit from Lyric. Corrected Duet LEX/PCI+ video settings for Video Key enable not being stored/restored from registry correctly.
- Resolved problem where an **Advanced Image Effect** would not execute once the image was updated through **DBLink**.
- Resolved issues related to soft Type On for Duet SD and Duet LE/LEX/PCI/PCI+.
- If 2D Frames On is selected from the selected 2D Text Window context (right-click) menu, all frames
 of selected text windows are toggled on/off. Previously, only the last-selected 2D Text Window was
 toggled.
- Resolved incorrect sort order in message entries generated by a Browser Search.
- Intelligent Interface:
 - An animation read up via a Y command on a Duet LE/PCI system can now be played to the active output frame buffer with a subsequent Y or V command.
 - Diagnostics section in Intelligent Interface dialog box (accessed from Config Menu > Intelligent Interface) will now update if connected over Telnet.
 - Telnet and Recall Keys options are now prevented from being selected simultaneously in the Intelligent Interface dialog box (accessed from Config Menu > Intelligent Interface).
 - The **Recall Keypad** display will now report **Invalid Message** if a **Read** or **Read Next** fails to load a message. This problem existed on Duet LE/PCI only.
- Masks:
 - Resolved intermittent issue with surface transparency of 2D Text Windows if they render after a Mask object.
 - Resolved blending problems with other characters in a 2D Text Window in which a Mask Character was present.
- Resolved scaling issue with the first character in an animated **2D Text Template** if it was located near the **2D Text Template** boundary
- Playlist and keyframe pauses for GPI now function correctly when RS-422 Serial I/O & GPI/O Board was installed in a Duet LE/PCI system.
- Resolved flash on Duet SD output if mixer was reset to default when either Output Layer was set for mix
- Resolved intermittent problem where text would not appear on Duet SD output if the containing 2D Text Template had a background.
- Resolved problem where characters would be missing from a **2D Text Window** after an extended period of constant updating.

- Corrected **Timeline** length of group members when **Apply All** was executed from **Animation Properties**.
- Resolved problem with iNFiNiT! batch export on Duet LE/PCI, where missing **Message Numbers** within the specified range were still exported. They contained content from last available message.
- Corrected Auto Standards Conversion bug, where 16:9 message was not properly scaled when read into a 4:3 Canvas.
- Resolved problem where an iNFiNiT! character was replaced via **Sync TrueType Fonts** if it had been imported into a **2D Text Window** in which a **Browser** font was active.
- Corrected screen position of 2D Text Windows that had Xscale/Yscale/Zscale keyframes.
- Ensured the availability of font assets in the **Browser** is updated when read from the database file. Previously, only those font assets visible in the **Font Browser Window** were checked. As a result, **Sync TrueType Fonts** could update characters to a non-existent font.
- Resolved problem where **Key Input** and **Shape** settings for the **SD Mixer** were not being saved for a **Timeline** mix if offline.
- Reload of image data during message read (e.g., for non-embedded, interfaced or **DBLinked** images) will no longer make the image visible if it is not.
- Resolved crash occurring if a larger font was applied to a **2D Text Template** with **Word Wrap** enabled
- Corrected operation of Aprisa VCS if Use Channel B was selected.
- Corrected problem in reading some pop-on messages, where characters would be missing.
- Template data messages read through Intelligent Interface will now use the Intelligent Interface message directory
- Internal Clip Player:
 - An internal clip will no longer start prematurely on Duet LE/PCI systems if the animation is paused at frame **0**.
 - Resolved problem where internal clip added after audio clip would not have visible video.
 - Resolved problem where a clip would not play if read up twice while another looping clip was playing on output.
 - o Resolved problems with using clips from two channels in same frame buffer
- GPIO on Duet LE/PCI systems
 - Resolved problem where a GPI used to release a pause could not be used for any other purpose (i.e. as a global GPI) without restarting Lyric.
 - o All available GPIs are now automatically allocated when Lyric starts up.
 - Corrected board and pin designations listed in Duet Hardware for second and subsequent VGBs.
 - Existing GPI assignments will no longer be overwritten when Global GPIs are configured unless the global GPI is enabled.
- Wipe Image Effect now supports a softness of 0 (none)
- Corrected scaling of graphics imported into 16 x 9 SD canvas when **1:1** aspect is disabled.
- Corrected Save As cropping with Duet HD.
- Macros/LEIF Corrections/Modifications:
 - Get/SetBackgroundVisible on Scene object now properly handles solid or gradated color background.
 - MajorVersion and MinorVersion methods on Version object now return correct values.
 - Rect method on Template object now returns correct values if Canvas is scaled and/or 16:9.
 - Reversed operation of flag for SizeToFit method on Template object, which had been counter-intuitive
 - Resolved problem where saving an individual macro twice to the same file would delete the file.
 - Simultaneously executing and recording macros is now prevented. This conflict can occur when an Intelligent Interface E macro execution command is sent while a macro record is in progress.
 - The maximum length of an auto-recorded macro statement has been increased from 256 bytes to 2K.
- Resolved kerning issues with a clock/timer on a 16 x 9 canvas on Duet LE/PCI systems.
- Resolved problem where F2 would not delete remainder of row if preceded by Ctrl + Home.
- Resolved problem where **Ctrl + Click** selection of group members in **Scene Graph** would select objects outside of the group.
- Corrected processing of characters typed with two keystrokes such as accented characters.
- Disabled ability to move 4:3 reference safe-title using the mouse.
- Corrected **Alpha** of exported QuickTime movies.
- Import of an image into a **2D Text Window** will not wrap to the next line if **Word Wrap** is not enabled.
- Fixed problem with the cursor not moving if 2D Frames On are off.
- When in **Preview Mode**, if you try to add another object, you'll snap out of **Preview Mode** and the new **Timeline** node will start at frame **0**.
- If an image file is not found on load (e.g., during **DBLink**), the error is now posted to the Lyric status bar instead of in a message box.
- Resolved crash when a second Lyric process exits on Duet LEX/PCI+ systems.

Known Issues - Lyric v5.0

- PCI-Squeezeback boards do not support Clocks/Timers.
- A Clip with a Start Time of 0, 1 or 2 frames always starts at Frame 0 when the animation is executed. A Clip with a Start Time of 3 or higher executes at the specified frame.
- **Clip Control Panel:** The minimum number of frames that can be looped to from the end of a clip is **15**. Output is unpredictable if the loop frame is set to less than **15** frames from the end of the clip.

2. Getting Started

Getting Started

- If you are already familiar with Lyric and Duet, refer to **What's New New Features** to find out about the new features in this version of Lyric.
- If you are completely new to Lyric, also refer to **Creating a Simple Lyric Composition**, which features a simple tutorial for creating a Lyric message.
- For information about navigating the Lyric interface, please refer to **Navigating and Entering** *Information in Lyric*.

About Lyric and Duet

Lyric[®] is a powerful character generator/graphics application boasting feature-packed 2D and 3D static and animated graphics creation tools, and real-time playback to air. Lyric runs on the Chyron[®] Duet[®] platform for online production and real-time playback, as well as on PCs running Windows NT[®] and Windows[®] 2000 operating systems for offline composition. Content may be created on a conventional PC, saved in a variety of static/animation formats as well as proprietary Chyron formats, and then played back as broadcast-quality graphics and animations on Chyron systems in a variety of video formats. Advanced from the hugely successful Chyron iNFiNiT![®] family, all Duet systems can import files from and export files to iNFiNiT! family systems. There are six Duet systems: Duet SD, Duet HD, Duet LE, Duet PCI, Duet LEX and Duet PCI+.

NOTES

- Duet SD and Duet HD differ in output and other aspects of operation, but use the same version of Lyric.
- Duet SD and Duet HD differ more substantially from Duet LE/LEX/PCI/PCI+ systems, which use a different version of Lyric.
- Lyric for offline use is also a separate version of Lyric designed for content creation on PCs only. Lyric compositions created on a PC can be played back on Duet systems.
- Lyric Online Help and printed documentation contain information about Lyric operation on all Duet systems, as well as offline PCs. Unless otherwise noted, the information provided applies to all systems. Features and operations pertaining to or excluding specific systems are explicitly called out. Be sure that the documentation you are referencing is appropriate to your hardware.
- Message Format Compatibility: Messages composed in earlier versions of Lyric can be played back using the current version of Lyric, but should be carefully checked for stable reproduction. The same caution should be taken when playing a message composed on one type of Duet system and playing it back on another.
- Closing and Restarting Lyric: Whenever Lyric has been closed, wait at least 10 seconds in order to allow Lyric to completely shut down before restarting. If animations are still visible on the screen, wait for them to play out as well.
- Among the functions that differ markedly between Duet SD/HD and Duet LE/LEX/PCI/PCI+: Masks, Default Effect, Playlist Effect Setup, Video Capture and Squeezeback (Duet SD)/Squeezeback Panel (Duet LE/LEX/PCI/PCI+).
- Multi FX, which transitions a message out using one effect, while simultaneously transition in another message using another effect, are not available to Duet LE/LEX/PCI/PCI+. A similar result can be achieved on a Duet LE/LEX/PCI/PCI+ system by linking boards and applying Message Effects, accessed from Default Effect setup in the Config menu.

Lyric Font Support and Font Creation

Lyric supports TrueType[®], OpenType[®] and iNFiNiT![®] fonts, as well as Windows[®] 2000 **Unicode** (Chinese, Japanese, Cyrillic, etc.). Lyric does not support PostScript[®] fonts. *For information on creating fonts for use in Lyric compositions, refer to the chapter on* **Creating and Using Fonts in Lyric**.

About Optional Internal and External Hardware

Duet is a multi-purpose media-processing system that brings out Lyric's most advanced capabilities. An open platform scalable for digital television, Duet is a video system that incorporates a CPU and Windows operating system with powerful Duet hardware. Features include internal keying/compositing of graphics and video, with three real-time layers: background, video, and animated foreground graphics all in a single channel. *Consult the Duet Hardware Reference Guide* (*Chyron Publication No. 2a02105*) for complete technical information about the Duet platform. A wide variety of optional internal and external optional hardware can augment the scope and flexibility of Duet systems. These include:

- **Duet Keyboard All Systems:** While a PC keyboard can run Lyric on a Duet system, the Duet keyboard provides dedicated keys for quickly executing Duet operations. *Refer to the chapter on* **Optional Duet Hardware** for in-depth information.
- Internal Clip Player Duet SD/LE/LEX/PCI/PCI+: The Internal Clip Player enables the recording and playback of video/audio clips in Lyric compositions. *Refer to the chapter on the Internal Clip Player for in-depth information.*
- Squeezeback Board Duet SD: The internal Squeezeback board enables the creation of regions which display input video in a Lyric composition. *Refer to the chapter on Video Regions and Squeezeback Objects for in-depth information.*
- **PCI-Squeezeback Board Duet LE/LEX/PCI/PCI+:** The internal PCI-Squeezeback board adds cutting-edge animated video effect creation capability, including resizeable, animatable video regions which display input video. *Refer to the chapter on Video Squeezeback* for in-depth information.
- RS-422 Serial I/O & GPIO Board (All Duet Systems Configuration and use differs among systems.): The internal RS-422 Serial I/O & GPIO board provides GPI capability to Duet SD and HD systems, and RS-422 interface capability with all Duet systems. RS-422 capability enables for control of external devices such as VTRs. Note that Duet LE/LEX/PCI/PCI+ Video Processing Boards (VPBs) have built-in GPI capability, although PCI-Squeezeback boards do not. *Refer to the chapter on the* RS-422 Serial I/O & GPIO Board for *in-depth information*.
- Video Capture Board (All Duet Systems Boards differ among systems.): The internal Video Capture board allows the Duet to capture a frame of video, display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats. *Refer to the chapter on Video Capture for in-depth information.*
- Video Mixer Duet SD: The internal Video Mixer board enables the mixing of video on a Duet SD system. Refer to the chapter on Video Mixing for in-depth information.
- **HD Mixer Duet HD:** The internal **HD Mixer** board enables the mixing of video on a Duet HD system. *Refer to the chapter on Video Mixing for in-depth information.*
- **CMix Duet SD/LE/LEX/PCI/PCI+:** The external **CMix** unit enables the mixing of video. While it can be used for mixing video on a Duet SD, it is generally used for Duet LE/LEX/PCI/PCI+ systems. *Refer to the chapter on Video Mixing for in-depth information.*
- KwiKeys GPI/O Trigger Device All Systems: KwiKeys provides an easy method of executing GPI-triggered events. Refer to the chapter on the Triggering Internal and External Events: GPIs, RS-422 and RS-232 Serial Protocols for in-depth information.
- **ReCall Keys: ReCall Keys** provides a means for the Lyric operator to quickly call up Lyric messages, play animations and manipulate Duets program outputs. **ReCall Keys** can be connected to a Duet system or a PC running Lyric, and communicates with the system via the **RS-232** protocol. *Refer to the chapter on the Triggering Internal and External Events: GPIs, RS-422 and RS-232 Serial Protocols for in-depth information.*

Lyric and External Systems

Lyric can transfer files to and from Chyron[®] iNFiNiT![®], Chyron Aprisa and Quantel[®] systems. This enables access to existing files on these systems, modification in Lyric, and transfer back to the external systems in their native formats. Refer to the chapters on these systems for in-depth information.

Using Lyric

In Lyric, graphics are composed by arranging any combination of 2D text, 3D characters, 3D objects, 2D bitmap graphics and light sources in an area called the **Canvas**. Collectively, items placed on a Lyric **Canvas** are called objects or elements. The use of the term **Object** or **Element** in this documentation can sometimes differ depending on the function being described. Once placed on the **Canvas**, any object may be individually manipulated. Except in **2D Text Windows**, there are no row/column constraints, allowing complete freedom of object placement.

In addition to the standard Windows methods for saving and opening files (**Ctrl + S** and **Ctrl + O**), Lyric messages may be recorded and recalled using **Record** and **Read** commands entered on the numeric keypad of a standard PC keyboard or the shortcuts to these commands on the **Address Keypad** of the **Duet Keyboard**, in conjunction with the **Message Number** display. In addition, Lyric offers **Read Next**, **Read Previous** and **Playlists** to display message sequences. Messages, fonts and graphics can also be easily imported to the **Canvas** and exported to a variety of destinations via Lyric's **Browser**.

Lyric provides setup parameters which drive Lyric operations. Most setup functions are found in the **Config Menu** and in **Preferences**, which are accessed from the **Config** menu. Such parameters include interface appearance, hardware configuration, communication with external systems, animation settings, etc. *Refer to the chapters on the* **Config Menu** and **Preferences** for in-depth information.

Lyric also provides setup parameters that apply to individual tools and operations. These settings are found in tool- or operation-specific dialog boxes and panels.

Animation in Lyric

Lyric can animate objects placed on the **Canvas**, including all types of **2D Windows**, **3D Text**, **3D Objects**, **Bitmaps**, **Light Sources** and specialized objects created by **Lyric from Advanced Image Effects**, **Advanced Text Effects**, etc. **Backgrounds** that are added to the **Canvas** as a whole are unlike other Lyric objects in most respects and cannot be animated.

Lyric animations are based on **frames**, much like the frames in a film, with each **frame** representing a point in time and space. Changes in position and other attributes are made at user-defined points in the animation known as **Keyframes**. Each Lyric animation by default has two points which define it, the **Start Keyframe** and the **End Keyframe**.

It is not necessary to set up a **Keyframe** for every frame of an animation. For a simple move, such as sliding an object from the upper left corner of the screen to the lower right corner of the Canvas, only the **Start Keyframe** (an object's position at the beginning of the animation), and the **End Keyframe** (the object's position at the end of the animation) must be defined. Lyric automatically interpolates the in-between frames, and the duration of an effect has no bearing on the number of assigned **Keyframes** necessary to perform the effect. *Refer to Animation Overview for information on creating animations.*

Compatibility with iNFiNiT! Files and Fonts

Lyric can import and export iNFiNiT! fonts and static messages. *Refer to Browser: iNFiNiT! Font Assets, File Menu: Import from iNFiNiT!, File Menu: Export from iNFiNiT!* and Custom Font Editor for information.

License Code

Config Menu > License Code

Lyric includes a Licensing Manager. A license code number is required if you are installing Lyric for the first time on a particular Duet or PC. If you are updating to a new version of Lyric and installing the software to the same directory as the previous version, the license code number will not be required.

Enter the license code number that is printed on the accompanying End-User License Agreement. The Lyric application will open. You will not need to enter the code again to use this installation.

Enter License Code	×
License Code:	_
OK Cancel	

License Code Configuration

If you have acquired Lyric for trial use, you will be supplied with a special license code number that unlocks the application for an evaluation period that will last 30 days in most cases. Enter your trial license code as prompted. The Lyric application will be unlocked, with all features functional. At the end of the evaluation period, subsequent attempts to launch the Lyric application will cause your system to display an error message.

For additional information on licensing, refer to the chapter on Support.

The Lyric Interface

When the Lyric application is first launched, the **Canvas**, which is where all graphics composition occurs, is displayed on the Lyric interface. As typically configured, the **Properties Window** appears at the right side of the screen, and the **Browser** and **Scene Graph** appear to the left.

The appearance of the interface may differ from that shown in the figure below, depending on the active function, the display of other windows and the position of the various tools. The **Menu Bar** and various menu items can also change depending on which function or window is active. Most elements that make up the Lyric interface can be moved and resized to suit personal preferences.

For information about navigating the Lyric interface, refer to **Navigating and Entering Information in Lyric**.



Typical Lyric Interface - Duet LEX

Many of the functions described in the following sections can be activated with special dedicated keys or key combinations, called hotkeys, on the Duet keyboard. *Refer to the Duet Keyboard and Keyboard/Mouse Shortcuts* for additional information.

Title Bar

The **Title Bar** is located along the top of a window or dialog box. On the **Canvas**, it displays the name of the program and the currently active file.



Title Bar - Canvas

Clicking on the program or menu icon in a maximized or restored window, or clicking on the **Title Bar** of a minimized window, accesses a menu which provides window functions. The program or menu icon is located directly to the left of the window title. In the figure of the Lyric **Canvas Title Bar** at left below, it appears as the Lyric icon. The figure to the right shows the menu accessed from a minimized window.

-

Restore	2			<u>M</u> ove Size Minimize	
_ize _ Mi <u>n</u> imize	е	IRTS		Ma <u>x</u> imize	
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. <u>⊂</u> lose	Ctrl+F4	and the second		Nex <u>t</u>	Ctrl+F6
Next	Ctrl+F6			Propertie	

Windows Title Bar Menus

A **Title Bar** may contain the program and/or file name, function name and other information. On the **Canvas**, the **Title Bar** also provides buffer and output information. *Refer to* **VGE Tally** *later in this section for additional information*. It also provides the following window functions through the **Title Bar** icons, menu, keystrokes and mouse.

Icon, Menu Item, Keystroke or Mouse Action	Description
미 Menu: Maximize	Maximize: Maximizes the window to full screen.
 Menu: Minimize	Minimize: Minimizes the window.
₽ Menu: Restore	Restore: Restores window to previously set size.
≍ Menu: Close Ctrl + F4	Close: Closes window.
Menu: Next Ctrl + F6	Next: Moves focus to the next window.
Menu: Move Drag using the Mouse	 Move: Repositions the window. When accessed from the Title Bar menu, select Move, press the cursor keys ↑↓ ← → to reposition, and then press Enter. For a fine adjustment, press Ctrl + ↑↓ ← →. Note that when Move is selected from the menu, moving the mouse cursor without clicking also moves the window. Double-click to set. A Window can also be dragged to a new location. Click-and-drag the Title Bar to reposition the window.

lcon, Menu Item, Keystroke or Mouse Action	Description
Menu: Size	Size: Resizes the window. When accessed from the
Drag using the Mouse	Title Bar menu, select Size , press the cursor keys $\uparrow \lor \leftarrow \rightarrow$ to resize, and then press Enter . For a fine adjustment, press CRT + $\uparrow \lor \leftarrow \rightarrow$. Note that when Size is selected from the menu, moving the mouse cursor without clicking also resizes the window. Double-click to set.
	A Window can also be also be resized using just the mouse. Click-and-drag the edges and/or the corners to resize the window.

<u>Menu Bar</u>

The standard Windows menu bar includes familiar File, Edit, View, Window and Help pull-down menus as well as Lyric-specific Tools, Browser (visible when the Browser is active) and Clip (visible when the Clip Control Panel is active) menus. Note that the Tools menu is also accessible by right-clicking on the Canvas or the Scene Graph.

For the sake of clarity, **Tools/Canvas Context/Scene Graph Context** menu functions in the Lyric User Guide will be referred to as accessible from the **Tools** menu. It should be understood that in most instances, the same functions are also accessible from the **Canvas** and **Scene Graph** context menus. Any differences are noted where appropriate.

Canvas

File Menu > New > Canvas; Windows Toolbar > 🗋

View Menu > Canvases

Lyric's **Canvas** is the 3-dimensional space in which all composition and animation takes place. Text and objects, including **Individual Light** sources and the **Camera**, can hold fixed positions or move within three dimensions. Note that a new **Canvas** can be created by accessing **File > New > Canvas** or by clicking the **D** button on the **Chyron Toolbar**.

If the Canvas is not visible:

• Pull down the **View** menu, and then select **Canvases**.

If the Canvas is still not visible, it is necessary to open a new Canvas.

Pull down the File menu, and then select New > Canvas or click the New Canvas icon 1.

Scroll bars on the right side and bottom of the **Canvas** enables you to adjust your view of objects on the **Canvas**, and enables you to compose animations where the objects start outside of the normal display area of the **Canvas**. The **Reset Scroll Position icon** quickly recenters the **Canvas**.



Canvas Reset Scroll Position Icon - Centered and Uncentered

If the **Canvas Reset Scroll Position** icon and **Canvas View** icons (*described later in this section*) are not displayed:

• Pull down the View menu, select Toolbars, and then select Reset Scroll/View Position.

Above left, the icon is seen in the centered state, when the **Canvas** view is centered. At right, the icon is seen in its uncentered state, when the **Canvas** view is off-center.

The **Canvases** for both active and inactive frame buffers can be displayed, as shown in the Lyric interface above. The setting can be enabled/disabled via **Config Menu > Preferences > Windows > Display All Frame Buffers**..

To quickly change the focus in the Lyric interface to the **Canvas** displaying the active **Frame Buffer**:

• Click the Canvas or press F6.

The **Canvas** context menu is virtually the same as the **Tools** menu and the **Scene Graph** context menu. To display the **Canvas** context menu:

• Right-click on an empty area of the Canvas, i.e., not on an object.

A Lyric composition on the **Canvas** can be viewed in variety of ways. A view can be selected by clicking one of the **View** icons that is located directly to the right of the **Reset Scroll Position** icon. To view the different orientation:

• Click on a Canvas View icon. Note that the leftmost icon is the Reset Scroll Position icon.



Canvas View Toolbar

If the Canvas View icons and Canvas Reset Scroll Position icon are not displayed:

• Pull down the View menu, select Toolbars, and then select Reset Scroll/View Position.

The following figure shows a 3D object (soccer ball) a 2D object (flare), 3D text (the word "soccer" in 3D characters) and a **2D Text Window** (the word "soccer" in 2D text). The view is identified in the top left corner of the **Canvas**. The visible axes are shown at the bottom left of the **Canvas**.

All four types of objects are visible in Front view.



Canvas - Front View

The 3D object and the tops of the 3D characters are visible in the **Top** view. The top edge of the **2D Text Window**, although it has no thickness and is in the **XY** plane only, is indicated by a blue line. The 2D object, having no thickness and being in the **XY** plane only, is not visible. If the 2D object or the **2D Text Window** are rotated in 3D space, they would be visible.



Canvas - Top View

All four types of objects are visible in **Perspective** view.



Canvas - Perspective View

The 3D object and the tops of the 3D characters are visible in the **Top** view. The left edge of the **2D Text Window**, although it has no thickness and is in the **XY** plane only, is indicated by a blue line. The 2D object, having no thickness and being in the **XY** plane only, is not visible. If the 2D object or the **2D Text Window** are rotated in 3D space, they would be visible.



Canvas - Left View

The following figure simultaneously shows all four views.



Canvas - View All

The following figure shows all of the elements rotated in 3D space. Not that the **2D Text Window** is now visible in the **Top** and **Left** views, and the **2D Object** is now visible in the **Top** view. It would also be visible in the **Left** view, but is hidden by the soccer ball.



Canvas Views - Objects Rotated in 3D Space

To quickly toggle the multi-view display on and off:

• Pull down the View menu, and then select Multi-View.

Additional scene viewing tools are also available:

- Spin the mouse wheel up/down to zoom into/out from the Canvas.
- Hold the **Shift** key down. Spin the mouse wheel up/down to zoom into/out from the **Canvas** more quickly.
- Hold the **Shift** key down and the mouse wheel down. Spin the mouse wheel up/down to zoom into/out from the **Canvas** more slowly.
- Hold the mouse wheel down. Move the mouse around the Canvas to look around the scene.
- Hold the **Shift** key down and the mouse wheel down. Move the mouse around the **Canvas** to rotate the scene.
- Click the Canvas Reset Scroll Position icon to reset the view.

The following elements may be placed on a Canvas:

Object	Description
2D Text	2D Text Windows including Roll, Crawl and Type On windows.
3D Characters	3D extruded text derived from Lyric's TrueType® fonts.
2D Objects	2D graphics in a wide variety of file formats.
3D Objects	3D objects in the .3ds , .prj or .obj formats.
Flipbooks	Flipbooks, which are self-contained animations composed of sequences of 2D bitmap graphics that can be executed as a Flipbook, as well as animated as a single objects on the Canvas.
Backgrounds	A solid color, ramped color or bitmap graphic that can act as a Background for a 2D Text Window , a 2D Text Template , or the entire Canvas . Backgrounds cannot be animated in 3D space, but their Transparencies can change during an animation.
Global Light	A light source which provides light from all directions, with color and intensity set on the Properties > Lighting . This light source is always present in the Canvas , and cannot be animated in 3D space or deleted.
Individual Lights	Up to six individual Light Sources which can be placed in a Canvas . Color , Style (Spot or Flood) and Intensity of these lights are set in Properties > Lighting . Individual Lights can be animated in 3D space.
Camera	Establishes a viewer frame of reference. The Camera can be animated, and its focal length can be adjusted.
	The Camera feature comes in handy when, for example, it is necessary to slightly shift the view of every object on the Canvas . Rather than repositioning each object and struggling to maintain the proper perspective, the Camera can simply be repositioned. The effect is the same as slightly moving the position of the viewer.

There are also other elements that are generated by Lyric and added to the **Canvas** when using **Advanced Image Effects**, **Advanced Text Effects**, etc.

It is necessary at times to select the **Canvas** as a whole, for example, when applying a **Background** to the **Canvas**. Choose one of the following methods to select the **Canvas**:

- Click in an empty area of the **Canvas**. The **Global Light** listing in the **Scene Graph** should become highlighted.
- Click on the Global Light or Camera listing in the Scene Graph.

When Lyric is running on a Duet system, **Frame Buffer** status and the output to which it is routed is displayed on the **Canvas Title Bar**.

**Msg: Untitled Dir: \\Emerald\Lyric\Messages FB1 on Out 1

Canvas Title Bar

In the figure above:

- Msg indicates Message Name. In this instance, it is Untitled.
- The directory path indicates the Default Message Directory as set in Config Menu > Preferences Default Paths. Note that when a message is read from another directory, the path to that message is briefly displayed, and then reverts to the Default Message Directory. In this instance, it is \\Emerald\Lyric\Messages.
- FB1 indicates the Frame Buffer in which the message has been read. In this instance, it is Frame Buffer 1. Note that a display of FB0 indicates that there are no VGEs assigned to Lyric in the Configure Board Use (Duet LE/LEX/PCI/PCI+) dialog box, or that Lyric is running on a PC. Refer to Duet Hardware for details on board assignment.
- Out 1 indicates the Output Channel for the Frame Buffer. In this instance, it is Channel 1.

Canvas Resolution

Config Menu > Canvas Resolution

Canvas Resolution settings configure the **Canvas** to properly reflect the graphics that are output from the Duet system, as well as control how 2D bitmaps are imported to the **Canvas**.

ivas Resolution	?
C D1 525	C HDTV 1080i
D1 625	C HDTV 1080 24P
O 16:9 525	C HDTV 720p
O 16:9 625	
C User Defined	Default
New	Update Delete
Width Height	Fps Pixel Aspect
Width Height	Fps Pixel Aspect
Width Height 720 576	Fps Pixel Aspect 25.00 1.067 spect for Graphics Import

NOTE Scaling the Canvas using the mouse will not preserve the aspect ratio of the Canvas.

Canvas Resolution Dialog Box

Broadcast Standard Presets

Seven presets are provided, matching the most common television standards, along with a setting for highdefinition video for film production (HDTV 1080 24P). The User Defined option allows the operator to enter specific width, height, frame rate, and pixel aspect ratio settings.

2 Ito I Pixel Aspect Dir: CC/Program Files/Chyron/Messages FB0	This option compensates for the difference between the square-shaped pixels used by Windows graphics applications and the rectangular pixels used by the Lyric application. In the top illustration, the Use 1:1 Pixel Aspect for Graphics Import option is active, and the original appearance of the imported object has been preserved.
Imported with 1:1 Pixel Aspect ON	
I am a perfect square created in Photoshop	In the bottom illustration, the option is not active, and the proportions of the importe object are distorted.
Imported with 1:1 Pixel Aspect OFF	

Enable Auto Standards Conversion

When this function is enabled, **4:3** SD messages can be imported into a **16:9** HD Canvas and vice versa, while aspect ratio and size are maintained.

For example, a page is created in Lyric with the Canvas set to **D1 525 (4:3** -720 X 486).



The Canvas Resolution is then changed to 16:9 525; the pixels are still at 720 X 486. If the same page is read to the 16:9 Canvas without the Auto Conversion enabled, it would appear horizontally stretched.

With Auto Conversion enabled, the page created with the Canvas set to D1 525 would now

retain the proper aspect ratio when read to the 16:9 canvas. There is no need for rescaling. The only area with which to be to be careful is that background clips are stretched to fill the entire screen when converting to from 4:3 to

16:9.





When **Auto Standards Conversion** is used in the inverse situation, pages created in **16:9** HD format display with the correct aspect ratio when read into a **4:3** Canvas. Note however, that the left and right edges of graphics created to fit a **16:9** Safe Title area are clipped when reading into the **4:3** Canvas. The interior outline above shows the **4:3** Safe Title area.

To enable Auto Standards Conversion:

- 1. From the **Config** menu, select **Canvas Resolution**. The **Canvas Resolution** dialog box is displayed.
- 2. Click the Enable Auto Standards Conversion checkbox and click OK.

Safe Title Adjust

Config Menu > Safe Title Adjust

The **Safe Title Area** is generally used to delineate the area on the **Canvas** where it is "safe" to place objects so that will be seen on most televisions. Lyric has built-in default settings for each **Canvas Resolution**, so that the user can be fairly certain that if the graphics are placed within the **Safe Title Area**, they are unlikely to be cropped by a viewer's television.



Safe Title

Lyric's **Safe Title Area** display can be adjusted to any size, proportion and position on the **Canvas**. A resized **Safe Title Area** can also be used to crop **Flipbook** animations when they are saved.

To adjust Safe Title Area settings:

• Select Safe Title Adjust from the Config menu. The Safe Title Adjust dialog box is displayed. If no modifications have been made, it displays the default settings for current Canvas Resolution, as set in Config Menu > Canvas Resolution.



Safe Title Adjust

Set the following parameters, and then click **OK** to set, or **Cancel** to cancel.

Parameter	Description	
XY Dimensions and Position: Unlike object position as displayed in the Status Bar and Properties > XYZ, where XY coordinates (0,0) specify the center of the Canvas, Safe Title XY coordinates (0,0) specify the upper left corner of the Canvas. There are no negative coordinates for Safe Title.		
X	Horizontal coordinate of the upper left corner of the Safe Title Area .	
Y	Vertical coordinate of the upper left corner of the Safe Title Area .	
Width	Width of the Safe Title Area. A change to the Width results in an adjustment to the right border of the Safe Title Area. A change to the Width is reflected in the Width %.	
Height	Height of the Safe Title Area. A change to the Height results in an adjustment to the right border of the Safe Title Area. A change to the Height is reflected in the Height %.	
Width %	Specifies the percentage of the width of the Canvas to which the Safe Title should be set. A change to the Width % is reflected in the Width .	
Height %	Specifies the percentage of the height of the Canvas to which the Safe Title should be set. A change to the Height % is reflected in the Height .	

Parameter	Description
Save	A Safe Title setting can be saved and recalled for future use. To save a Safe Title setting:
	 After settings are final, click Save. The Save Safe Title dialog box is displayed. Note that the default location for the Safe Title file is the Default Message Directory as set in the Config Menu > Preferences > Default Paths, although the file can be saved elsewhere. Note also that the file type is called Safe Title File (*.saf).
	Enter a file name, and then select Save. The file has now been saved for future use.
Recall	To recall a saved Safe Title file:
	 Select Recall. The Recall Safe Title dialog box is displayed.
	 Navigate to the desired .saf file, and then select Open. The Safe Title Area is now displayed with the recalled settings applied.
Reset	Select Reset to reset the Safe Title Area to the default settings for the current Canvas Resolution as set in Config Menu > Canvas Resolution .

Transport Controls

The **Transport Controls** provide easy navigation and playback control of the current animation. They are usually located at the bottom edge of the **Canvas**, and are organized as familiar **Play**, **Stop**, **Rewind** and **Fast Forward** buttons. Intermediate buttons advance or reverse the animation by one frame or one second of video, or to the next/previous keyframe. The buttons at each end advance or reverse animation to the end or beginning of the sequence.



Transport Controls

Changes made with the **Transport Controls** buttons are reflected by the **Frame Counter** display, and by the **Current Frame** indicator on the **Timeline** and on the **Keyframe Graph**.

Additionally, the speed of an animation can be changed during execution:

Press the up cursor key ↑ to speed up the animation, or the down cursor key ↓ to slow down the animation.

Frame Counter

The **Frame Counter** display shows the elapsed time in a given animation in hours, minutes, seconds and frames. **Keyframes** can also be set by entering figures directly into these windows or using the display's up

and down arrows at to increase or decrease the time value displayed in the active **Hour**, **Minute**, **Second** or **Frame** field.



Frame Counter

Message Number

Traditional Chyron systems such as the iNFiNIT!® are able to save newly-created files as messages, which are assigned a number of up to eight digits. Lyric includes this feature as well. **Message ID** is displayed in the **Message Number** display for faster storage and recall of messages than would be possible opening files in the typical Windows manner.

A **Message ID Number** can be entered for **Read**, **Read Next**, **Read Previous** or **Record** operations by using the numeric keypad, which is the set of number keys to the right of the Duet or PC keyboard.



Message Number

Each time a Lyric file is recorded or read, the **Message Number** increments. Additionally, the **Message Number** of the currently displayed file is displayed in the **Title Bar** of the **Canvas**.

Refer to Recording/Reading Messages for further information.

Note that there are many different file operations in Lyric. *Refer to the section(s) covering the function or feature for details on reading (recalling) and recording (saving) specific types of files.*

Browser

Browsers enable you to quickly catalog and store objects and assets such as font styles, and quickly recall them into your current project. **Browsers** act both as a database for Lyric assets, and as a visual storage, search, and retrieval system for those assets.

Scene Graph

The **Scene Graph** lists all of the elements in the current Canvas, including text, graphic objects, Lyric-created objects and light sources. Each element can be selected using the mouse and highlighted for adjustment.

Font and Justification Tools

Font Tools display current font settings and can set font style, size and color. These attributes can be also set in the more detailed **Font Properties** dialog box, which is part of the **Properties** window. **Font Tools** also include standard Windows buttons for bold/italic/underline and for left/center/right justification and vertical centering.

Windows (Standard) Toolbar

The **Windows** toolbar includes standard Windows icons for creating a new file, opening existing files and saving files. There are also **Cut**, **Copy**, **Paste** and **Delete** icons, as well as **Undo/Redo** icons and the context-sensitive **Help** cursor.

Timeline

The **Timeline** is a visual representation of the elements present on the Canvas and their progress through an animation's duration. Each element and many of its attributes has its own **Timeline**, which is displayed in the main **Timeline** window. Keyframes can easily be set by clicking and dragging each element from a starting point to an end point.

Properties

The **Properties** dialog box controls many attributes of the Canvas and its objects, such as font style, light intensity, positioning of objects, etc. The top of the **Properties** dialog box contains tabs from which you can quickly select a **Property** to set or change.

Chyron Toolbar

Chyron Tools access functions unique to Lyric. Various icons may be grayed out, depending on the currently active function and type of Duet system. Included in the **Chyron Toolbar** are the **Transform** and **Alignment Toolbars**.



Chyron Tools

Tool	Description	
2D Wi Text a	ndows: Click the tool icon to introduce the 2D Window to the Canvas. 2D and RGB Fonts can be entered into these windows.	
ABC	Opens a 2D Text Window on the Canvas.	
î e	Opens a 2D Roll Window on the Canvas for composing Roll animations.	
	Opens a 2D Crawl Window for composing Crawl displays.	
	Opens a special 2D Type On Window for composing Type On/Slow Reveal displays.	
12:00	Opens a 2D Clock Window for creating time-of-day Clock displays.	
0	Opens a 2D Timer Window for creating count-up and count-down Timer displays.	
2	Opens a Spline Window in which 2D text or RGB Font characters may be mapped to a curved baseline for animation along that baseline.	
Importation and Template Creation: Click the tool icon to set up importation of 2D or 3D object or background; or to create a 2D or 3D Template.		
3D	Imports 3D Objects (.3ds , .prj or .obj formats) into the Canvas.	
3	Imports 2D Bitmap graphics into the Canvas. Lyric can import more than 20 graphics file types. Imported graphics are treated as independent, fully	

Tool	Description			
	animatable objects in Lyric compositions.			
	Imports Background images or textures. Backgrounds imported in this manner may be set within the Canvas as a whole, or within individual 2D text windows.			
	Creates a 2D Text Template when the cursor is inside of a 2D Text, Roll, Crawl or Type On Window ; or a 3D Text Template when the mouse is clicked outside of any window, directly on the Canvas .			
Grouping: Allows grouping and ungrouping of objects.				
♣	With multiple objects selected, the Group icon enables the operator to manipulate those objects simultaneously.			
- ⁰ -	Ungroups grouped objects, restoring individual control over the objects.			
Display: Click to set various display options.				
	Erase offers a variety of options for erasing entire scenes or certain categories of scene elements. Be sure to familiarize yourself with the use of this control, because Undo functionality is limited as regards Clear Scene operations.			
	Set Default Background Color enables the operator to select a gray or black background color to use as a backdrop while creating a Lyric composition. <i>This</i> <i>background color is not seen on output</i> . Aids visibility in situations where elements in the composition are difficult to see because of unusual textures and colors. <i>This function is different from the function that adds a</i> Background to <i>the entire composition, a</i> 2D Text Window or a 2D Text Template !			
X	Turn On/Off Text Window Frames eliminates/restores visibility of all 2D Window and 2D Text Template borders to facilitate composition, reducing the necessity of reviewing composition on a Duet output. Note that is it always recommended that the final Lyric composition be reviewed on output to ensure correct execution of animations.			
	Turns on/off all windows except those designated as Basic Windows in the Preferences menu.			
Mask	- Duet SD Only			
MASK	Activates the Mask Scene function, which is available only on Duet SD.			
Trans	Transform Tools			
×	Edit Position cursor for repositioning all types of objects on the Canvas.			
5	Edit Rotation cursor for rotating all types of objects on the Canvas.			
	Edit Scale cursor for scaling all types of objects on the Canvas.			
[+]	Edit Center of Rotation cursor for adjusting the Center of Rotation for all types of objects on the Canvas.			

Tool	Description	
Alignment Tools		
<u>∎</u> t	Left-aligns multiple 2D Text Templates or Timelines .	
	Right-aligns multiple 2D Text Templates or Timelines .	
	Top-aligns multiple 2D Text Templates or Timelines .	
έŧ	Bottom-aligns multiple 2D Text Templates or Timelines .	
ŧ	Makes multiple 2D Text Templates or Timelines the same width.	

Duet SD/HD Tools and Duet LE/LEX/PCI/PCI+ Tools

Duet Tools and **Duet LE/LEX/PCI/PCI+ Tools** control playback and display of Lyric messages. There are operations common to both Duet SD/HD Tools and **Duet LE/LEX/PCI/PCI+ Tools**, but there are functional differences as well. **Duet LE/LEX/PCI/PCI+ Tools** also provides additional animation playback tools. **Duet Tools** are available only when Lyric is running on a Duet system. They are grayed out in an offline environment. Additionally, a grayed out **FB** icon, as shown below, indicates an unavailable or uninstalled **VPB** (all systems) or **PCI-Squeezeback** board (Duet LE/LEX/PCI/PCI+ tools). *For additional information on Duet Tools, refer to Duet SD/HD Tools or Duet LE/LEX/PCI/PCI+ tools*.



1001	Description		
Duet Tools (All systems): These tools are available to all Duet systems. The icons have a slightly different appearance on Duet SD/HD systems as opposed to Duet LE/LEX/PCI/PCI+ systems. Unless otherwise noted in this table, when pairs of icons are shown, the Duet SD/HD version is shown on the left, and the Duet LE/LEX/PCI/PCI+ version is shown on the right.			
	The time icon activates Duet's Render Mode . In this mode, any text or objects placed on the active Canvas are rendered on Duet's video output(s) in real time. Compositions displayed on the video output can thus be edited in real time.		
9	When Render Mode is not active (i.e. the icon is not selected), Canvas compositions can be transferred to the Duet hardware by clicking the icon icon. Once a composition has been transferred to the video output, it can no longer be modified in real time. Additional changes must be made on the Canvas, and then rendered to the video output by clicking the Duet icon.		
0	The Swap Output Channels for editing or composition on Duets VGA monitor. Note that this icon also executes a transition between Duets two video outputs! The video output channel designated as active displays the transition. The type of transition is designated by the Default Effect setting. The inactive video output channel will simply switch one image for the other. • Note that on the Duet SD/HD the active buffer swaps as		

Tool	Description	
	well, and the user now edits in the newly current buffer. On the Duet LE/LEX/PCI/PCI+, the active buffer remains the same, even though the contents have been swapped.	
	 On a Duet LE/LEX/PCI/PCI+ system, a dialog allowing the user to choose the buffer with which to swap is displayed when Swap is clicked. This dialog is not displayed on a Duet SD/HD, as the swap destination is already set in the mixer. 	
Change (Change Key)	No icon. Changes active frame buffer to next available frame buffer.	
Duet SD/HD:	The Frame Buffer FID FID (1) (2) (3) icons select a VGE or MPx output for composition/editing and so displays its signal on the VGA monitor.	
Duet LE/LEX/PCI/PCI+:	A Frame Buffer icon that is green indicates the presence of a PCI-Squeezeback board , an optional feature for Duet LE/LEX/PCI/PCI+ systems only.	
	 An additional FB icon is present on the interface for each Frame Buffer available on your Duet system, unless it is assigned to an upstream linked board on a Duet LE/LEX/PCI/PCI+, in which event it would be inaccessible for direct editing. Additionally, If Lyric is running on a PC, all FB icons are inactive. 	
	• An FB icon, as explained above, appears on the Lyric interface to represent each Video Graphics Engine (or combination of VGEs being used for Multi-VGE Rendering) that is available to Lyric. A grayed-out icon in one of these positions represents a VGE that is unavailable to Lyric.	
Duet LE/LEX/PCI/F are available only LE/LEX/PCI/PCI+ 1	CI+ Tools: The following tools, some of which have no icons, to Duet LE/LEX/PCI/PCI+ systems. <i>Refer to Duet</i> Fools for more detailed descriptions.	
Load (Alt + L)	Loads an animation for field-based playback.	
Quick Load (Alt + Q)	Loads an animation for frame-based playback. Results in quicker rendering, but possibly less smooth animation.	
Free	Clears memory of loaded animation.	
Stop (Esc)	Stops playback during a loop.	
Play (Refer to Duet LE/LEX/PCI/PCI+ Tools.)	Plays the animation to the currently active VPB or PCI- Squeezeback board.	

VGE Tally

The VGE Tally indicates which frame buffer is active and on to which output it is routed. The VGE Tally is displayed in the Title Bar of the Canvas displaying the active frame buffer. In the following figure, Frame Buffer 1 is active, as indicated by the active FB1 icon in Duet Tools. The VGE Tally indicates that Frame Buffer 1 is routed to Output 1 of the Duet.





The **Title Bar** of the **Canvas** displaying the inactive frame buffer indicates only the frame buffer number, not the output to which it is routed.

A VGE Tally can indicate if the frame buffer is routed to a Mixer. The following indicates that Frame Buffer 2 is routed to Output 1 and Output 2.

FB2 Msg: Untitled on Out 1 + Out 2

The following indicates that Frame Buffer 3 is routed to through the Video Mixer to Output 1. FB3 Msg: Untitled on Out 1 (Mix)

Status Bar

The **Status Bar** is located at the bottom of the Lyric interface. It provides information about active objects and functions. It is illustrated here in three segments, with the leftmost segment at the top; the middle at the middle, and the rightmost at the bottom of this figure.





Trigger prompts such as **Paused for Keypress**, **Wait for Keystroke**, **Paused for Delay** (from **Delays/Timeouts**) and **Waiting for Timecode** are displayed in red in the **Status Bar** at the bottom of the screen. The following illustration shows a **Wait for Keypress** generated by a **Wait for Key** set in the **Control** field of a **Playlist**.

Waiting for Keypress	Edit Scene	M	X: -0.359	Y: -1.253
in diving for heapprove	E di o donio			1. 1.200

Waiting for Keypress

Status information such as **Record** confirmation, **Delete** confirmation, **Read Next Loaded**, and **VGA Preview** are displayed in green in the **Status Bar**. The following illustration shows a **Record** confirmation.

Recorded 00006001 in C:\Program Files\Chyron\Messages\ Lyri

Record Confirmation

The Status Bar can be displayed or hidden.

• Toggle the display on and off by clicking on the **Status Bar** item in the **View** menu.

The **Status Bar** is divided into panes as follows:

Pane	Description	
Currently Selected Object or Function	At far left, the Status Bar displays a description of each Toolbar icon as the mouse moves over it, or displays the name of the currently selected object. In the figure above, it shows that Object '2D Text 1' , which is a 2D Text Window , is currently selected.	
Copyright Information	To the left of the middle of the Status Bar is a pane that displays copyright information.	
Edit/Mask Scene Status	Directly to the right of it is a pane that usually indicates the status Edit Scene . On a Duet SD system only, it changes to Edit Mask when a Scene Mask has been created, and Tools Menu > Mask Scene > Edit Mask has been selected.	
M	The following pane to the right displays the letter M . It turns red during a Macro Record operation.	
Mouse Position	The next pane to the right displays the X and Y coordinates of the mouse cursor on the Canvas. $X = 0$, $Y = 0$ are the coordinates for the center of the Canvas.	

Pane	Description		
Name of Object	The XY coordinates are followed by the name of the currently selected object.		
	 In the case of a 2D or 3D object or character, it displays the name of the object, matching the name at the very left of the Status Bar. 		
	 In the case of a 2D Text Window, it displays the Row Number and the name of the character. In the example above, it is the letter E. A Unicode character is identified by its Unicode number, e.g. U+9788. An RGB Font character is identified by the key combination that produces it. 		
To the right side status of various lettering. When	To the right side of the Status Bar is a group of panes that displays the active/inactive status of various functions. When the function is active, the pane displays black lettering. When the function is inactive, the pane is grayed out.		
II-1, II-2, II-D	Intelligent Interface:		
or II-I	 II-1 indicates that Intelligent Interface is enabled for transmission on Serial Port 1. 		
	 II-2 indicates that Intelligent Interface is enabled for transmission on Serial Port 2. 		
	 II-D indicates that Intelligent Interface is enabled for transmission on both Serial Ports 1 and 2. 		
	 II-T indicates that Intelligent Interface is enabled for transmission via Telnet. 		
TRNS	Translation Mode: Allows typing of Alt characters.		
	 Press Ctrl plus - (minus) sign to type multiple Alt characters. 		
	• Press Ctrl plus = (equal sign) to type a single Alt character.		
COL	Tab Column Mode: Allows typing in columns.		
	Press Alt + M or select Tab Column Mode from the Edit menu to toggle on and off.		
LOCK	Lock Mode: Allows locking of 2D text rows so that they shift as one group.		
	Press Ctrl + L or select Row Shift Locked from the Edit menu to toggle on and off.		
САР	Caps Lock Mode : When active, all characters are typed as upper case. Equivalent to a typewriter Caps Lock key. To toggle Caps Lock Mode on and off:		
	Press the Caps Lock key.		

Pane	Description		
NUM	Num Lock Mode:		
	 When active, the numeric keypad at the right of the keyboard types numbers. 		
	 When inactive, pressing the numeric keypad keys shifts cursor position, activates/inactivates Insert Mode, or deletes the selected 2D text character. 		
	To toggle Num Lock Mode on and off:		
	 Press Fn + Num Lock (same keycap as Ctrl on the numeric keypad) on the Duet keyboard, or press the Num Lock key on the PC keyboard. 		
OVR	Overwrite/Insert Mode:		
	 When active, a newly-typed character replaces the existing character. 		
	 When inactive, the newly-typed character is inserted at the cursor position without replacing a character. 		
	Choose one of the following methods to toggle between Overwrite and Insert Mode :		
	 Press Fn + Insert (same keycap as Delete Row) on the Duet keyboard, or the Insert key located directly above the Delete key on the PC keyboard. 		
	 With Num Lock Mode inactive, press the Ins (0) key on the numeric keypad. 		

Clip Control Panel

Optional single or dual Internal Clip Players provide the ability to play back video and/or audio clips either independently or as part of a Lyric animation. A video clip plays behind Lyric graphics on output, and is not visible on the **Canvas** during clip editing, preview or playback. The Internal Clip Player also enables input video or audio to be recorded to *.avi or *.wav files, respectively. *Refer to the chapter on the Internal Clip Player and Clip Player and Clip Control Panel* for detailed information.

Save/Load User Profile

Save User Profile: Config Menu > Save User Profile Load User Profile: Config Menu > Load User Profile

NOTE

Lyric Version 4.1 and later running on Windows NT®, Windows® 2000 or Windows XP® creates User Profile (**.reg*) files that are compatible with Lyric Versions 4.0 and later running on Windows NT. The **.lup* format is still supported, and limited-access users still cannot read **.lup* files.

Lyric operators can store their preferences for window position, Canvas resolution and all Preferences settings. When all adjustments to the Lyric interface are to your liking, you may create and save a Lyric User **Preference** file (.reg).

1. From the **Config** menu, select **Save User Profile**. The **Store Configuration To** dialog box is displayed.

Store Configu	ration To:		<u>?</u> ×
Save in: 🔁	Lyric	💌 🖛 🗈 😁	•
Messages		Bellew012302.lup	e.
		Lew3pt2HD.lup	
O90602HD AudioClipD Fred10310	.reg emoWindowsLayout.lup 1.lup	LewHDmain.lup RegFormat022703.reg	
•			
File <u>n</u> ame:	RegFormat022703.reg	<u>S</u> a	ive
Save as <u>t</u> ype:	Lyric User Profiles (*.reg	j; *.lup) 💽 Car	

Saving User Profile

2. Select a name and storage location for your settings, and then click **Save**.

Lyric now records User Profile information in the **.reg** file format. For backward compatibility, you may still use User Profiles stored in the old **.lup** format.

To load a User Profile:

1. From the **Config** menu, select **Load User Profile**. The **Store Configuration To** dialog box is displayed.

oad Configu	ation From:	?>
Look in: 🔂	Lyric	• 🖿 🖆 🎟 •
🗋 Messages 🗋 Playlists) ■ Lew01230 ■ Lew10310	2.lup 11.lup
Plugins	.reg 🔊 Lew3pt2H	D.lup in.lup
	emoWindowsLayout.lup 🕢RegForma	t022703.reg
	1,10р	
•)•
file name:	Lew3pt2HD.lup	Open
iles of type:	Lyric User Profiles (*.reg; *.lup)	▼ Cancel
	Lyric User Profiles (*.reg; *.lup)	
	Lyric New User Profile (*.reg) Lyric Old User Profile (*.lup)	

Loading User Profile

2. Select a User Profile, and then click Open. The User Profile settings are loaded.

NOTES

When loading a User Profile, it may take a moment for the interface to take on the correct configuration! This is normal behavior.

When a new User Profile is loaded, the Intelligent Interface Message Directory updates as well, and is reflected in the Intelligent Interface dialog box, accessed from Config Menu > Intelligent Interface. The Intelligent Interface directory is the same as the Default Message Directory as set in Preferences > Default Paths.

The last loaded User Profile remains in effect until a new User Profile is loaded.

Creating a Simple Lyric Composition

In case you've found an answer to every early question except the one above, here is an exercise in creating a simple Lyric composition, using three basic types of Lyric objects: 2D text, an imported bitmap image and a 3D Lyric-generated character.

1. Launch Lyric from the Start menu or a desktop shortcut.



Launching Lyric
The Lyric interface opens.

Trunk - Untitled		_(0) ×
Ple Edit View Config To	ols Window Help	
	X 8 X 6 8 8 8 8 8 8 8 8 8 8 9 8 9 8 8 8 8 8 8	
	** Neg Unkilled Dir; CUProgram Filesi Chronol Messages - FRB	
Aa T		Fegular
		Mode 17 20 17 20 Au
		100 100 100 100 100 100 100 100 100 100
1. Sec. 10		Argen Kerning
- 4-		Space Width Leading
		HSheer XSheer
Pe	-	P + Moscorital
<u>×</u>		Verical
220Test		
Clabal Light		APPLY
El canera	 Polesti Bilant 	Aa
	* Familier	
For Help, press F1	SceneGraph Int (X:192 Y214 Row:0	LOOK NO

The Lyric Interface

2. First, we're going to create a brief message in 2D text. Look closely at the upper left corner of the **Canvas**. It probably looks something like this:

🎫 Msg: Untitled	Dir: C:\Program Fi
r	

2D Text Window Margins

What you are looking at are the margins of a **2D Text Window**.

3. Move your pointer to the corner until it becomes a **Position** \bigoplus cursor.

🚥 Msg: Untitled	Dir: C:\Program Fil
\$	

Position Cursor

4. Click and drag down and to the right. You'll see the text window's Title Bar.



Making the 2D Text Window Visible

This text window is a Lyric object that can be manipulated in various ways, but for the moment, you're just going to....

5.create some text. Take note of the cursor that should have been in the text window's upper left corner all this time. Type some text.

🕶 Msg: Un	titled Dir: C:\Program Files\Chyron\Lyric\Messages FB0
2D Text	1
•	Type some text.

Typing Text into the 2D Text Window

Now might be a good time to look around the interface and take note of a couple of things:

- Notice that a baseline immediately appeared when you started typing.
- Look for the Scene Graph; it's probably somewhere at the left of the screen. In the Scene Graph, take note that an entry called 2D Text 1 has appeared.

🗖 Scene Graph 💶 🗙
2D Text 1
Global Light
- Camera

Scene Graph Showing 2D Text Window

Just hold these observations in mind, for the time being. Let's continue with another Lyric basic skill. You've got to get that 2D text window down to a manageable size so you can place other objects on the Canvas without getting confused. Move your pointer just to the lower edge of the text window's title bar. The pointer becomes a Resize arrow.



Resize Arrow

- 7. Click and drag downward. Since this is a **Resize** arrow (and not a **Move** arrow), you're shrinking the area of the text window, not moving the window downward.
- Now, if you put a Move cursor over the title bar as in Step 4, and drag the text window up, you've got a decent chance of finding the window's bottom edge, whereas you might not have been able to see it at first.

2D Text 1	4	÷
Type so	ome text.	
	đ	
	₩ 00 00 00 :	0

Finding the Bottom Edge of the 2D Text Window

9. Move the text window back toward the top of the **Safe Title** area, and repeat these moving and resizing actions on the **sides** of the window, until there's some room on the Canvas for other objects.



Moving the 2D Text Window Back into the Safe Title Area



elect a Graphic	: File			?>
Look in: 🔂	Chyron	• + 1		Preview
3D Objects CG PlugIn Clip Files Effects ImageMagi Images	Lyric ┥ Messages Playlists	Double-click m to open this di	ie rectory!	Check me!
File name:	<u> </u>		Open]
Files of type:	Graphic Files (*.bmp;*.30)1;*.cal;*.chy;.????;* 💌	Cancel]
- Apply to Backg C Size to Fit	ground C Center			Width Height Depth

Select a Graphic File

- 11. Before going any further, click the **Preview** checkbox in the upper-right of the dialog. It'll come in handy, as you'll see in a minute.
- 12. Now, double click the Lyric folder seen above. Here's what you'll see inside the Lyric directory:



Inside the Lyric Directory

13. Single-click **rgba.bmp**. We know you probably know that you could double-click it to expedite the process, but bear with us, because we want you to see the **Preview** while you're here.

Select a Graphi	c File	<u>?×</u>
Look in: 🧲	I Lyric 💌 🗢 🖆 🏢 -	Preview
D Object: Clip Files Effects Hide Images License	s Messages Playlists Plugins Trgba.bmp TVObject.jpg	RGBA
File name:	rgba.bmp Open	
Files of type:	Graphic Files (*.bmp;*.301;*.cal;*.chy;,????;* Cancel	
Apply to Back	ground O Center	Width Height Depth

Selecting a Bitmap

14. Press **Open**. The bitmap is added to the composition.



Bitmap Added to Composition

Notice that the **Scene Graph** has a new entry, representing the image as an object in the composition.

15. Lastly, we'll add a 3D character to the composition. Click anywhere on the Canvas that *isn't* inside the 2D Text window and isn't touching the imported bitmap. When you click in the Canvas's workspace, look over to the right and note that the Mode control on the Properties page has switched to "3D". This indicates that when not specifically dealing with 2D text, Lyric is ready for work with 3D characters and objects.

	Properties
1	Font 2D Font FX 3D F
I	Arial 💌
	Regular
	<u>Size</u> 1 50 ÷
	Arrent Manuface

Specifying 3D Character Mode

16. Type a letter; for now, just one.



Typing a 3D Character

Notice, too, that the Scene Graph now has a new element.

17. Next, we'll manipulate the 3D character in space a bit. Locate the button on the Lyric **Toolbar**. Place it over the 3D letter you typed, and move it however you please. You'll see that the character behaves quite three-dimensionally!



Manipulating the 3D Character

Note that imported 3D objects can be manipulated in the same manner as 3D characters.

Navigating and Entering Information in Lyric

Accessing Lyric Functions

The Lyric main interface is composed of a number of areas from which 2D and 3D effects and animations can be set up and executed. Various buttons and drop-down menus provide access to additional functions such as **Video Squeezeback**, **Roll**, **Crawl**, and so on. Pausing the mouse over a button or other Lyric component displays a **Tool Tip** describing the function of the item.

A grayed-out button, menu item, tab or dialog box indicates that it is either not available to the specific Duet system or the PC, or it is not active in the current mode. For example, the **Group** button does not become accessible until there are multiple objects selected on the Canvas. An opaque gray button with no graphic signifies that the function is not available to the specific system/PC.

Drop-down menus and associated submenus are accessible from the **Menu Bar**, as shown in the figure below.

🚥 Lyric - Untitled							
File	Edit	⊻iew	Config	Tools	Window	Help	
N	ew				Ctrl+N	Þ	<u>C</u> anvas
0	pen				Ctrl+O		Browser
⊆	lose						Playlist
5	ave				CHI+S	T	



If the **Browser** window is active, a **Browser** item is also on the **Menu Bar**, situated between **Tools** and **Window**.

A context-specific menu can be displayed and hidden by right-clicking while on a particular Lyric window, menu bar or toolbar. For example, as shown below, right-clicking on an alphanumeric font in the **Browser** displays a **Browser Alphanumeric Font**-specific menu.



Right-Click to Access Context-Specific Menus

Refer to **Object Name and Type** later in this section for additional information on object context menus.

About Mouse Selection

Even after a mouse button is clicked on an icon, object, etc., and is still in the down position, you are not committed to selecting the item until the mouse button is released. If you wish not to proceed with the selected item, move the pointer away from the item, and then release the mouse button.

Entering Information in Lyric

Entering parameter values and making selections generally follow Microsoft[®] Windows[®] conventions. In a number of instances, there can be more than one choice with which to enter the same parameter value. If so, the value entered using one method updates the other. For example, changing the value in a Spin Control Box would update its associated slider.

About Keyboard Shortcuts

Keyboard shortcuts can be used to quickly enter instructions to Lyric. References to keyboard shortcuts can be found throughout Lyric documentation and are specified as follows:

- If a keystroke combination contains a +, it indicates that the key specified to the left of the + should be pressed, and then held, while the key to the right is pressed. For example, Ctrl + N indicates that the Ctrl key should be pressed, and then held, while the N key is pressed. Ctrl + Alt + ↑ indicates that the Ctrl and the Alt key should be pressed and held while pressing the ↑ key as many times as necessary to shift the page on the Canvas.
- If the keystroke combination does not contain a +, then press, but do not hold the keys, in the order in which they are indicated. For example, to record a message at a specific Message Number,
 <Message Number> Record indicates that the Message Number should be entered on the numeric keypad, and then Record is pressed. No keys are held while others are pressed.
- If the + key is used as a keystroke instead of used to specify a held key, it is indicated as such.

Refer to Keyboard/Mouse Shortcuts Overview for a complete list.

Text Entry Field

Text entry fields appear as white rectangles. Place the cursor in the field, and then type the appropriate information.

Spin Control Box/Jog Wheel

A **Spin Control Box** is sometimes accompanied by a **Jog Wheel**. When both are present, adjusting the value in one updates the other.



Spin Control Box and Jog Wheel

To adjust the value in a Jog Wheel:

• Use the click-and-drag the mouse pointer to "spin" the **Jog Wheel** to the appropriate setting.

To set a value in a **Spin Control Box**:

• Highlight the **Spin Control Box** field, and then type the desired value into the entry field. Use the alphanumeric keys along the top of the keyboard, not the **Numeric Keypad** keys at the right to enter values, as the **Numeric Keypad** keys change **Message ID** number and do not update data fields.

OR

• Click on the arrows in the **Spin Control Box** to adjust the value.

Adjusting the Increment/Decrement of a Spin Control Box

The size of the increment/decrement of each **Spin Control Box** can be individually adjusted. They cannot be adjusted globally, as units vary among **Spin Control Box** applications in Lyric. To adjust the increment of an individual **Spin Control Box**:

1. Right-click on the **Spin Control Box**, and then select **Properties** from the context menu. The **Chyron SpinEdit Control Properties** dialog box is displayed.

Undo	Ctrl+Z	-9	Spin Button Increments Line	Page (CTRL key)
Cu <u>t</u> ⊆opy Paste	Ctrl+X Ctrl+C Ctrl+V		0.100000	1.000000
Select <u>A</u> ll				
Properties		•		

Accessing the SpinEdit Control Properties Dialog Box

- 2. Enter a new value in the **Line** field. The value in this field specifies the number of units that the **Spin Control Box** increments or decrements when an arrow is clicked.
- 3. Enter a new value in the **Page (CTRL key)** field. The value in this field is the amount that the **Spin Control Box** increments or decrements when the **Ctrl + an arrow** is clicked. This value is generally set to a larger value than the **Line** value, giving the user the option of incrementing/decrementing by larger intervals.
- 4. Select **Apply** to apply the adjustment, and then click the **Close** (**x**) icon at the top right corner of the dialog box to exit.

OR

Select **OK** to apply the adjustment and exit the dialog box.

OR

Select **Cancel** to cancel the adjustment and exit the dialog box.

The context menu shown above also features editing functions that simplify copying values from one field to another. To activate these functions on the menu, highlight a value in a **Spin Control Box** field.

Kernin		
	Undo	Ctrl+Z
25	Cu <u>t</u>	Ctrl+X
	⊆ору	Ctrl+C
	<u>P</u> aste	Ctrl+V
0.01	Select <u>A</u> ll	
Filte	Properties	

Spin Control Box Context Menu

Function	Description
Undo	Undoes the change in the Spin Control Box field.
Cut	Cuts the selected value in the Spin Control Box field.
Сору	Copies the selected value in the Spin Control Box field.
Paste	Pastes the selected value to the Spin Control Box field in which the cursor is located.
Select All	Selects the entire value in the Spin Control Box field.
Properties	Described above.

<u>Slider</u>

Drag the slide box to the desired value. Note that some sliders may differ in appearance (e.g. have a moveable pointer), but still operate in the same manner.



Slider

Checkbox

Click on a checkbox to toggle it on/off or activate/deactivate.

Checkbox, Unchecked (Left) and Checked

Radio Button

Click on a radio button to activate it. Generally, only one button in a radio button group can be activated at any time. Selecting a different button in a radio button groups usually deactivates the previously active radio button.



Radio Buttons

Frame Counter

A Frame Counter field indicates time in Hours/Minutes/Seconds/Frames. Some Frame Counters have adjustment arrows; other do not. NTSC video counts 30 (actually 29.97, non-drop-frame, in Lyric) frames per second; PAL video counts 25 frames per second.



Frame Counter

A Frame Counter can be set using one of the following methods:

- Place on the cursor on the Hours, Minutes, Seconds or Frame field or press ← or → to cursor to the field, and then click on the up or down arrow to adjust that field. A field reaching the end of its range will change the adjacent field to continue the adjustment. For example, clicking the up arrow while the Frame Counter reads 00:00:00:29, will advance the Frame Counter to 00:00:01:00.
- Place on the cursor on the **Hours**, **Minutes**, **Seconds** or **Frame** field or press ← or → to cursor to the field, and then enter a new value.

Other Buttons

Depending on the function of the particular button, clicking on it may simply activate the function, or perform an operation.

Tabs

To organize a large number of settings in a dialog box, it is sometimes split into tabs. Clicking on a tab opens a dialog box in which board-specific or function-specific settings can be entered. For example, the **Properties** dialog box, is split into a tabs addressing **Font**, **2D Font**, **Lighting**, **Clock/Timer** and so on.



Tabs

Typing Text in Lyric - Standard and Translation Modes

Standard vs. Translation Mode

For the most part, typing 2D or 3D text on the **Canvas** is performed in the same manner as typing text to paper on a typewriter or to a word processor on a PC. Most characters are typed in **Standard Mode**. Alt characters, however, produced by key combinations that include the **Alt** key, must be typed in what is known as **Translation Mode**. This is because pressing the **Alt** key in combination with alphanumeric keys in Lyric, activates functions such as font and menu selection, rather than typing characters.

There are two Translation modes:

- Locked Translation Mode: This mode activates Translation Mode until turned off. Toggle on and off by pressing Ctrl + (plus key).
- Single-Stroke Translation Mode: This mode activates Translation Mode for typing one character only. Toggle on and off by pressing Ctrl (hyphen key).

Note that once **Translation Mode** is activated, do not press the **Alt** key to type the **Alt** character. Simply press the key that makes up the remainder of the **Alt** keystroke combination.



Key Showing the Four Possible Keystroke Combinations

As shown in the figure, there are four possible key combinations that can be produced by the keycap A:

- A: Sends Code 97 to the system. To type A, the system cannot be in Translation Mode.
- Shift + A: Send Code 65 to the system. To type Shift + A, the system cannot be in Translation Mode.
- Alt + A: Sends Code 150 to the system. To type Alt + A, activate Translation Mode, and then type A.
- Alt + Shift + A: Sends Code 149 to the system. To type Alt + Shift + A, activate Translation Mode, and then type Shift + A.

The **Translation** mode also offers a convenient way to use all four of the ASCII codes that Lyric assigns to each key of a PC or Duet keyboard. While helpful for access to non-standard characters, this feature is especially useful with the **RGB Font** function. Some production situations, such as sporting events, may require quick recall of a large number of bitmaps linked to keystrokes. The **Translation Mode** allows the use of the **Alt** keystroke combinations to access **RGB Font** characters.

When Translation Mode is active, TRNS on the Lyric Status Bar is not grayed out.

TRNS

Status Bar Showing Translation Mode Active

Typing Characters Using Alt + ASCII Codes

Note that characters with ASCII codes through **255** can be typed on the **Canvas** by pressing and holding the **AIt** key while entering the ASCII code padded out to four digits. The numbers must be entered on the numeric keypad, not the alphanumeric keys located along the top of the keyboard. This method works for both **TrueType®** and **RGB Fonts**. For example, to type the character **®**, which is ASCII code **174** in the Arial font:

• Press Alt + 0174 on the numeric keypad.

Refer to Duet Keyboard for a map of the ASCII values assigned by Lyric to the keyboard.

Selecting and Grouping Objects

Selecting Objects

When repositioning, rotating, applying other attributes to an object or objects, it is necessary to select the object(s) first. Objects may selected directly on the **Canvas**, or from the **Scene Graph**.

The methods used for selecting 2D text are different from those used for selecting other objects. *Refer to* **Selecting and Modifying 2D Text** for details. The following selection procedures apply to objects except 2D text.

In addition, refer to **Enable Bounding Box** for details on selecting a 2D object using a **Bounding Box**.

The following selection procedures apply to objects except 2D text.

To select an object on the Canvas:

• Click the object with the mouse. As the object is selected, it is highlighted in the **Scene Graph**.

To select an object on the Scene Graph:

• Click the object name on the **Scene Graph**.

Refer to Animation: Scene Graph for additional information.

To select multiple objects:

• Hold the **Ctrl** key while clicking each object. As each object is selected, it is highlighted in the **Scene Graph**.

It can, at times, be difficult to select an overlapped object on the Canvas. To do so:

- 1. Hold **Alt** while clicking on the **Canvas**. Watch the **Scene Graph**. Each time the mouse is clicked, a different item in the **Scene Graph** is highlighted. When the desired item is highlighted, it has been selected.
- 2. Release the **Alt** key. The object can now be clicked, and repositioned, rotated, etc.

This technique can also be used to select a keyframe from a **Motion Path** where the frames are overlapping.

- 1. Click (select) a frame on a Motion Path that is behind the keyframe.
- 2. Hold the **Alt** key down, and then click the keyframe as many times as necessary to advance to the keyframe.

As described in the following section, objects can also be grouped. This enables the application of attributes to the entire group of objects.

Grouping/Ungrouping Objects

When multiple objects are selected, they may be grouped, so that changes to attributes simultaneously affect all member objects of the group.

To group selected objects, click the **Group** icon or select **Group** from the **Tools** menu:



Group Icon

The grouped objects are labeled with a group name, and then listed on the **Scene Graph** as indicated by the topmost item:



Scene Graph Showing Grouped Objects

To expand a group on the **Scene Graph** to its constituent objects, click the plus sign + to the left of the group name. To reduce an expanded group, click the minus sign - to the left of the group name.

Note that when using the mouse in conjunction with **Transform Tools** to move, rotate, scale or change the center of rotation of a grouped set of objects, the user can manipulate the group as one unit, even if only one object of the group is selected. Holding down the **Shift** key in conjunction with using these tools allows manipulation of an individual object within the group.

To ungroup selected objects, select any object in the group, and then click the **Ungroup** button or select **Ungroup** from the **Tools** menu:



Ungroup Icon

The Group object disappears from the Scene Graph, and the individual objects are listed separately.

Refer to Internal Properties - Use Group Priority for additional information on group behavior.

Object Name and Type

Object Context (Right-Click) Menu > First Item

Many functions and tools related specifically to an object can be accessed by right-clicking on the object itself on the **Canvas**, or by right-clicking the object's listing in the **Scene Graph**. This displays the object's context menu. The first item in an object's **Context** menu identifies the name and type of the object.

If necessary at any time, the object can easily be renamed.

- 1. Right-click on the object on the Canvas, or on its name in the Scene Graph.
- 2. Select the first item in the context menu. This item specifies the name and type of the object. The **New name for selected object:** dialog box opens.

New name for selected	d object:	×
Live_Logo		
ОК	Cancel	

Changing an Object Name

3. Enter a new name, and then click **OK**. The new object name is reflected in the **Scene Graph**, the **Keyframe Graph**, the **Timeline** and the object's context menu.

Scroll Bars

Scroll Bars are located at the right side and bottom of the **Canvas** and move the view of the 3D workspace up, down, right or left. Scroll bars are present in other Lyric Windows as well.

NOTE

It is important to reset the Canvas scroll bars before recording a new Lyric message, in order to make sure that text and/or objects are properly positioned for display upon recall. *Refer to Getting Started: Canvas for additional information.*

About Transparency Settings

The **Transparency** setting is technically an **Opacity** setting, in that a setting of **0** is completely transparent, and a setting of **100** is completely opaque. It is common throughout the industry, however, to use the terms **Transparency** and **Opacity** interchangeably when referring to level settings.

Edit Menu

The Edit menu accesses editing functions common to most objects, 2D Text Window and Template editing functions, as well as selected position and animation editing functions. Unless specifically noted, references to 2D Text Windows includes also 2D Roll, 2D Crawl and 2D Type On (also known as Slow Reveal) Windows. Many of these functions are also accessible from the Chyron Toolbar, keystroke combinations or by other means. All menu items in the menu shown below are shown as active, although during Duet/Lyric operation, various items are active or grayed out depending upon the Duet/offline system, optional hardware installed and current function in use.

- For information on editing functions common to most objects, refer to the following section.
- For information on the 2D text editing functions, refer to the chapter on 2D Text.
- For information on **Template**, **DBLink** and **(Intelligent) Interface** functions, refer to the chapter on **2D Text Templates**.
- For information on Keyframe All Objects, Keyframe Selected Objects and Copy/Paste Animation State, refer to the chapter on Animation.

Edit	
Undo	Ctrl+Z
Redo	Ctrl+Y
Out	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Paste in Place	Ctrl+I
Paste Unicode Text	Ctrl+Alt+V
Delete	Del
	50.
Insert Row	Alt+Insert
Delete Row	Alt+Delete
Swap Row Priorities Up	Alt+P
Swap Row Priorities Down	Alt+N
Insert Tab	Ctrl+T
Select Next Tab	Alt+3
Tab Column Mode	Alt+M
Select All	Ctrl+A
Delete Background	
Find/Replace	Ctrl+H
Renumber Templates	
Disable Interface Fields	Alt+U
Disable DBLink Fields	
Delete Templates/Leave Text	
Update DBLink Fields	
Enable Word Wrap	
Row Shift Locked	Ctrl+L
Row/Tab Properties	
KevErame All Objects	
KeyFrame Selected Objects	
Copy Animation State	
Decte Animation State	
Faste Millination State	

Edit Menu

Common Editing Functions

The following edit functions are common to most objects.

Undo/Redo	
To view:	
View Menu > Undo	
View Menu > Redo	
To execute:	
Undo: Edit Menu > Undo	; Windows Toolbar ᡢ; Ctrl + Z
Redo: Edit Menu > Redo	; Windows Toolbar 🛄; Ctrl + Y

Use this command to reverse the last editing action. Lyric keeps track of previous editing steps, so that **Undo** can be used repeatedly to reverse recent actions.

- If Undo is unavailable on the Edit menu, the last action cannot be reversed.
- After one or more Undo operation(s), you may select Redo repeatedly to redo your editing steps.

Please note that the number of preserved edits is limited by available memory. This memory is automatically allocated so that the maximum number of edits are preserved.

Undo/Redo Lists

The lists of the most recent undone and redone edits can be viewed by accessing **View Menu > Undo List** and **View Menu > Redo List** respectively. Additionally, a range of edits can be undone from these lists. The **Undo** and **Redo Lists** show a chronological list of **Canvas** editing steps, arranged from earliest to most recent.

Undo List

To view the **Undo List**, select the **Undo List** item from the **View** menu. If the **Undo List** item is checked, the normal **Undo** command (**Ctrl + Z**) also displays the **Undo List**:

Undo List		×
Undoable States		
Modified Global Light frame 0 Created C Created h Created y Created r Created n Modified C Position at frame 1 Modified h Position at frame 2 Modified y Position at frame 3 Modified r Position at frame 4 Modified o Position at frame 5 Modified n Position at frame 5 Modified C Rotation at frame 7 Modified C Rotation at frame 8		
Modified C Rotation at frame 9 Modified y Rotation at frame 9		-
Undo To	Cancel	

Undo List

- To undo the most recent edit, scroll to the bottom of the list, and then select the last step and click the **Undo To** button. Lyric cannot undo a single step in the middle of the **Undo List**, however you may undo a range of edits.
- To undo a range of edits, select the step you wish to undo, and then click the **Undo To** button. The selected edit, and all subsequent edits, are undone.

Redo List

Undone edits appear on the Redo List, which is also available from the View menu.

- To redo the most recent undone edit, select the first item on the **Redo List**, and then click the **Redo To** button.
- To redo a range of undone edits, select the step you to wish to redo, and then click **Redo To**. The selected step, and all more recently undone edits, will be redone.

Cut, Copy, Paste



- The Cut command deletes the currently selected object or text and places it on the clipboard.
- The **Copy** command copies the currently selected object or text and places it on the clipboard.
- The **Paste** command inserts the current contents of the clipboard into the currently active window at the cursor location.

The following figure shows how different types of elements are selected.



Selecting a 3D Character



Selecting a 2D Text Window



Selecting 2D Text

Paste in Place

Edit Menu > Paste in Place; Ctrl + I

Paste in Place pastes previously cut 2D text from one Lyric composition into the *same exact position* in the same or a new composition.

Delete

Edit Menu > Delete; Windows Toolbar : Delete Key (for 2D Text only); Ctrl + Delete (Objects) The Delete command deletes the currently selected object or text *without* placing it on the clipboard.

Select All

Edit Menu > Select All; Ctrl + A

Select All selects all text in the active 2D Text window. To perform a Select All operation:

• Select a **2D Text** window, and then select **Select All** from the **Edit** menu, or press **Ctrl + A**. A bounding box appears around all of the text in the **2D Text** window. Changes to font attributes, justification, etc., are now applied to all of the text in the **2D Text** window.





To remove the bounding box:

• Click anywhere outside of the bounding box.

View Menu and Toolbars

The View Menu

The **View** menu provides control of the display of the various windows and toolbars that comprise the Lyric interface, allowing customization of the workspace.

View	
Toolbars 🕨 🕨	✓ Standard Tools
🖌 Status Bar	✓ Chyron Tools
✓ Browsers	✓ Alignment Tools
✓ Canvases	✓ Transform Tools
Undo List Redo List Keyframe Graph Scene Graph Properties Timeline	✓ Font Tools
	✓ Duet Tools
	Message Number
	Message Number A Deset Scroll/View Desition
	Reset Scrolly view Position
	Reau Errects
✓ Macros	✓ Browser Commands
iTV Browser	✓ Browser Assets
✓ Multi-View	HTML Tools

View Menu

Displaying Toolbars

Use the **View** menu command to display and hide Lyric's various **Toolbars**, which include buttons for some of the most common commands in Lyric, such as **File Open**. A check mark appears next to the menu item when the **Toolbar** is displayed. When the checkmark is not displayed, the toolbar is hidden. Note that **HTML Tools** is not currently supported.

Moving/Docking/Floating/Hiding a Toolbar

Toolbars can be easily repositioned by clicking and dragging the toolbar to a new location. Toolbars can be either docked or floating.

Docked: The toolbar can be attached horizontally to the top or bottom edge of a window, or vertically to the left or right edge of a window.

Floating: The toolbar is positioned away from the edges of the window.

To reposition a toolbar as a docked toolbar:

• Click a point on the toolbar that is not on an icon, and then drag the toolbar to a new location at the edge of the program window (interface).



Repositioning a Toolbar to a Docked Position

To reposition a toolbar as a docked toolbar:

• Click a point on the toolbar that is not on an icon, and then drag the toolbar to a new location away from the edge of the program window (interface).



Repositioning a Toolbar to a Floating Position

Transport Control		× 00 00 00
Alignment Tools	Read FX	Transform To X

Floating Toolbars

A floating toolbar can repositioned by clicking and dragging. It can also be repositioned as follows:

1. Left-click on the title bar of the floating toolbar. From the context menu, select Move.



Toolbar Context Menu

2. Use the cursor keys to reposition the toolbar, and then press Enter.

To automatically convert a floating toolbar to a docking toolbar:

• Double-click on a point on the toolbar that is not an icon. The toolbar docks to its usual position.

A floating toolbar can be hidden by right-clicking on a point that is not on an icon, and then selecting **Hide**. The toolbar can be redisplayed by selecting the toolbar name in the **View** menu, as described above.



Toolbar Context Menu

Help Menu - Using Lyric's Online Help System

Help Menu

NOTE

Lyric Help is updated periodically and can easily be downloaded into the Lyric installation directory for direct access from Lyric, or to any system for offline access. Updates to Lyric Help and a PDF of the Lyric User Guide are available at http://www.chyron.com/support/docs/duet.html.

Lyric's **Online Help** system offers comprehensive information on Lyric and Duet operation. To access **Help** features:

• Click on the Help menu.



Help Menu

Help Topics

Clicking the **Help Topics** menu item opens the **Help** interface; by default, the left-most pane of this screen displays the **Index**.



Lyric Help Window

You may also click on the **Contents** tab for a selection of "Books" containing the same content that is offered by the **Index**, or click on the **Search** tab and enter a subject name to look for topics containing the information about the specific subject.



Lyric Help Table of Contents and Index

Browse Sequences

Along the top of the **Help** window is a **Browse Sequence** display. It displays an ordered set of topics that take the user through a subject.

- Click on the topics to open them, and use the arrows to the left and right of the display to navigate forward and back through the sequence.
- A choice of **Browse Sequences** on selected subjects is available from the dropdown list box to the left of the **Browse Sequence** display.

<hr/>	\Rightarrow	Г	21	21	21	21	21	21	21
Previous	Next	14	Cotting) (hat	Dust	Penet	Peset	Selecting	Pererding
Getting 9	Started 🔻		Started	Dol Do	Keyboard	Duet Key	Canvas	Objects	and Rea

Help Browse Sequence

Printing Help Topics

Print and **Print Preview** functionalities for printing images of Lyric compositions are not implemented at this time. If, however, the Duet system or PC is connected to a printer, **Online Help** topics can be printed. From within the **Online Help** window:

• Right-click, and then select **Print...** from the menu, and then proceed as usual from the **Print** dialog box.

OR

• Click on the **Print** icon in the **Online Help** toolbar, and then proceed as usual from the **Print** dialog box.



Print Icon in Online Help

Context-Sensitive Help

Context-sensitive help, i.e. help that is tailored to a selected function is available by clicking the kind icon, and then clicking a window, icon, window, etc. on the Lyric interface. The appropriate help is displayed.

More Info

Clicking the **More Info** menu item opens the screen pictured below. It contains information and links for Chyron Sales and Support.

e Information	
chyron	OK
www.chyron.com	
Technical Support Telephone: U.S. (631) 845-20	00
Email: support@chyron.c	:om
Web: www.chyron.com	/support
Product Information	
Sales: www.chyron.com	/sales
On-Line Catalog: www.chyron.com	/products/cated
Cnews - Email Newsl	etter: /news

More Info Window

About Lyric

Clicking the **About** menu item opens the screen pictured below. It contains Version and Build Numbers, as well as buttons that give information about any Lyric plug-ins (LEIFlets) that are installed in your system. It also displays the executing directory for Lyric.

• Press the LEIFlets... button to expand the dialog box for plug-ins information, and in the expanded menu, press the button(s) for information on the individual plug-ins, shown at right.

/ersion 4.12 (Build 58 am Files\Chyron\Lyric t © 1998 - 2003 forp.	6) : 4.1 DK			
	×	About Quar	terback	×
/ersion 4.12 (Build 58 am Files\Chyron\Lyric ⊧© 1998 - 2003	6) : 4.1	PGS	Quarterback LEIFlet Copyright (C) 2001, Patrick Graphics Systems www.patrickgraphicssystems.com	I
Corp.		About Harv	ester Lite	×
	Ж	RGS	Harvester Lite LEIFlet Copyright (C) 2001, Patrick Graphics Systems	
Title	About			
Quarterback			www.patrickgraphicssystems.com	-
	/ersion 4.12 (Build 58 am Files\Chyron\Lyric t © 1998 - 2003 Corp. /ersion 4.12 (Build 58 am Files\Chyron\Lyric t © 1998 - 2003 Corp. Title Quarterback Harvester Lite	/ersion 4.12 (Build 586) am Files\Chyron\Lyric 4.1 t © 1998 - 2003 Corp.	Version 4.12 (Build 586) am Files\Chyron\Lyric 4.1 t © 1998 - 2003 Corp. OK Version 4.12 (Build 586) am Files\Chyron\Lyric 4.1 t © 1998 - 2003 Corp. OK Title About Quarterback Harvester Lite	✓ersion 4.12 (Build 586) am Files\Chyron\Lyric 4.1 t © 1998 - 2003 Corp. ✓

About Lyric

Window Menu



Window Menu

The **Cascade** and **Tile** selections (below, left and right respectively) have the same effect as in other Windows applications.



You may use the User Profile selection in the Config menu to reset the windows.

Other selections in the **Window** menu represent each open window on the interface. You may use these selections to change the active window.

Tools and Canvas/Scene Graph Context Menu

Menu Bar > Tools; Right-Click Empty Area of Canvas; Right-Click Empty Area of Scene Graph The **Tools** menu and the **Canvas/Scene Graph** context (right-click) menu access many of Lyric's special features. The menu is shown below with all functions active. During Duet/Lyric operation, various items are active or grayed out depending upon the Duet/offline system, optional hardware installed and current function in use. Additionally, depending on the installed plugins, there may be items at the end of the menu which do not appear here.

NOTE

For the sake of clarity, Tools/Canvas Context/Scene Graph Context menu functions in the manual are referred to as accessible from the Tools menu. It should be understood that in most instances, the same functions are also accessible from the Canvas and Scene Graph context menus. Differences are noted where appropriate.

This menu is accessed by selecting **Tools** from the Lyric menu bar, or by right-clicking on an empty area (not on an object or object listing) of the **Canvas** or the **Scene Graph**.

3D Object			
Background		۲	<u>S</u> olid/Ramp Color
Flipbook			Graphic File
Movie			
Graphic			
Squeezeback Object			
Video Region			
Clock		_	
Crawl			
Font Editor			
Roll			
Spell Check	F7		
Spline Window			
Text Window			
Template			
Template Update	Alt+T		
Timer			
Type On			
Group			
Ungroup			
Reverse Animation			
Clip Control Panel			
Mask Scene		۲	<u>C</u> reate Mask
Multi FX			✓ <u>U</u> se Mask
Playlist			<u>D</u> elete Mask
Squeezeback Panel			<u>E</u> dit Mask
Video Capture			Save Mask
CMix			Becall Mask
Video Mixer			
Set Message Properties			
Set Message Preload Time			
Joseph TV Object		_	
Harvester Lite			
Harvester Lite			
BizGraph			
Paint			
Harvester Dro			
Ouerterbeck Properties			
Johanne Droperties			
Internal Properties]

Tools and Canvas/Scene Graph Context Menus

The following list provides a brief description of each of the items on this menu.

- **3D Object: 3D Object** places a 3D object on the **Canvas**. 3D objects are covered in depth in the chapter on **3D Characters and Objects**.
- Background: Background adds a background to the entire Canvas, a 2D Text Window or a 2D Text Template. Backgrounds are covered in depth in the chapter on Color, Transparency, Background, Lighting and Texture.

- Flipbook; A Lyric Flipbook animation is a series of targa (*.*tga*), *.*tif* or *.*bmp* files, preloaded into memory and played out in sequence, much like the old-time paper flipbooks. In a Flipbook animation, each bitmap image appears for 1 frame of video. Flipbook animations can be created on the Duet platform, or on off-line PCs, typically using third-party animation applications such as SoftImage or 3D Studio. Flipbook animations can also be created within Lyric itself. Flipbooks are covered in depth in the chapter on 2D Objects.
- **Movie Duet LE/LEX/PCI/PCI+:** An *.*avi* or *.*mov* object can be imported into the Lyric composition. The **Movie** object can be repositioned, scaled and rotated as part of a Lyric animation.
- Graphic: Graphic places a 2D object on the Canvas. 3D characters are covered in depth in the chapter on 3D Characters and Objects.
- Squeezeback Object (Duet SD Only): Squeezeback (Duet SD only) enables the creation of regions in a Lyric composition that can be displayed up to full-screen, with no loss of video quality. Squeezeback effects are created on the optional Squeezeback Board. Because Squeezeback effects are processed on its own board, manipulation of Squeezeback video has fewer effects on the behavior of other elements in a Lyric composition than similar Video Region effects created on the Duet's VGEs. Squeezeback Object and Video Region are covered in depth in the chapter on Video Region and Squeezeback Object Duet SD.
- Video Region (Duet SD Only): Video Regions are areas of the Canvas that display video from external sources or the Duet Internal Clip Player. Video Regions may be incorporated into Lyric compositions and animated or manipulated like any other object on the Canvas. Video Regions may be scaled with or without locked aspect ratio, but the video playing back may not be cropped. Apparent size may also be altered by increasing distance from the Camera along the Z-axis. Video Region is covered in depth in the chapter on Video Region and Squeezeback Object Duet SD.
- Clock: Clock places a Clock on the Canvas. The Clock, composed of 2D text, can be displayed in a TrueType[®] or RGB Fonts, in a variety of hour-minute-second formats. Clocks are covered in depth in the chapter on Clocks and Timers.
- Crawl: Crawl opens a specialized 2D Text Window in which one or more rows of text can be set to travel horizontally across the screen. Crawl setup is covered in the chapter on 2D Text Animation.
- Font Editor: RGB Fonts, which are fonts composed from bitmap images, as opposed to standard font characters, can be created using the Custom Font Editor. RGB Fonts are useful for quickly typing frequently-used graphics such as sports team logos. Typing graphics is considerably faster than importing them.

The **Custom Font Editor** can also import and export iNFiNiT! fonts for use in Lyric or imported iNFiNiT! messages. *iNFiNiT! fonts and message operations are covered in depth in Browser: iNFiNiT! Font Assets, Import from iNFiNiT!, Export to iNFiNiT!, Custom Font Editor and FTP - Transferring Files to/from an iNFiNiT! System.*

- Roll: Roll opens a specialized 2D Text Window in which one or more rows of text can be set to travel vertically over the screen. *Roll setup is covered in the chapter on 2D Text Animation.*
- Spell Check (F7): Lyric provides a Spell Check feature, which examines all 2D text on the Canvas, including text in 2D Text, Roll, Crawl and Type On Windows and in 2D Text Templates, and compares them to words in a standard dictionary, as well as those in a User Dictionary. The User Dictionary, as well as other spelling parameters, can be set in Spelling Preferences. Spell Check is covered in the chapter on 2D Text and the chapter on Preferences.
- Spline Window (Type-on-a-Curve): Lyric's Spline Window tool enables 2D text to be mapped and animated to a curved baseline. Double-byte characters from languages such as Korean, Chinese and Japanese are supported. Spline Window setup is covered in depth in the chapter on 2D Text Animation.
- Text Window: Text Window places a new 2D Text Window on the Canvas. 2D Text and 2D Text Windows are covered in depth in the chapter on 2D Text.

- **Template:** The **Template** function creates a template which enables update of text contained within it. When the **Template** function is executed, the following occurs:
 - o If the cursor is in a 2D Text Window, a 2D Text Template is placed at the cursor position.
 - o If 2D text is highlighted, a Template is created which encloses the highlighted text.
 - o If the cursor is outside of a 2D Text Window, a 3D Character Template is created.

Note that 2D objects automatically have templates applied. Refer to the section on **Updating Lyric Messages** and to the sections on **2D Text Templates**, **2D Object Templates** and **3D Character Templates** for additional information.

- Template Update (Alt +T): Template Update enables the text in 2D Text Templates and 3D Character Templates to be updated with new text. Refer to the section on Updating Lyric Messages and to the sections on 2D Text Templates and 3D Character Templates for additional information.
- Timer: Timer places a Timer on the Canvas. The Timer, composed of 2D text, can be displayed in a TrueType[®] or RGB Fonts, in a variety of hour-minute-second formats. The Timer can count either up or down. *Clocks are covered in depth in the chapter on Clocks and Timers.*
- **Type On (Slow Reveal)**: **Type On** opens a specialized **2D Text Window** in which one or more rows of text can be set appear on screen one character at a time, simulating typing. Characters can also be set to appear randomly. *Type On setup is covered in the chapter on 2D Text Animation*.
- **Group/Ungroup:** When multiple objects are selected, they may be grouped, so that changes to attributes simultaneously affect all member objects of the group. *Group is covered in depth in the chapter on Getting Started: Navigating and Entering Information in Lyric.*
- Reverse Animation: Reverse Animation reverses the direction of the animation currently on the Canvas, causing the animation to run in reverse. *Reverse Animation is covered in depth in the chapter on Animation.*
- Clip Control Panel (Duet SD/LE/LEX/PCI/PCI+): The Clip Control Panel provides the ability to
 play back video and/or audio clips either independently or as part of a Lyric animation. Lyric Clip
 (*.ccf) files are created which mark In and Out points of the clip. Clip files can be created from
 sources such as a VTR or DDR (Digital Disk Recorder), Chyron Aprisa DDR, Duet's Internal Clip
 Player or Audio files processed through integrated audio hardware in Duet. Lyric does not perform
 actual edits on the recorded content of the source material. The Clip File contains the In and Out
 point information that defines the duration of the clip. In order to play back the video/audio, the
 original material and the playback device must be available. Clips functionality is not available to
 Duet HD systems. The Clip Control Panel is covered in depth in the chapter on the Internal Clip
 Player.
- Mask Scene (Duet SD Only): Mask Scene provides the ability to animate "cut-out" objects inside an arbitrarily shaped window. The Mask created by the "cut-outs" can reveal background, video input or other Lyric images. Mask Scene is covered in depth in the chapter on the Masks.
- Multi FX (Duet SD Only): Lyric's Multi FX capability allows Duet SD's frame buffers to perform transitions between Lyric messages using Advanced Image Effects. Multi FX include Curtain, Explosion, Focus, Leaf, Matrix, PageRoll, PageTurn, Ripple, Slide, Venetian, Zoom and Wipe. For optimal Multi FX execution, the Duet SD should be equipped with at least two VGEs and a Video Mixer. Multi FX are covered in depth in the chapter on Transition Effects.
- **Playlist:** The **Playlist** feature allows multiple Lyric messages to be compiled into an automated list and played out sequentially using preset transition effects. For example, this feature might be used to automatically play a dissolving sequence of graphics displaying sports statistics of players or teams. *Playlists are covered in depth in the chapter on Playout to Output*.
- Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only): The PCI-Squeezeback board adds cuttingedge animated video effect creation capability to the Duet LE/LEX/PCI/PCI+ system. The Lyric interface provides a set of easy-to-use setup controls for the PCI-Squeezeback board. The PCI-Squeezeback board features four independent video layers, two of which can be resized and positioned in real time to create dynamic effects such as compression of a full-screen video image to allow for display of additional graphics in the lower third. Note that the PCI Squeezeback Board for Duet LE/LEX/PCI/PCI+ is a completely different piece of hardware from Duet SD's Squeezeback Board. The Squeezeback Panel and the PCI-Squeezeback board are covered in depth in the chapter on Video Squeezeback - Duet LE/LEX/PCI/PCI+.

- Video Capture: Lyric's optional Video Capture tool allows the Duet to capture a frame of video, display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats (e.g. TIFF, TGA, BMP, JPG, etc.). The hardware and procedures are different depending on whether the system is a Duet SD, Duet HD or Duet LE/LEX/PCI/PCI+. Video Capture is covered in depth in the chapter on Video Capture.
- CMix: CMix is a 1RU-rack mount device providing two output channels, each displaying an independent mix of up to 4 video/key input layers over an optional Program video input layer, which mix to one video/key output. CMix is connected to a host machine via the Universal Serial Bus (USB). Originally designed for use with Duet LE/LEX/PCI/PCI+, CMix can also be used to expand the mixing capabilities of Duet SD systems, or with conventional PCs equipped with broadcast-quality video sources for use as a standalone router/switcher. The system contains two independent sets of mixing logic controlling two video/key outputs. The mixers share the same inputs, but the inputs can be assigned to different layers in each mixer. CMix is covered in the chapter on Video Mixing.
- Video Mixer (Duet SD/HD Only): The optional internal mixer board allows precise routing and layering of video to output. The boards and setup procedures are different for the Video Mixer Duet SD and the Video Mixer Duet HD. Video Mixer is covered in depth in the chapter on Video Mixing.
- Set Message Properties: Refer to Internal Properties at the end of this section.
- Set Message Preload Time (Duet LEX/PCI+ Only): The Duet LEX/PCI+ automatically calculates a
 preload for Streaming Animations. If, however, the animation does not execute properly because of
 a short preload, a higher preload value can be stored with the specific message. The advantage of
 customizing a Message Preload Value is that if a message requires a longer preload, the larger
 required system resources will be dedicated only for playout of the individual message, and would not
 be tied up when other functions are performed. Set Message Preload Time is covered in depth in
 the chapter on Duet Tools: Streaming Animation Duet LEX/PCI+ Only.
- Insert TV Object: Insert TV Object inserts a TV Object, which is a place-holder that designates the location of a "squeezed-back" (not to be confused with Lyric/Duet Squeezeback operations) TV picture in an interactive television composition, when activated on the viewer's set-top box. Lyric for iTV composition requires a special license and this tool may be unavailable in your version of the software. Insert TV Object is covered in depth in the chapter on iTV.
- Harvester Lite: The Harvester Lite plugin enables a Lyric 2D Text Template to be linked to a text field at a remote URL for dynamic update via the Internet. Harvester Lite is covered in depth in the chapter on Plugins.
- Harvester Properties: Update parameters for Harvester Lite are set via Harvester Properties. Note that this item does *not* appear in the **Tools** menu, but does appear in the **Canvas**, **Scene Graph** and **2D Text/Template** context menus. *Harvester Lite is covered in depth in the chapter on Plugins*.
- Paint, BizGraph, Harvester Pro and Quarterback: These are a few examples of a variety of optional plugins available for use with Lyric. If these plugins are not installed on the system, the corresponding items do not appear on the **Tools** menu. Liberty Twister, a paint plugin, is a product of Video Design Software. Please access Liberty Twister online Help for operational information or visit the Video Design Software web site at http://www.videodesignsoftware.com. BizGraph, an animated graph display plugin; Harvester Pro, a data harvesting plugin; and Quarterback an enhanced directory access plugin, are from Patrick Graphics Systems. Please access the plugin's online Help for operational information or contact PGS at inforequest@patrickgraphicssystems.com. Web Site: http://www.patrickgraphicssystems.com.
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. The Internal Properties accessed from this menu are applied to the current message. They include Legacy Mask, Preview Frame, Rendering Mode, Use Group Priority and onRead Macro. Note that Internal Properties does not appear on the Tools menu.

Chyron Tools

View Menu > Toolbars > Chyron Tools

The Chyron toolbar accesses Lyric-specific functions, such as **Text Window**, **Roll**, **Crawl**, **Type On**/Slow Reveal, **Clock**, **Timer**, **Type On A Curve**, **Import 3D Object**, **Import Graphic**, **Background**, **Template Field**, **Group/Ungroup**, **Erase**, **Set Default Background Color**, **Turn On/Off Text Window Frames**, **Show Basic Windows** and Use Mask. A number of these tools are also available from the **Tools Menu**.





Erase

The **Erase** function erases a variety of objects from the current **Canvas**. Text, elements from the scene or frame buffers can be erased. **2D Text Template** backgrounds, however, cannot be erased using this tool. *Refer to the sections on 2D Text Templates and Background for information on erasing a Template Background. To perform an erase:*

1. Click on the **Chyron Toolbar**. The **Erase** dialog box is displayed:

rase	?)>
Ihis Window O All Windows O	2D Text Templates Text Background
Scene 🕫	Scene Dijects Persistent Timers Background
Erame Buffers C	Cancel

Erase Dialog Box

2. Only the **2D Text** or the **Scene** area is active at any one time, depending on which radio button is selected. Set **Erase** parameters as described below.

Item	Description
This Window	When multiple 2D Text Windows are open, the active 2D Text Window is the only one erased.
All Windows	Applies the Erase operation to all 2D Text windows (includes Roll , Crawl and Type On).
2D Text	May be left <i>unchecked</i> to leave 2D text intact in the selected window(s) during other erase operations.
2D Text Background	May be left <i>unchecked</i> to leave 2D Text Window(s) Background intact.

ltem	Description
Scene	Selects the entire composition, as opposed to individual 2D Text Windows .
Objects	Objects in a scene include 2D Text Windows (both the windows themselves and their contents), imported bitmaps, 3D characters and 3D objects, etc.
Persistent Timers	If Persistent Timers are specified for erasure, they will be cleared from the Canvas , regardless of the Make Persistent setting in the Properties > Clock/Timer tab.
Background	This Erase Background option affects the Canvas, as opposed to a single window. An Erase of this type does not erase 2D Text Window Backgrounds, only the Background of the Canvas. Note that this type of Erase operation cannot be undone! Even if Undo si available after a Scene Background erase operation, the available Undo(s) are applicable to other steps in the composition, but not to the Background erase.
Frame Buffers	Erases the contents of all Duet frame buffers. This operation <i>does</i> affect the signal going to the Program and Preview outputs, so <i>use with caution</i> .

3. After selecting the item(s) to be erased, click **OK** to execute the **Erase**, or **Cancel** to cancel the **Erase** operation.

Set Default Background Color

When creating a Lyric composition that does not contain a colored background as set using the **Background** tool, it may be advantageous at times to view the composition on a gray, instead of a black **Default Background** (e.g. when working with **Mask Objects**). The color of the **Default Background** has no bearing on Duet output.

To toggle the **Default Background** between black and gray:

Click the button.

Turn On/Off Text Window Frames

Toggling (clicking) the **Turn On/Off Text Window Frames** icon turns on/of the display of all **2D Text Window** and **2D Text Template** frame on the **Canvas**, facilitating preview of the composition. Note that this function is also available from the **2D Frames On/Off** item in a **2D Text Window** context menu.



Turn On/Off Text Window Frames Icons

Refer to the indicated sections for information on the following Chyron Tools:

- 2D Text for information on 2D Text Window, Roll, Crawl, Type On/Slow Reveal, and Type on a Curve (Spline Window).
- Clocks and Timers for information on Clocks and Timers.
- **Tools Menu** for information on **Import 3D Object**, **Import Graphic**, **Background** and **Group/Ungroup**.
- Templates for information on Template Field.
- Preferences, in the section on Windows, for information on Show Basic Windows.
- Masks for information on Use Mask.

Properties

View Menu > Properties

Properties define the attributes of various functions and objects used in Lyric.

Attributes are the individual components describing how an object appears, such as its X,Y, Z Position, Rotation, Scale (size), Font and Edge Style, Transparency, Color, etc. Each object type (3D Objects, Camera, 2D Text, etc.) has its own set of applicable attributes. For example, an Intensity attribute is meaningful for a Light Source, but meaningless for a 3D Object.

Properties are set in the **Properties Window**, which is usually automatically displayed when Lyric is opened. If the **Properties Window** is not visible:

• From the View menu, select **Properties**. The **Properties Window** should appear.

Properties	
Font 2D Fon	t FX 3D F 📕 🕨
Arial	•
Regular	•
Mode © <u>2</u> D O	<u>3</u> D
Size	50 +
Aspect 1.000 + Space Width 12 + H Shear 0.000 +	Kerning D Leading D V Shear 0.000 C
Botate	Filter Horizontal O Vertical O
Aa	APPLY

Properties Window

The **Properties Window** first displays the **Font** tab. To select a tab, use one of the following methods:

- If necessary, click the controls to scroll among the tabs to access those that are not visible. Click the desired tab.
- Right-click in the **Properties Window**, but not in a data entry field, and then select the desired **Property** from the context menu.

The expanded figure below shows the **Properties** that can be accessed.

📰 Prop	perties								<u>- 0 ×</u>
Font	2D Font FX	3D Font FX	XYZ	Lighting	Surface	Camera	Loops/Pauses	Animation	Clock/Timer

Properties Tabs

The **Properties** window provides access to the following selections:

Property	Description
Font	Sets Font Face, Font Size, Font Style, 2D/3D Mode, Aspect Ratio, Kerning, Space Width, Leading, Shear, Rotation and Filters for characters used in 2D text composition.
	Sets Font Face and Font Style for characters used in 3D text composition.
	Also includes ability to launch TrueType® Font Preview.
	Font Face and Font Style can also be set using Font Tools.
	Refer to Creating and Using Fonts in Lyric for additional information.
2D Font FX	Sets effects for 2D characters, including Edge Type , Edge Size , Face/Edge Color , Transparency , and Softness . Multiple Edge styles may also be set.
	Refer to Creating and Using Fonts in Lyric for additional information.
3D Font FX	Sets/changes 3D font effects, including Character Depth, Bevel Depth, Bevel Mode, Bevel Type and Smoothness.
	Refer to Creating and Using Fonts in Lyric for additional information.
XYZ	Sets/changes Position , Rotation , Scale and Center of Rotation of the selected characters/objects in the X , Y , and Z planes.
	Refer to the chapter on Position, Rotation, Scale and Orientation for further information.
Lighting	Sets/changes characteristics of the light sources that affect 3D elements. Parameters include color and intensity for global lighting, and position, color and Intensity up to six individual light sources.
	Refer to the chapter on Color, Transparency, Background, Lighting and Texture for further information.
Surface	Sets/changes Surface parameters for the selected Object(s). These parameters describe how colors and/or bitmap textures are applied to 3D objects.
	Refer to the chapter on Color, Transparency, Background, Lighting and Texture for further information.

Property	Description
Camera	Sets/changes Camera perspective and zoom. These factors determine how 2D and 3D object(s) appears within the Canvas frame.
	Refer to the chapter on Position, Rotation, Scale and Orientation for further information.
Loops/Pauses	Controls start/end points (and number of loop iterations) for animation displays.
	Refer to the chapter on Animation for further information.
Animation	Adjusts playback speed for Rolls, Crawls and other animations. When multiple objects are animated on the Canvas, this window offers control over each object's duration in the overall scene.
Clocks/Timers	Opens Clock or Timer windows on the Canvas. Clicking the Clock or Timer buttons on the Chyron Toolbar simultaneously selects the Clock/Timer Properties tab and opens the appropriate type of window on the Canvas.
	Refer to the chapter on Clocks and Timers for further information.
Recording/Reading Lyric Messages

Lyric messages, which can be static or animated compositions, or just specific groups of settings, can be recorded and read (recalled) at a later time. These operations can be performed using **File Menu > Save**, **File Menu > Save As** and **File Menu > Open**. Lyric, however, provides an easy shortcut that makes it simple to record a series of messages, and to read them quickly for on-air use. Lyric **Messages** can also be read to the **Canvas** from the **Browser** and automatically recorded to a file when saved to a **Browser** database. *Refer to Browser: Message Asset Operations for additional information.*

About the Address Keypad

The **Record** and **Read** functions, as well as **Read Next** and **Read Previous**, are performed in a similar manner:

 Using the Address Keypad (also known as the numeric keypad) located to the right of the alphanumeric keypad on a Duet or PC keyboard, enter the Message ID of the message file. The Message ID can be up to eight digits long, and it is not necessary to enter leading zeroes. The Address Keypad for a Duet keyboard is shown in the following figure. Message ID entry works the same way on a numeric keypad on a PC keyboard.



Duet Numeric Keypad

2. Press the key that performs the desired operation, i.e. **Read**, **Read Next**, etc. Note that the **Record** button is not part of the **Address Keypad**. Lyric provides PC keyboard equivalents for these operations, as detailed in later in this section.

When using the Address Keypad to enter a Message ID for a Read or Record operation, the Lyric message is saved to or recalled (read) from the Default Message Directory as set in Config Menu > Preferences > Default Paths. This eliminates the need to enter a directory path each time a Read or Record operation is performed. *Refer to the section on Preferences: Default Paths for additional information.*

Record and Read Operations

The following table outlines the various message operations. Both Duet and PC keyboard key combinations are provided. Remember that the + symbol does not specify a keystroke, but instead indicates that the preceding key must be held while the next key is pressed.

- Regarding the Duet Keyboard: All Message ID numbers must be entered using the Address Keypad, not the alphanumeric keys. In addition, Num Lock must be On in order for the operations to work.
- Regarding the PC Keyboard: All Message ID numbers and other keystrokes (including Enter), except for Ctrl and Alt, must be entered using the Address Keypad, not the alphanumeric keys. In addition, Num Lock must be On in order for the operations to work.

Duet Keyboard	PC Keyboard	Description
Clear	Del	Resets the Message Number to 0 .
Record	Minus key (-) on the numeric keypad	Saves (records) the current Lyric composition at the Message ID shown in the Message Number display. Along with the message, Lyric saves the active window (and cursor position, if appropriate), so that these attributes are preserved when the message is read. After the message is recorded, the Message Number display increments up by 1 .
Alt + Record	Alt + Minus key (-) on the numeric keypad	Saves the current Lyric composition to the same Message ID from where it was read, <i>without</i> prompting for an overwrite confirmation. After the message is recorded, the Message Number display does <i>not</i> increment. If the message was not originally read from an existing message, then the composition is saved at the current Message ID . If a message with that Message ID already exists, then the overwrite prompt is displayed. If the file does not have a Message Number , but instead has a name, then Alt + Record records to the same name.
Ctrl + Record	Ctrl + Minus key (-) on the numeric keypad	Opens the Record Only: dialog box, which allows selective recording of specific sets of attributes, such as Clocks/Timers , Clips , Macros , etc. Selective recording is covered later in this section.

Duet Keyboard	PC Keyboard	Description
Ctrl + Alt + Record	Ctrl + Alt + Minus key (-) on the numeric keypad	Selectively records (Record Only) to the same Message ID from where it was read or previously recorded, <i>without</i> prompting for an overwrite confirmation. After the message is recorded, the Message Number display does <i>not</i> increment. If the message was not originally read from an existing message, then the composition is saved at the current Message ID . If a message with that Message ID already exists, then the overwrite prompt is displayed.
Read	Enter	Reads the Lyric Message at the currently displayed Message Number .
Read Next	Ctrl + Enter	 Read Next recalls a sequence of messages with ascending Message Numbers, allowing the operator to prebuild and instantly display messages. Executing Read Next reads the message saved at the currently displayed Message Number, and then builds it without displaying it. The next time Read Next is executed, the prebuilt message is displayed on the Duet output, while simultaneously reading and prebuilding the message saved at the next highest assigned ID number. Read Next status is maintained per frame buffer. For example, if a Read Next sequence is taking place in Frame Buffer 1, then changing to a different frame buffer does <i>not</i> move the Read Next sequence to the newly active buffer. When Frame Buffer 1 is reactivated, the Read Next sequence can be continued from where it left off. Read Next can be especially useful for displaying pages of credits, day-by-day weather forecasts, sports scores, etc.
Read Previous	Alt + Enter	Operates similarly to Read Next , but the Message Number decrements instead of incrementing. There is one exception: Reading a Message Effects <i>.lyr</i> message created on the Duet LE/LEX/PCI/PCI+ <i>always</i> causes the Message Number to increment, regardless of how the message was read (Read , Read Next or Read Previous).

The following should be noted regarding **Read Next** and **Read Previous** operations:

- The search range for the next or previous message searched is determined by the **Read Next Range** setting in the **Config > Preferences > CG** tab. The default value is **10**. This specifies that Lyric checks through the next 10 or previous 10 **Message IDs** for a valid message before displaying the prompt **Message Not Found**.
- **Read Next/Previous** works properly only when the ^{two} button is active. The message display is not sent to the Duet output, but is previewed on the VGA. When **Read Next/Previous** is executed again, the message is sent to output, and the following/previous message is loaded and can be viewed on the VGA monitor. This also allows modification of the composition in the **Read Next/Previous** buffer before being sent to output.
- The message recalled by a **Read Next** or **Read Previous** operation can be sent to output as soon as it appears on the system's VGA monitor.
- Animations are automatically loaded during a **Read Next/Previous** operation, so that when **Read Next/Previous** is executed for output to air, the loaded animation executes immediately. When the animation is finished, the next message is read.

Selective Recording

Record to Currently Displayed Message Number: Ctrl + Record (Duet keyboard); Ctrl + numeric keypad Minus (-) key (PC keyboard)

Record to Message Number of Loaded Message (Overwrite): Ctrl + Alt + Record (Duet keyboard); Ctrl + Alt + numeric keypad Minus (-) key (PC keyboard)

<u>Overview</u>

When a Lyric composition is saved, text, graphics, animation information, **Template** information, **Backgrounds** and much more are saved to the Lyric message. It is also possible, however, to save specific elements from the Lyric composition, so that they can be easily read into other Lyric compositions.

In some instances it is possible to do this from the individual tool's interface (e.g. **Clip Control Panel** or the **Multi FX Control** dialog box), which involves opening a **Save** or **Save As** dialog box and entering a **File Name**. An alternative, quicker method is to record the file from the **Record Only:** dialog box. Messages recorded in this manner are saved to the currently displayed **Message Number** in one of the **Default Directories**. *Refer to* **Preferences - Default Paths** for information on **Default Directories**. To open the **Record Only:** dialog box:

- If recording to the currently displayed Message Number, then press Ctrl + Record on a Duet system, or Ctrl + the numeric keypad Minus sign (-) on a PC.
- If recording to the currently loaded **Message Number** (i.e., to perform an overwrite), then press **Ctrl + Alt + Record** on a Duet system, or **Ctrl + Alt + the numeric keypad Minus sign (-) on a PC**.

The **Record Only:** dialog box is displayed. The **Title Bar** displays the **Message ID Number** to which the message is to be recorded.

ext ● <u>All Text In Window</u> ○ Cursor to <u>E</u> nd	Timeline <u>S</u> cene (.efx) <u>D</u> bject (.kyf)	 C Message, <u>W</u>ith Options ✓ Preview Frame ✓ C Specific Frame
Current <u>H</u> ow Template <u>D</u> ata Message	Panel	
Plugin 1 C Harvester Lite 2 C Backup Restore 3 C	C Lloc <u>k</u> s/Timers C <u>M</u> acros C Multi <u>F</u> X C Plavlist (plv)	Embedded Macro Save Name Only
4 C 5 C 6 C	C Sgueezeback C Video Mi <u>x</u> er	

Record Only Dialog Box

The selective record procedure can be executed quickly using Hotkey combinations.

- Press Ctrl + Record (Duet keyboard) or Ctrl + Minus key on the numeric keypad (PC) to record to the currently displayed Message Number, or press Ctrl + Alt Record (Duet keyboard) or Ctrl + Alt + Minus key on the numeric keypad (PC) to record to the currently loaded Message Number (overwrite). Release the keys.
- 2. Press the key indicated for the file type. It is indicated by an underline in the **Record Only:** dialog box.
- 3. Press Enter. The file is recorded.

For example, using a Duet keyboard:

- To quickly record a **Clip** file to the current **Message Number**, press **Ctrl + Record C Enter**. **Hotkey** combinations are specified for each file type below.
- To quickly overwrite the currently loaded message and record a Clip file to the same Message Number, press Ctrl + Alt + Record C Enter.

For example, using a PC keyboard:

- To quickly record a Clip file to the current Message Number, press Ctrl + Minus key on the numeric keypad C Enter. Hotkey combinations are specified for each file type below.
- To quickly overwrite the currently loaded message and record a Clip file to the same Message Number, press Ctrl + Alt +Minus key on the numeric keypad C Enter.

Hotkey combinations are specified for each of the following file types where appropriate. For sake of clarity, only the Duet keyboard versions that record to the currently displayed **Message Number** are specified. The **Ctrl + Alt + Record** combination can be substituted for any of the **Ctrl + Record** operations, and the **Minus key on the numeric keypad** can be used to substitute for the **Record** key when using a PC keyboard.

Additionally:

- If the file has a Message Number, but was not read from the Default Message Directory, Ctrl + Alt
 + Record records to the Message Number in the directory from which it was read.
- If the file does not have a **Message Number**, but instead has a name, **Alt + Record** records to the same name in the directory from which it was read.

Text

The first three **Text** items record a specific element of a single, active **2D Text Window** (includes **2D Roll**, **2D Crawl** and **2D Type On Windows**) to what is known as a as a **Pop-On** message. Once recorded, the element can be recalled into a different **2D Text Window** for easy update. All **Text** types are recorded as in the *.*lyr* format. The default setting is **All Text**.

- All Text (Hotkey: Ctrl + Record T Enter): Records all text in selected 2D Text Window. Empty lines on a Pop-On message are ignored. For example, if a three-line Pop-On is recorded, and the middle line is empty, the Pop-On is read back as a two-line Pop-On, and replaces (or adds) two consecutive rows of text.
- **Cursor to End (Hotkey: Ctrl + Record E Enter):** Records all text from the beginning of the row on which the cursor is positioned, to the end of the text in the window. As described above, empty lines on a **Pop-On** message are ignored.
- Current Row (Hotkey: Ctrl + Record R Enter): Records only the text on the current row.

Recording All Text, Cursor to End or Current Row Messages from the Record Only: dialog box saves the file to the Default Message Directory. Refer to Pop-On Messages for details on recording and using these types of messages.

The following **Text** item appears similar in function to a **Pop-On Message** record, but is actually a duplication of the **Intelligent Interface "W"** command (**Create Data Message**), which can replace both text and graphics.

Template Data Message (Hotkey: Ctrl + Record D Enter): Records a Template Data Message based on the currently displayed Template Description Message. Text entered in a 2D Text Template(s), and a graphic(s) that is dragged-and-dropped from the Browser to an existing 2D Object Template on the Canvas can replace the existing text and graphic(s), respectively. Note that the graphic used to replace the graphic in the Template Description Message must be dragged-and-dropped from the Lyric Browser, and not imported from the Import Graphic tool on the Chyron Toolbar or from Tools Menu > Graphic. Additionally, the 2D Object Template (i.e., the graphic) that is to be replaced in the Template Description Message must be enabled for II Update.

Recording a **Template Data Message** from the **Record Only:** dialog box saves the file to the **Default Message Directory**.

Refer to About Template Description and Template Data Messages for in-depth coverage of Template Data Messages and Template Description Messages, and 2D Object Templates for information on 2D Object Templates. Refer also to Intelligent Interface W Command - Create Data Message and Graphic Update for details on creating a Template Description Message via Intelligent Interface.

<u>Plugin</u>

A **Plugin** selection records plugin-specific files.

- If the plugin is active, and selective recording is enabled in the plugin application, the name of the plugin appears in the **Plugin** list, and is available for selection.
- If the plugin is active, and selective recording is not enabled in the plugin application, the name of the plugin appears in the **Plugin** list, but is not available for selection.

Refer to plugin documentation for details.

Timeline

A Timeline selection records Keyframe information as follows:

- Scene (.efx) (Hotkey: Ctrl + Record S Enter): Selecting Scene records the Keyframe information for all objects on the Canvas in the .efx format to the Default Effects Directory, where it becomes available for use by the Read Effects tool. The file format is the same as that recorded from File > Save As, where Lyric Effect (*.efx) is selected as the file format. Refer to Read Effects Duet SD/HD or Read Effects Duet LE/LEX/PCI/PCI+ for additional information.
- Object (.kyf) (Hotkey: Ctrl + Record O Enter): Selecting Object records all of the Keyframe information for a selected object on the Canvas in the *.kyf* format to the Default Effects Directory. The file format is the same as that recorded from Right-Click Object Timeline > Save Keyframe File. Refer to Animation: Timelines and Read Effects Duet SD/HD or Read Effects Duet LE/LEX/PCI/PCI+ for additional information.

<u>Panel</u>

A **Panel** selection records tool-specific files as follows.

- Clip (Hotkey: Ctrl + Record C Enter): Selecting Clip records only Clip information in the .ccf format to the Default Clip File Directory. The file format is the same as that recorded from Clip Control Panel > Save. Refer to Tools Menu: Clip Control Panel for additional information.
- Clocks/Timers (Hotkey: Ctrl + Record K Enter): Selecting Clocks/Timers records only Clock and Timer information in the .lyr format to the Default Message Directory. All Clocks and Timers in the composition are recorded. The file format is the same as that recorded from Properties > Clocks/Timers > Save. Refer to Properties: Clocks/Timers for additional information.
- Macros (Hotkey: Ctrl + Record M Enter): Selecting Macros records only Macro information in the *.lyr* format to the Default Message Directory. The file format is the same as that recorded from Macros > -> Save, when the Macro is saved in the *.lyr* format. *Refer to Macros for additional information.*
- Multi FX (Duet SD Only) (Hotkey: Ctrl + Record F Enter): Selecting Multi FX records only Multi FX information in the .lyr format to the Default Message Directory. The file format is the same as that recorded from Tools Menu > Multi FX > Save. Refer to Tools Menu: Multi FX for additional information.
- Playlist (Hotkey: Ctrl + Record P Enter): Selecting Playlist records only the Playlist information in the .ply format to the Default Playlist Directory. The file format is the same as that recorded from File Menu > Save As, where Playlist Files (*.ply) is selected as the file format. *Refer to Tools Menu: Playlist for additional information.*
- Squeezeback (Duet SD Only) (Hotkey: Ctrl + Record Q Enter): Not implemented at this time.
- Video Mixer (Duet SD Only) (Hotkey: Ctrl + Record X Enter): Selecting Video Mixer records only Video Mixer information in the *.lyr* format to the Default Message Directory. The file format is the same as that recorded from Tools Menu > Video Mixer > Save. *Refer to Tools Menu: Video Mixer* for additional information.

Message, with Options

Preview Frame: Many Lyric animations begin or end with a blank frame, and therefore, producing a blank screen when read to the **Canvas**, as well as creating a blank thumbnail when saved to the **Browser**. To make it easier to quickly determine the nature of an animation, a **Preview Frame** can be set.

In order to display the **Preview Frame** when a message is read to the **Canvas**, **Show Preview Frame** must be selected (checked) in the **Animation Settings Preferences**, accessed from **Config Menu > Preferences > Animation Settings**. Once the **Preview Frame** is displayed, the message should be saved to or updated in the **Browser** to display the **Preview Frame** as the thumbnail.

- End Frame: The last frame of the animation is displayed as the Browser thumbnail.
- Specific Frame: The frame set in the Frame Counter is displayed as the Browser thumbnail.

Note that this operation is *not* the same as running an animation, stopping it at some point, and then saving it to the **Browser** database. This creates a thumbnail at the point that the animation was stopped, but does not set a **Preview Frame** in the message itself.

The **Preview Frame** can also be set in the **Internal Properties** dialog box for the message. *Refer to Internal Properties* for additional information.

Embedded Macro

A macro can be embedded with a Lyric file and automatically executed when the file is read. It can be saved either as a full macro or as a **Macro Name** only. In addition, the macro can be edited or created from scratch before saving.

When saving the **Macro Name Only**, a **Macro** of the same name must be loaded in the **Macros** dialog box in order for it to execute when the message is read. To save the **Macro Name Only**:

- 1. Enter a message number, and then press Ctrl + Record (Duet keyboard) or Ctrl + Minus sign (-) on the numeric Address Keypad. The Record Only dialog box is displayed.
- 2. In the Embed Macro area, select (check) the Embedded Macro checkbox.

3. Enter a name into the **Macro Select** field drop-down list box (unlabeled), and then select (check) the **Save Name Only** checkbox. Macro setup is complete.

✓ Embedded Ma TypeHello	ecro	🔽 Save Name Only

Record Only Macro Name

4. Click Record. The Macro Name is saved with the Lyric message.

When a message recorded with an embedded **Macro**, and **Save Name Only** is selected (checked), the **Macro** executes immediately if a **Macro** of the same name as the **Macro Name** saved with the message is loaded in the **Macros** dialog box. If the **Macro** is not loaded in the **Macros** dialog box, the following is displayed when the message is read, indicating that the specified **Macro** is not loaded in the **Macros** dialog box:



Embedded Macro Failed

To save an embedded macro script:

- 1. If entering a macro directly in the **Record Only** dialog box, skip to Step 2. Otherwise, load an existing macro in the **Macros** dialog box.
- 2. Enter a message number, and then press Ctrl + Record (Duet keyboard) or Ctrl + Minus sign (-) on the numeric Address Keypad. The Record Only dialog box is displayed.
- 3. In the Embed Macro area, select (check) the Embedded Macro checkbox.

 Either enter a script directly in the Script window, or select a Macro from the Macro Select dropdown list box. The Macro script is displayed in the script window (unlabeled). Optional: Edit the script. Macro setup is complete.

Embedded Macro	Save Name Only
Create a Windows S	hell object.
set WshShell = Creat	eObject ("WScript.Shell"
'F6 sets focus to the l	Canvas.

Record Only Embedded Macro

5. Click **Record**. The **Macro** is saved with the Lyric message.

When a message recorded with an embedded **Macro**, and **Save Name Only** is not selected (checked), the **Macro** executes immediately. Note that because the **Macro** is embedded, it is not loaded in the **Macros** dialog box. It can be viewed and edited, however, by pressing **Ctrl + Record** (Duet keyboard) or **Ctrl + Minus sign (-) on the numeric Address Keypad** to access the **Record Only** dialog box.

A Macro Name can also associated with a message from the Internal Properties dialog box. *Refer to Internal Properties - onRead Macro* for additional details.

About Other File Saving Methods

The distinctions between Lyrics various **Save** methods and resulting file destinations should be clearly understood. In *all* cases, messages are saved to destination folders on a local/remote drive or removable media. The **Browser** stores only the reference, or "bookmark" that contains identification and location information for each **Message Asset** stored in its database. *Refer to* **Browser Overview** for additional information the **Browser**.

Save Method	Description
File > Save command and icon on Windows	 Saves with an alphabetical, numerical or combination filename, within Windows conventions. Attaches extension <i>.lyr</i>. Opens dialog box prompting to name the file first time it is saved.
TOOIDai	 After saving, File Name is displayed in the Canvas Title Bar.
	 Always saves with the name displayed in the Canvas Title Bar.
	 Saves to current filepath as determined by the last file saved.
	 Confirms overwrite unless feature is disabled in the Confirm on Overwrite checkbox in the CG Preferences tab of the Preferences dialog box.
	 Simultaneously saves to current Browser database if File Save Adds to Browser is enabled (checked) in Browser tab in the Preferences dialog box. File Name displayed in Browser is also displayed in the Canvas Title Bar.

Save Method	Description		
Save As	 Used to save a copy or modified version of the file without overwriting the original. 		
	 Used to store message to a destination folder other than the Default Path. 		
	 If File Save Adds to Browser is enabled, causes the same icon (thumbnail) to be added to the Browser each time a new version of the file is saved. This may be useful to remind the operator that there are multiple version of the message. When duplicate Message Assets are displayed in the Browser, the Text View or Icon with Text View can be checked to verify the location of each copy. 		
Message Number,	• Num Lock must be on to use this option.		
followed by pressing Record on a Duet kevboard, or -	 Performing a Save using this method records the file to the Default Message Directory as specified in Config Menu > Preferences > Default Paths. 		
(Minus sign) on the numeric keypad.	 If this is the first time the message has been saved, it is assigned a numeric File Name in the Default Message Directory. 		
<u>+ 6635 E</u>	• If Auto Increment on Read/Record is enabled in the CG Preferences, the displayed Message Number advances after a Record operation so that the subsequent file that is saved is assigned the next number.		
	• The Message Number displayed in the Message Number display determines the Message Number under which a file is to be saved. Instead of assigning a sequential Message Number , a number can be entered manually using The numeric keypad. When a Record is performed, the file is saved under the new Message Number .		
Save to Database button on the Lyric Browser	 Always saves file with a Message Number, as determined by the Message Number display. This hold true even if the file has been previously named and saved using Save or Save As. 		
Used for Messages and Fonts	• The Message Number assigned to the file in this operation also becomes the File Name in the Default Message Directory . This can result in duplicate copies of the message in the default filepath; one with the original name, and the other determined by the Message Number display.		

Graphic Display and Animation Playout Overview

Lyric provides a variety of methods for displaying graphics on air, and for previewing and playing animations. The different types of Duet systems have common, as well as system-specific features and procedures.

This section provides an overview of the playout and frame buffer operations, with references to more detailed descriptions of each.

Read

The **Read** function reads the message saved (recorded) at the **Message Number** displayed on the Lyric interface. If the **Live** button is active, the message also appears on the output.

Read Next

Read Next recalls a sequence of messages with ascending **Message Numbers**, allowing the operator to prebuild and instantly display messages. Executing **Read Next** reads the message saved at the currently displayed **Message Number**, and then builds it without displaying it. The next time **Read Next** is executed, the prebuilt message is displayed on the Duet output, simultaneously while reading and prebuilding the message saved at the next highest assigned ID number. The transition from one message to the next is determined by the **Default Effect**, set in the Config menu. Additionally, **Message Effects** messages (Duet LE/LEX/PCI/PCI+ only) can be placed in a **Read Next** sequence to control the transition of groups of

messages within a **Read Next** sequence. The two button must be active when executing a **Read Next** sequence. **Read Next** can be especially useful for displaying pages of credits, day-by-day weather forecasts, sports scores, etc.

Read Previous

Read Previous recalls a sequence of messages with descending **Message Numbers**, allowing the operator to prebuild and instantly display messages. Executing **Read Previous** reads the message saved at the currently displayed **Message Number**, and then builds it without displaying it. The next time **Read Previous** is executed, the prebuilt message is displayed on the Duet output, simultaneously while reading and

prebuilding the message saved at the next lowest assigned ID number. The button must be active when executing a **Read Previous** sequence. Note that a **Message Effects** (*.lyr*) message should *not* be placed in a **Read Previous** sequence, as it will automatically cause the **Message Numbers** to ascend.

Transport Controls

Transport Controls provide easy navigation and playback control of the current animation:



Transport Controls

Changes made with the **Transport Controls** buttons are reflected in the **Frame Counter** display, and by the **Current Time** pointer movement on the **Timeline** and on the **Keyframe Graph**.

Playlists

While **Read Next** and **Read Previous** execute sequences of messages that are stored at **Message Numbers** that are in ascending or descending order, a **Playlist** can execute a sequence of messages stored as numbered or named files. Additionally, a number of parameters can be applied that control the transition into the next message, how the message is triggered, and to which channel it is sent. *Refer to the section on* **Playlists** for details.

Transfer Mode - Duet LE/LEX/PCI/PCI+ Only

Transfer Mode allows animations to be played on multiple video processor boards simultaneously. When operating in **Transfer Mode**, the VPBs and PCI Squeezeback boards take on all the work of reproducing a message, which can include **Rolls**, **Crawls**, **Flipbooks** and **Clocks/Timers**. There is no use of system memory, and the duration of effects displayed by this method is limited only by the memory on the Video Processor Board.

Refer to the section on Duet LE/LEX/PCI/PCI+ Tools for details.

Load-and-Play Mode - Duet LE/LEX/PCI/PCI+ Only

In this mode of operation, the Lyric software loads a graphic composition, frame-by-frame, into system memory, as opposed to the memory on the system's VPBs or PCI-Squeezeback boards. Any type of animation may be played back in this fashion, but on a Duet LE/PCI, animations are limited to six seconds in duration.

This playout mode can only be used on one VPB per system at a time. *Refer to Duet LE/LEX/PCI/PCI+ Tools* for details.

Streaming Animation Mode - Duet LEX/PCI+ Only

In **Load-and-Play Mode**, an animation must be loaded and built before playout can begin. The hardware's resources limit the duration of such animations to six seconds.

The Duet LEX/PCI+'s larger memory and greater speed allow playout to occur while an animation is still loading, hence the term **Streaming Animation**. Depending upon the complexity of the animation, some preloading may be required in **Streaming Mode**. *Refer to the section on Streaming Animation for details.*

Updating Messages in Lyric

Lyric provides a variety of means to update information displayed in a message. **2D Text**, **2D Object** or **3D Text Templates** can be updated from internal or external sources, and 2D text not contained in **2D Text Templates** can be updated by reading specially recorded 2D text messages.

NOTE

The update procedures described below are not to be confused with the Update functions found in the Browser environment. Messages that are updated using the procedures described below, however, can be subsequently updated in the Browser. *Refer to the sections covering Browser operations for details.*

Templates

Lyric **Templates** allow the isolation of various elements on the Canvas so that they can be updated locally and/or remotely from a variety of sources. There are three types of **Templates**:

2D Text Templates

2D Text Templates are always created within a 2D Text Window. Each 2D Text Template can have is own set of Font, Color, Justification and other characteristics. 2D Text Templates can also be updated using the following methods:

- Template Update (Internal from Lyric): Template Update is an internal method of quickly updating the text in 2D and 3D Text Templates. Template Update is accessed by pressing Alt + T, or by selecting Template Update from the Tools menu. Text entered in the Template Update dialog box fields replaces (updates) the text in the 2D or 3D Text Template fields.
- DB Link (From Database): 2D Text and 2D Object Templates can be updated by databases in a number of formats such as Lyric's own Browser, Microsoft® Excel®, and dBase®. DB Link is set up in the 2D Text or 2D Template dialog boxes. Refer to DB Link for details.
- Intelligent Interface (From a Remote Host or Telnet): Intelligent Interface sends commands from a remote host to update 2D Text Template and 2D Object Template data, making it an especially powerful tool for live events such as sports and election coverage.
- Harvester and Harvester Pro (External from the Internet): The Harvester plugin enables a Lyric 2D Text Template to be linked to a text field at a remote URL for dynamic update via the Internet. The Harvester Pro plugin enables a user to precisely capture, process and direct the output of text data from almost any web page to Lyric 2D Text Templates.

2D Object Templates

2D Object Templates are always created outside of a **2D Text Window**. A **2D Object Template** can be updated using the following methods:

- DB Link (From Database): 2D Object and 2DText Templates can be updated by databases in a number of formats such as Lyric's own Browser, Microsoft® Excel®, and dBase®. DB Link is set up in the 2D Object or 2D Text Template dialog boxes. Refer to DB Link for details.
- Intelligent Interface (From a Remote Host or Telnet): Intelligent Interface sends commands from a remote host to update 2D Text Template and 2D Object Template data, making it an especially powerful tool for live events such as sports and election coverage.

3D Text Templates

3D Text Templates are always created outside of a **2D Text Window**. A **3D Text Template** can be updated as follows:

• Template Update (Internal from Lyric): Template Update is an internal method of quickly updating the text in 3D and 2D Text Templates. Template Update is accessed by pressing Alt + T, or by selecting Template Update from the Tools menu. Text entered in the Template Update dialog box fields replaces (updates) the text in the 3D or 2D Text Template fields.

Pop-On Text

Rows of text in a **2D Text Window** can be updated by replacing them with text that has been recorded as a **Pop-On** message. By doing this, only the row(s) that changes must be recorded. When read back, the **Pop-On** message replaces the new text at the current cursor position in the **2D Text Window**.

Internal Properties

Overview

Internal Properties sets specific properties for an object or a message, which can override default values as set in **Preferences** or elsewhere.

There are two general groups of Internal Properties:

- Internal Properties that are applied to a specific object.
- Internal Properties that are applied to a specific message.

To apply Internal Properties settings and not close the Internal Properties dialog box:

• Click Apply.

To apply Internal Properties settings and close the Internal Properties dialog box:

Click OK.

To close the Internal Properties dialog box without saving modifications to the settings:

• Click Cancel.

Internal Properties settings are retained with the message when the message is saved.

NOTE

Internal Properties are currently not implemented for Movie objects, Flipbooks, Advanced Text Effects objects, Advanced Image Effects Objects, Group Objects (although behavior of groups can be controlled from a message standpoint), Audio Clip objects, Video Clip objects, Mix objects and other specialized objects that are generated by Lyric.

Internal Properties Applied to an Object

Object Context (Right-Click) Menu > Internal Properties

Internal Properties can be set for **2D Text Windows** (except **Spline**), 2D bitmap objects, 3D characters and 3D objects. These objects all share a similar set of **Internal Properties**, as well having **Internal Properties** that are specific to the object type and/or playout system. The following figure is a composite of all of the **Internal Properties** that are available to these object types.

To access the Internal Properties settings for an object:

• Select the object on the **Canvas** or the **Scene Graph**, and then right-click. The **Internal Properties** are displayed.

	and a second second	
Property	Value	
Alpha Trim	0.05	
Depth Test	Default	-
Depth Write	Default	-
Lighting	Default	-
Pixel Aspect	1	
Wireframe	False	+

Internal Properties - Object

Alpha Trim (2D Objects Only, Duet LE/LEX/PCI/PCI+ Only)

Alpha Trim removes unwanted transparent portions of a **Mask Object**. The threshold at which a pixel is deemed transparent enough to remove is determined by its **Alpha Trim** setting. The default **Alpha Trim** value is **0.05**. Raising this value results in the additional removal of less transparent pixels. **Alpha Trim** must be enabled from the context menu of the object in order to apply this setting.



Alpha Trim Applied to Mask Objects

Note that when **Alpha Trim** is applied, full pixels are removed, sometimes creating an undesirable stairstepping effect. If this occurs, applying a **Soft Mask** instead may yield better results.

Refer to Mask Objects - Duet LE/LEX/PCI/PCI+ for additional information on Mask Objects and Alpha Trim.

Depth Test/Depth Write (Duet LE/LEX/PCI/PCI+ Only)

The **Depth Test** setting determines if an object can be covered by another object when the objects intersect in **Z-Space**. Normally, even if they are rotated in **Z-Space**, and points on each object share the same **Z-Position**, 2D objects simply lie one on top of the other, without intersecting.

- If **Depth Test** is enabled, then another object can cover the object.
- If Depth Test is disabled, then another object cannot cover the object.

The Default Depth Test settings are as follows:

- The **Default** setting for **Depth Test** is normally disabled for **2D Text Windows** and 2D bitmap objects.
- The Default setting for Depth Test is normally enabled for 3D characters and 3D objects.

The **Depth Write** setting determines if an object can cover up another object when it intersects with another object in **Z-Space**.

- If **Depth Write** is enabled, the object is allowed to cover another object.
- If **Depth Write** is disabled, the object cannot cover another object, even if **Depth Test** is enabled on the other object.

The Default Depth Write settings are as follows:

- The **Default** setting for **Depth Write** is normally disabled for **2D Text Windows** and 2D bitmap objects.
- The **Default** setting for **Depth Write** is normally enabled for 3D characters and 3D objects.

For objects to intersect and order properly, both **Depth Test** and **Depth Write** should be enabled. If an object has an alpha component (e.g. **2D Text Windows**), however, enabling **Depth Write** may unintentionally not allow objects behind the alpha object to show through. In this instance, disable **Depth Write**. Note that doing so may require that the animation requires adjustment, as the object will no longer be able to overwrite other objects.

When working with **2D Text Windows** that intersect with other objects, **Use Scene Camera** and **Modified Space**, both accessed from the **2D Text Window** context menu, should be enabled to allow manipulation of the **2D Text Window** in 3D space.

When **Depth Write** and **Depth Test** are disabled for the two rotated 2D bitmaps, as shown in the following figure, there is no intersection between each of them and any other object.



Depth Write and Depth Test Disabled

When **Depth Write** and **Depth Test** are enabled for the two rotated 2D bitmaps, they intersect with each other and the 3D cube.



Depth Write and Depth Test Enabled

There may be an occasion where it may be desirable to set **Depth Test Enabled** and **Depth Write Disabled** for an object, depending on how objects are to interact.

Lighting (Duet LE/LEX/PCI/PCI+ Only)

The **Lighting** property determines if the global and individual lights are enabled for the object. The default setting is **Enabled**. The **Lighting** setting affects the appearance of only 3D characters and 3D objects. The appearance of 2D text and 2D bitmap objects is not affected.

When lighting is disabled, an object displays no reflected light from the Global light or the **Individual** lights.



Lighting Disabled

When Lighting is enabled, the object reflect light as set for Global and Individual lights.



Lighting Enabled

Note that when lighting is enabled for an object, and the first (not necessarily **Light 1**) *selected* individual light is specified in **Lighting Properties** as a **Spotlight**, it appears that the lighting for the object appears to be disabled, even if it is enabled and the **Global Light** is set at a high **Intensity**. The **Global Light** is still affecting the appearance of the object, but the object appears flat. This is due to the **Spotlight Angle** setting being set to **0**. Once the **Spotlight Angle** is set to a value higher than **0**, the object resumes its 3D appearance.

Refer to the chapter on **Color/Transparency/Background/Lighting/Texture: Lighting Properties** for additional information on setting lights.

Pixel Aspect (2D Bitmap Objects Only)

The **Pixel Aspect** setting determines the **Pixel Aspect** at which a 2D bitmap object is imported. The default setting is determined by the **Use 1:1 Pixel Aspect for Graphics Import** setting in **Canvas Resolution** configuration, accessed from the **Config** menu.

- If enabled in Canvas Resolution, Pixel Aspect is set at 1:1.
- If disabled in Canvas Resolution, Pixel Aspect is set at .9.

The **Pixel Aspect** setting in **Internal Properties** can be changed for an individual bitmap either to correct **Pixel Aspect** or to change it for effect. The figure below shows a bitmap imported with **Use 1:1 Pixel Aspect for Graphics Import** enabled. This specifies that the **Pixel Aspect 1.0**. The appearance of the same graphic is corrected by setting the **Pixel Aspect** in **Internal Properties** to **.9**.



Pixel Aspect Settings

Wireframe (3D Characters and Objects Only, Duet LE/LEX/PCI/PCI+ Only)

Enabling **Wireframe** displays a 3D character or object as a 3D wireframe. The current colors, textures, shininess and/or transparencies of the surfaces are picked up in the wireframe.

- If Wireframe is set to False, the object is displayed as solid.
- If Wireframe is set to True, the object is displayed as a wireframe.



Wireframe - False and True

The following shows a wireframe of the 3D character O, with the face made completely transparent.



Wireframe with Transparent Face

Internal Properties Applied to a Message

Light, Global Light or Camera Context (Right-Click) Menu > Internal Properties

Tools and Canvas/Scene Graph Context Menus > Message Properties

The Internal Properties for a message can be set by accessing the context (right-click) menu for Light, Global Light or Camera, or from Tools Menu > Message Properties. To access the Internal Properties settings for an object, use one of the following methods:

- Select a Light on the Canvas or Scene Graph, and then right-click.
- Select Global Light or Camera on the Scene Graph, and then right-click.
- From the Tools menu, select Message Properties.

The Internal Properties are displayed.

	In the second	
Property	value	
Legacy Mask	Disabled	•
Preview Frame	-1	
Rendering Mode	Normal	-
Use Group Priority	1	
onRead Macro		

Internal Properties - Message

Legacy Mask (Duet LE/LEX/PCI/PCI+ Only)

Mask Objects in Lyric v4.1 up to, but not including, Lyric v5.0, are rendered differently than **Mask Objects** rendered in Lyric v5.0 and later. To properly render a message created using pre-Lyric v5.0, a **Legacy Mask** option is provided. The default setting is **Disabled**.

- To properly render a message containing **Mask Objects**, that was created using a version of Lyric up to, but not including, Lyric v5.0, set **Legacy Mask** to **Enabled**.
- To properly render a message containing **Mask Objects**, that was created using Lyric v5.0 or later, set **Legacy Mask** to **Disabled**.

Refer to Mask Objects - Duet LE/LEX/PCI/PCI+ for additional information on Mask Objects.

Preview Frame

The **Preview Frame** is the frame of an animation which displays when the animation message is read. This value can be set in the **Record Only** dialog box, accessed by pressing **Ctrl + Record** or **Ctrl + Alt + Record**, or by setting in the **Internal Properties** dialog box. For the **Preview Frame** setting to be applied, the **Show Preview Frame** setting in **Config Menu > Preferences > Animation Settings** must be enabled (checked).

The **Preview Frame** setting in the **Internal Properties** dialog box reflects the **Preview Frame** set from the **Record Only** dialog box.

The default setting for Preview Frame is -1, which specifies that no Preview Frame is set.

- If Show Preview Frame is enabled, the last frame of the animation is displayed.
- If Show Preview Frame is disabled, the first frame of the animation is displayed.

If the **Preview Frame** is set to **0** or higher:

- If Show Preview Frame is enabled, the specified Preview Frame of the animation is displayed.
- If Show Preview Frame is disabled, the first frame of the animation is displayed.

Refer to **Reading and Recording Messages - Selective Recording - Preview Frame -** for additional information.

Rendering Mode

The type and complexity of an animation may require that it be rendered in a specific manner in order to play back correctly. In addition, depending on the system and the graphic boards, one **Rendering Mode** may be more suitable than another for playback. **Rendering Mode** can be set for an individual message. This setting for the message does not change the default **Rendering Mode** setting as set in **Config Menu > Preferences > Animation Settings**. The **Rendering Modes** are the same as those in the **Animation Settings**.

- **Fast Rendering** allows some animations that may not play back properly in real time to play back smoothly. There may be an infrequent trade-off when **Fast Rendering** is enabled, in that the compositing of overlapped transparent pixels and the antialiasing of characters may not display properly. Preview the animation before sending to air.
- Normal Rendering plays back animations using Duet's normal rendering process.
- **Depth (2 Pass)** corrects the rendering of 2D objects, that have transparency, and that either intersect in 3D space or that overlap. While rendering in this mode is slightly slower, it usually unnoticeable, due to the high rendering speed of current graphics cards.
- Fast/Fix Key (Duet LE/LEX/PCI/PCI+ Only) corrects the rendering of the Key Out signal. Rendering in this mode is necessary only if the rendered Key signal is to be used downstream of the Duet system. While rendering in this mode is slightly slower, it usually unnoticeable, due to the high rendering speed of current graphics cards. Using this mode also requires the presence of specific graphics cards. *Contact Chyron Customer Service (631-845-2132) for additional information*. Note that on Duet SD/HD systems, using this mode is not necessary, as the Key signal is rendered properly.

Use Group Priority

Prior to Lyric v5.0, when a group was created, any object added to the group would retain its display priority with regard to the ungrouped objects, even though the **Scene Graph** indicated that the priority of the objects had moved up. This would also occur with automated grouping of animated objects (e.g. created using **Animate Elements** or **Advanced Text Effects**).

The following figure shows five ungrouped, overlapping 3D characters.



Ungrouped Overlapping Characters

When a group is created in Lyric, a new **Group** object is added to the top of the **Scene Graph**. As shown in the following figure, the **Scene Graph** indicates that objects **4** and **2** should overlap objects **5**, **3** and **1**. Object **4** still overlaps object **3**, but does not overlap object **5**. Object **2** still overlaps object **1**, but does not overlap object **3**.



Grouped Objects Not Displaying Actual Priority

Enabling the **Group Priority** setting results in the objects in the group displaying at their actual priority. Objects **2** and **4** now cover objects **1**, **3** and **5**.



Grouped Objects Displaying Actual Priority

Priority behavior is determined as follows:

- When Group Priority is set to 0, the Canvas does not reflect the actual priority of grouped and ungrouped objects as indicated by the Scene Graph. A group created using Animate Elements or Advanced Text Effects is always added to the top of the Scene Graph.
- When Group Priority is set to 1, the Canvas does reflects the actual priority of grouped and ungrouped objects as indicated by the Scene Graph. A group created using Animate Elements or Advanced Text Effects is always added to directly above its associated 2D Text Window listing in the Scene Graph.

The default Group Priority value is determined as follows:

- Group Priority is set to 0 (False) for messages created using pre-Lyric v5.0.
- Group Priority is set to 1 (True) for messages created using Lyric v5.0 and later.

In Lyric v5.0 and later, priority can be further fine-tuned by dragging-and-dropping the group, or dragging-anddropping objects within, into and out of groups on the **Scene Graph**. Non-grouped objects can also be inserted between grouped objects by adjusting the **Z-Position(s)** of the grouped and/or non-grouped object(s).

onRead Macro

Enabling **onRead Macro** allows a macro that is recorded with a message to execute when the message is read. The default setting for **onRead Macro** is blank, specifying that there is no macro associated with the message.

To associate a macro with the message and test execution:

- 1. While the Lyric composition is displayed, create or read a macro. Test the macro to make sure that it executes properly.
- 2. In the **Internal Properties** dialog box **onRead Macro** field, enter the name of the macro. Click **OK** to close the **Internal Properties** dialog box.
- 3. Save the message.
- 4. Read the message. The macro should execute.

A message can also be set to execute a macro when the message is read by saving it from the **Record Only** dialog box. *Refer to Reading and Recording Messages - Selective Recording - Embedded Macros - for additional information.*

Lyric Control of Internal and External Devices and Events

Lyric can control and/or be controlled by a wide range of internal and external devices, using a variety of methods.

- Squeezeback (Duet LE/LEX/PCI/PCI+) and Playlist Effects can be executed via Chyron KwiKeys or other external devices such as Master Control Switchers via GPI (General Purpose Interface) control. Refer to the sections on Squeezeback Panel, Playlists, and Duet Hardware: KwiKeys respectively for details.
- Lyric can trigger **Transport Controls** (e.g. **Play**, **Stop**, etc.) on VTRs and DDRs using the **BVW-75** protocol via the **RS-422 Serial Digital Interface**.
- The Aprisa DDR can be controlled via an Ethernet connection.
- Intelligent Interface commands can be sent to Lyric via RS-232 Serial Protocol or Telnet.
- **GPIs** can be used to start Lyric **Clocks** and **Timers**, release a **Pause** and perform many other triggering functions.
- Lyric can use GPI output to trigger external devices such as keyers and tally lights.
- A user can send **Read**, **Read Next**, **Xfer** and other related commands to Lyric using Chyron's **ReCall Keys** via the **RS-232 Serial Protocol**.

Lyric File Formats

Lyric can import and export many common graphic, animation and other formats that can be used in outside applications. Lyric also creates and uses a variety of proprietary and non-proprietary formats.

File Extension	Description
	Lyric Compositions
*.lyr	This is the most commonly used Lyric file format. It is used to save complete Lyric compositions as well as specific groups of settings.
	Text Messages
*.lyr	All Text File: Records all text in the selected 2D Text Window. Recorded from within the Record Only: dialog box.
*.lyr	Cursor to End File: Records all text from cursor position to the end of the row in the selected 2D Text Window . Recorded from within the Record Only: dialog box.
*.lyr	Current Row File: Records all text on current row in the selected 2D Text Window. Recorded from within the Record Only: dialog box.
	Properties
*.lyr	Clock/Timer File: Records all Clock/Timer settings in the Lyric composition and is recorded from within the Clock/Timer Properties tab or from within the Record Only: dialog box.
	Animations
.efx	Scene Effects/ Read Effects File: Records Keyframe information from all objects on the Canvas. Recorded from File Menu > Save As, then select Save as Type: Lyric Effects File (.efx) or the Record Only: dialog box.
*.kyf	Object File: Records Keyframe information of the selected object on the Canvas . Recorded from Timeline > Save Keyframe File or the Record Only: dialog box.
*.tfx	Text Effect File: Records Advanced Text Effect settings of the active 2D Text Window. Recorded from Advanced Text Effects > Save.
	User Profiles
*.reg	Lyric User Profile: A standard Windows® registry file format that saves User Preferences and other Lyric settings and allows access for all Windows users. Also used in Chyron MOS operations. A User Profile is set via Config Menu > Save User Profile. It is loaded via Config Menu > Load User Profile.
*.lup	Lyric User Profile: A Lyric format that saves User Preferences and other Lyric settings. Limited access users cannot load *.lup files. A User Profile is set via Config Menu > Save User Profile. It is loaded via Config Menu > Load User Profile.

File Extension	Description		
Palettes			
*.reg	Palette File: A standard Windows® registry file format that is used to store a Palette settings. Recorded from the Color Select dialog box.		
	Playlists		
*.ply	Playlist File: Records Playlist information from within the Playlist or the Record Only: dialog box.		
	Macros		
*.lyr	Macro File: Records Macros scripts from within the Macros dialog box or the Record Only: dialog box. Because it is saved as a Lyric message, it can be read by entering a Message Number , and then pressing Read or Read Next . It can also be set to autoexecute on opening and can be programmed into a Playlist .		
*.lmx	 Macro File: A standard Windows® Macros script format that is recorded from within the Macros dialog box. Can be edited from within Lyric as well as in a text editor. Can only be opened from File Menu > Open or Windows Toolbar > Open icon 2. Cannot be set to autoexecute on opening or be programmed into a Playlist. 		
	Control Panels		
*.lyr	Multi FX File (Duet SD Only): Records Multi FX settings from within the Multi FX Control dialog box or the Record Only: dialog box.		
*.lyr	Video Mixer File (Duet SD Only): Records Video Mixer settings from within the Video Mixer dialog box or the Record Only: dialog box.		
*.ccf	Clip File: Records a Clip file from within the Clip Control Panel or the Record Only: dialog box.		
	Browser Databases		
*.mdb	Microsoft® Database File: Microsoft® Access database file format used to record Browser database files. Recorded from Config Menu > Preferences > Browser > Create Data Source or from Browser Window > Select Database > Create Data Source.		
	Backup		
*.lbu	Lyric Backup File: Backup file of Browser database, Browser assets, Windows directory or sets of files. The backup file can be used to restore files in the same or a different location. Backup is performed from File Menu > Backup. Restore is performed from File Menu > Restore.		

File Extension	Description	
External Systems - Chyron iNFiNiT!®		
*.fnt	iNFiNiT! Font File: An iNFiNiT! font file recorded from within the Browser's iNFiNiT! Browser Assets Window > Save to Database, Custom Font Editor > File Menu > Save or Custom Font Editor > File Menu > Save As > Save as Infinit font.	
*.rgb	Chyron iNFiNiT! RGBA File: An iNFiNiT! graphic file format. Imported via Tools Menu > Graphic or Import Graphic icon on the Chyron Toolbar. Lyric can also save to this format via File Menu > Save As, then select Save as Type: iNFiNiT! RGBA (*rgb).	
External Systems - Non-Chyron		
*.vpb	Quantel® Graphics File: a Quantel graphics file format. Recorded from within Browser Window > Quantel Assets > Save to Database.	

Using Audio in Lyric

An audio (*wav) file can be incorporated into a Lyric composition in the following manners:

- As an audio clip which is added to the scene via the **Clip Control Panel**.
- As a component of a video clip that is recorded from the Clip Control Panel.

Refer to Clip Control Panel, Audio and the Internal Clip Player and Recording Video/Audio to Video and Audio Files for in-depth coverage.

3. Duet SD Hardware Configuration

Duet Hardware Configuration

Config Menu > Duet Hardware Configuration

Duet Hardware Configuration is the setup facility for Duet systems. It encompasses functions such as **GPI**, **Video Standard**, **Timecode**, and much more. When **Duet Hardware Configuration** is selected from the **Config** menu, a set of configuration tabs is displayed for the system on which Lyric is installed. The following sections cover configuration for each type of Duet system.

Duet SD Video I/O Board

Overview

The SD Video I/O board performs video processing services for Duet, providing SDI (Serial Digital Interface) inputs and outputs, plus various sync gen timing services including a Genlock input and time code inputs. This board provides no analog video outputs.

The two video paths each include a 10-bit 4:2:2 keyer for compositing the Duet graphics input over the program video input using **Key1**. When the keyer mix is enabled, the resulting key output is 100% opaque. When the keyer mix is disabled the video output can be either shaped by Key or unshaped under user control.

The **Input Processor** has 10-bit resolution. **RGB1** is optionally unshaped via an integer divider, and **Key1** is decimated, then **RGB1** is converted into **YCrCb 4:2:2**. **Y1** and **Key1** are fed to a luminance mixer along with program **Y**. **CrCb1** and decimated **Key1** are fed to the chrominance mixer along with program **CrCb**.

The **Keyer Luminance Mixer** has 10-bit resolution. A two-channel mixer, uses shaped **Y1** input for mix with program video, shaped or unshaped otherwise. The **Y1** mixer coefficient is 100%; the program Y mixer coefficient is equal to **(1 - Key1)**.

The **Keyer Chrominance Mixer** also has 10 bit resolution. **CrCb1** and program **CrCb** are multiplexed, and use shaped **CrCb1** input for mix with **PGM** video (shaped or unshaped otherwise). The **CrCb1** mixer coefficient is 100%; the program **CrCb** mixer coefficient is equal to (**1 - Decimated Key1**).

Setup

Duet Hardware	Fonts Internet Jav Options	va Plug-in Keyboard	
Duet Hardware Configuration THE COMPANY THE WHOLE WO WATCHES Duet Hardware Devices		System Users and Passwords	
Duet Hardware Video I/0 Driver VIDI00: SD Video I/ Standard Definition Video I/	O Board		×
 <u>5</u>25i / 59.94 Hz <u>6</u>25i / 50 Hz 	C Analog sync In SDI Video In C Free <u>B</u> un	Enable Video Shaping	
Horizontal Delay	Vertical Delay	Output 1 Enable <u>K</u> eyer	
Ancillary Data Enable Anc <u>Data</u> Blank Line 10	Analog Output Output 1 Output 2	Output 2 Enable Keyer	
Slot Delays		OK Cancel	

Accessing Standard Definition Video I/O Settings from Control Panel

Remember that Duet's output video standard can be changed only in this Windows control panel, and not from Lyric. All of the other settings can be changed in this control panel or from **Duet Hardware** in Lyric's **Configuration** menu.

ng
r On
r On
all

Video Configuration Settings

- 1. In the Video Standard area, select your facility's standard by clicking a radio button.
- 2. In the Reference Select area, select one of the following:
 - Analog Sync In (to use your facility's black burst signal)
 - SDI Video In
 - Free Run (Duet supplies its own internal sync)
- 3. The Video In area determines processing of video inputs to Duet; click:
 - Enable Key Input when a Key Input signal is applied to Duet. Otherwise, a 100% matte signal is associated with Program In.
 - **Enable Video Shaping** to attenuate input video to the key signal level, so that color components do not exceed the key level.
- 4. The **Ancillary Data** checkbox causes Duet to pass all data in the incoming signal's blanking interval to the outputs.
- 5. In the **Output** area, the **Keyed** checkbox enables the Duet's keyer and causes the signal appearing at the SDI video input to be passed to the Duet output with Duet video keyed over it.
- 6. After all your selections are made, press Apply.

Output Processor, 10 bit resolution

YCrCb and **Key** are range limited, filtered, and have sync added. Ancillary data, delayed from the program video input, is optionally added prior to conversion to **SDI**.

Channel 2 Output (without Keyer)

The **Channel 2 Input/Output Processor** has 10-bit resolution. **RGB2** is optionally unshaped via an integer divider. **RGB2** and **Key2** are converted to **YCrCbK 4:2:2:4**, then are range limited, filtered, and have sync added. Ancillary data, delayed from **PGM** video input, is optionally added as well, before conversion to **SDI**.

Program Video Inputs

For the **Program Video** inputs, **SDI Video** and **Key** are deserialized, and then **Y** and **CrCb** are demultiplexed for the keyer inputs. **YCrCbK** is then converted to **RGBK** for the program video output. This board subsection includes a programmable delay for horizontal positioning. A separate delay path is provided for ancillary data pass through to the **SDI** video outputs.

Sync-Gen

In the **Sync Gen** section of the Video I/O board, Genlock is selectable from either the **SDI Video** input or from the analog reference input. Scanline timing (**525/625 timing**) is software-selectable. Separate video timing channels are provided for each backplane slot, with individually programmed (software-controllable) delays.
Duet Hardware Configuration

Config Menu > Duet Hardware

Duet Hardware configuration sets video specifications, parameters for external device control via the **BVW-75** protocol and **GPIs**, as well as **Timecode setup**. Note that **Device Control**, **GPI**, **Timecode** and **MPx** configuration procedures are the same for Duet SD and Duet HD. **Timecode** and **Device Control** setup are the same for all systems. Hardware requirements for accepting external **Timecode** differ between systems.

uet Hardware Configuration		
Video Device Control GPI	Timecode MPx	
Video Standard © <u>525 line (NTSC)</u> © <u>6</u> 25 line (PAL)	Reference Select C <u>A</u> nalog sync In C <u>S</u> DI Video In C Free <u>R</u> un	Video In <u>E</u> nable Video Shaping Enable Key Input
Horizontal Delay	Vertical Delay	Output 1 • Keyer Off • Keyer On
Ancillary Data Enable Ancil <u>D</u> ata Blank Line 10 🚔	Analog Output	Output 2
		Sa <u>v</u> e Re <u>c</u> all
		OK Cancel

Duet Hardware Configuration Dialog Box - Duet SD

Duet Hardware Configuratio	n		×
HD Video Device Control	GPI Timecode <u>M</u> F	×]	
Video Standard 720p / 59.94 Hz 1080i / 59.94 Hz 1080 S.F. / 23.98 Hz	Reference Select C Locked Free Run	Video 1 Out Keyed Input 1	Video 2 Out Keyed C Input 1 Input 2
Analog Output Enable Sync RGB VUV	- Horizontal Delay	C Incoming Video	C Incoming Video
			OK Cancel

Duet Hardware Configuration Dialog Box - Duet HD

There are five tabs which contain configuration settings:

- Video (Duet SD) or HD Video: Specifies parameters such as Video Output Standard, Genlock, etc. for the selected board.
- Device Control: Specifies the configuration information for the optional RS-422 Serial I/O Board & GPI/O board, which enables serial control of external devices using the BVW-75 protocol, as well as in- and out-bound GPI triggering.
- **GPI:** Specifies how the **GPI** assignments are set up.
- Timecode: Specifies Timecode source and other parameters.
- **MPx**: Specifies the allocation of VGEs in Duet SD and HD. For example, in multi-VGE systems, two VGEs may be paired for enhanced processing power in rendering complex animations.

Note that if the optional **RS-422 Serial I/O Board & GPI/O** and its driver are not installed in the system, the **Device** and **GPI** tabs are not accessible, and are grayed out. For information on **Device** configuration, refer to **Duet Hardware Configuration - Device Control**.

Video

Config Menu > Duet Hardware > Video

The **Video** tab provides control of Duet basic video setup, **except for the video output standard**, directly from Lyric.

Duet Configuration		×
Video Device Control GPI	Timecode <u>M</u> Px	
-Video Standard	Reference Select	Video In
525 line (NTSC)	C Analog sync In	Enable Video Shaping
O <u>6</u> 25 line (PAL)	⊙ <u>S</u> DI Video In	Enable Key Input
	◯ Free <u>R</u> un	
<u>H</u> orizontal Delay	Vertical Delay	Output 1
<u>880 ÷</u>	-j 1 🚊	C Kever Off
-Ancillary Data	-Analog Output	Output 2
Enable Ancil Data	O Output 1	Keyer Off C Keyer On
Blank Line 🛛 📋	Output 2	
		Sa <u>v</u> e Re <u>c</u> all
		OK Cancel

Video Configuration Tab

Setting	Description
Video Standard	Specifies Video Standard [525 Line (NTSC for Standard Definition Duet systems), 625 (PAL for Standard Definition Duet systems), 1080i (High-Definition Duet systems), 1080/24p (High Definition Duet, outputting 24 frames per second for film production) or 720p (High Definition Duet systems)]. This must be set in the High Definition Video I/O Settings dialog box, accessed from Control Panel > Duet Hardware .
	This area of the window is only an indicator of the configuration which is set in the Duet Hardware control panel. This control panel is accessible completely independent of Lyric through Windows.
Reference Select	Selects one of three Genlock sources: Analog (Composite Sync/Black Burst, SDI (SD Duet Only), or Free Run (internal reference source only).
Video In	Select Enable Video Shaping to attenuate Input Video to the Key signal, so that color components do not exceed the key level. Select Enable Key Input to use Duet's internal keyer. Otherwise, the signal is passed at full value.
Horizontal Delay	Sets/changes the Horizontal delay of Duet video with respect to incoming video reference.

Setting	Description
Vertical Delay	Sets/changes the Vertical delay of Duet video with respect to incoming video reference.
Note: Horizonta should be made However, these which are descr made only by a	I and Vertical Delay settings are maintenance-type adjustments that only at the time of system setup, and left unchanged if possible. controls are active in Lyric's "Duet Hardware Configuration" menus, ibed in the following sections. Any changes to these controls should qualified technician.
Output 1 Output 2	Use the radio buttons to enable or disable the Keyer signal for each of the Video I/O board's two outputs.
Ancillary Data	The Ancillary Data checkbox causes Duet to pass all data in the incoming signal's blanking interval to the outputs. When enabled, all ancillary data, including Closed Captioning, will pass through the Keyer unaffected. This means that no Duet video is inserted into the first displayed scanline of each field, in order to preserve the Closed Captioning information. The Blank Line , or Vertical Reset , is normally Line 10, but a different line can be selected for non-standard video formats. The ancillary data appears on the same line in the output signal.
Save/Recall	Saves the current Video settings in a file with the familiar .lyr suffix. You may open such a file to restore previously-saved settings.
	Save Lyric Video Settings Save jn: Lyric 00000501.lvr 00000515 Lyric Recall Lyric Video Settings Mes Look jn: Lyric 00000501.lyr 000 Images 000000501.lyr Messages 000000502.lyr Messages 000000510.lyr Save/Record Lyric Video Settings
Output	Use these radio buttons to select which of Duet's output channels will appear on the Video I/O board's single analog output. Select Keyer Off or Keyer On for the selected output.
OK/Cancel	To exit and save changes, click OK . To exit without changing the current Duet video settings, click Cancel.

Configuration for Display of Video Source

Duet SD: Config Menu > Duet Hardware > Video

Video from a variety of sources can be incorporated as part of a Lyric composition. Lyric provides creative tools for displaying video, including **Masks**, **Video Regions**, **Squeezeback Objects** and application of video to 3D surfaces.

Video can be displayed as a continuous live or prerecorded source. In this situation, the video is not a component of the Lyric composition itself, in that it is not an object that can be manipulated through Lyric. It is a straight video display, with no set beginning or end controlled through Lyric.

Video can also be displayed as a clip, where playback parameters are controlled either directly from Lyric's **Clip Control Panel**, or where the playback parameters are set up from the **Clip Control Panel**, but the clip itself is an object in a Lyric animation and is played back as part of the Lyric animation. The **Clip Control Panel** provides the ability to play back video or audio clips files (*.*ccf*). Lyric does not perform actual edits on the recorded content of the source material. The **Clip File** contains the **In** and **Out** point information that defines the duration of the clip for playback, however, the source video/audio remains unchanged. In order to play back the video/audio, the original material and the playback device *must* be available. Clip files can be created from sources such as an **External VTR or DDR** (Digital Disk Recorder), a **Chyron Aprisa DDR**, Duet's **Internal Clip Player**, or **Audio** files processed through audio hardware in Duet.

Playback from a video source is routed through Duet's internal keyer. The video is not visible on the Lyric **Canvas** as seen on Duet's SVGA monitor. Rather, the clip is keyed behind the Lyric composition and is visible on the output monitor. To enable Duet's internal keyer:

- 1. From the **Config** menu, select **Duet Hardware**.
- 2. Select the Video tab, click Keyer On for either or both channels, and then click OK. The figure below shows Keyer On for Output 1, and Keyer Off for Output 2.

Duet Hardware Configuration		×
Video Device Control GPI	Timecode MPx	
Video Standard	Reference Select	Video In
525 line (NTSC)	C Analog sync In	Enable Video Shaping
C 625 line (PAL)	SDI Video In	Enable Key Input
	C Free <u>R</u> un	
<u>H</u> orizontal Delay	- <u>V</u> ertical Delay	Output 1
	-ji	O Keyer Off ⊙ Keyer On
- Ancillary Data	- Analog Output	Output 2
Enable Ancil <u>D</u> ata	C Output 1	💿 Keyer Off 🔿 Keyer On
Blank Line 🛛 📋	Output 2	
		Sa <u>v</u> e Re <u>c</u> all
		OK Cancel

Video Settings for Display of Video

Device Control

Config Menu > Duet Hardware Configuration > Device Control

Lyric can control or be controlled by external devices such as videotape tape recorders (VTRs), digital disk recorders (DDRs) and switchers by using GPIs (General Purpose Interface triggers) or by the BVW-75 Serial Digital Protocol via the RS-422 Serial Digital Interface.

Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights. *Refer to GPIs - Overview for comprehensive information on GPI setup.*

The most common use of the BVW-75 protocol/RS-422 connection is for cueing and playback of video from the **Clip Control Panel**. In addition, segments of existing video on external playback devices can be defined, saved and played back as **Clips** either on their own, or as components of a Lyric message.

NOTE

To enable BVW-75 via RS-422 (all systems) capability or GPI (Duet SD/HD) capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board and must be installed in the Duet SD/HD system. This board is not necessary for GPI function on Duet LE/LEX/PCI/PCI+, but is necessary for BVW-75/RS-422 communication. *Call Chyron Customer Service at 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup.*

- While each type of system displays its own set of system-specific tabs in Duet Configuration, the Device tab on all systems is the same.
- If this board is not present in a Duet SD/HD system, the Device and GPI tabs are grayed out.

The following example shows configuration on a Duet SD of serial device control of a Sierra DDR, using the **BVW-75** protocol.

- 1. Be sure that the external DDR or VTR is properly connected to the Duet system. For additional information on connection, refer to the Duet Hardware Reference Manual.
- 2. From the **Config** menu, select **Duet Hardware**. The **Duet Hardware Configuration** tabs are displayed. Click the **Device Control** tab to display the **Device Control** settings.

Ideo Device	Control GPI Timecode .	MPx		
<u>P</u> ort:	1 Description: Si	erra DDR	Port Allocated: 🔽	
	Protocol			
	Sony BVW-75 💌 R	\$422		
	Port Configuration			
	<u>B</u> aud 38400 <u>▼</u>	D <u>a</u> ta Bits 8		
	Stop Bits 1] Pari <u>t</u> y OD	D I	
	• Master	Pre-Roll Time		
	C Slave	(frames)		

Duet Configuration - Sony[®] BVW-75 Protocol

- 3. From the **Port** drop-down list box, select the number (1 4) of the port on the Chyron RS-422 Serial I/O & GPI/O Board that is to be connected to the external device.
- 4. In the Description field, enter a description of the device. When the external device is selected in the Clip Control Panel Playback Device drop-down list box, this description is reflected in the Playback Device field. Refer to Clip Control Panel for additional information on clip operations.
- 5. Select (check) the **Port Allocated** checkbox. If this checkbox is not enabled, the device is not recognized by the **Clip Control Panel**, and therefore cannot be accessed for clip creation.
- The Protocol drop-down list box defaults to the BVW-75 protocol, using an RS-422 connection. BVW-75 is the currently the only protocol supported by Lyric. Lyric detects connected machines that use BVW-75 protocol, and then automatically sets the Port Configuration values for Baud Rate, Data Bits, Stop Bits and Parity. The Master radio button is always selected. The Slave function is not implemented at this time.
- 7. Enter a **Pre-Roll Time**, in frames, for the VTR that is connected. **Pre-Roll** for a DDR is **0**. Remember that this adjustment is in **Frames**.
- 8. Click **OK**. **Device Control** is now set up for the DDR.

GPI Config Menu > Duet Hardware > GPI

<u>Overview</u>

Lyric can control or be controlled by external devices such as tape machines, digital disk recorders (DDRs) and switchers by using **GPIs (General Purpose Interface** triggers) or by the **BVW Serial Digital Protocol** via the **RS-422 Serial Digital Interface**. Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. In addition, **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights.

NOTE

To enable GPI and/or RS-422 capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board must be installed in the Duet SD/HD system. *Call Chyron Customer Service at* 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup. If this board is not present in the system, the GPI and Device tabs are grayed out.

Setup

To access GPI setup:

• From the **Config** menu, select **Duet Hardware**, and then click the **GPI** tab. The following two figures show sample **GPI INPUT** and **GPI OUTPUT** settings.

Duet Configuration	x
Video Device Control GPI Timecode	
<u>G</u> PI: 7	
Direction INPUT Pulse Width (ms) 500 Iest	
OK Cancel	

Duet Configuration - Setting GPI INPUT

Duet Configuration	×
Video Device Control GPI Timecode MPx	
<u>G</u> PI: <u>3</u> Desc <u>r</u> iption:	GPI <u>A</u> llocated: 🗹
Direction Active Level OUTPUT I Eulse Width (ms) Iest	
	OK Cancel

Setting GPI OUTPUT

The following parameters should be set to enable **GPI** capability:

ltem	Description
GPI	GPI designates which is assigned to a specific event. The number of GPIs available depends on the number of RS-422 Serial I/O & GPI/O Boards installed in the system. In the GPI dropdown list box, default GPIs 1 - 8 for the first installed RS-422 Serial I/O & GPI/O Board; 9 - 16 for the second board; 17 - 24 for the third board, and 25 - 32 for the fourth board. Click on the up or down arrow spin control box to set.
	If multiple RS-422 Serial I/O & GPI/O boards are installed in the system, then the DIP switches must be correctly set in order to ensure availability of all GPIs.
Description	A descriptive name can be assigned to the GPI in the Description field to make it easier to identify.
GPI Allocated	The GPI Allocated checkbox must be checked to enable GPI control.
Direction	The Direction setting determines whether the designated port is to receive the incoming pulse (INPUT) or send an outgoing pulse (OUTPUT).
Active Level	The Active Level setting determines whether a voltage change in the GPI signal low to high (HIGH) or from high to low (LOW) is to be recognized as the trigger.
Pulse Width	Pulse Width defines the minimum duration of the GPI pulse in milliseconds. This should be set to ignore a short accidental contact with a physical GPI button or a slight signal anomaly which could unintentionally trigger the GPI .

NOTE

When a GPI assigned to a specific event, such as to trigger a Playlist step or trigger a Squeezeback Effect, make sure that the same GPI is not also assigned as a Global GPI, as there may be a conflict when the GPI or Global GPI is triggered. *Refer to GPIs and Global GPIs for additional information. Refer to Chapter 6 - GPIs and Global GPIs for additional information.*

Test Messages



Cannot Test for Input - GPI Not Enabled

Lyric	×
•	OK/RETURN to toggle GPI again
	Cancel

GPI Enabled and Assigned

Wait for Input	
	Waiting for GPI

GPI Enabled - Waiting for Input

Timecode

Config Menu > Duet Hardware > Timecode

Timecode parameters can now be set for all Duet systems in the **Config Menu > Duet Hardware > Timecode** tab, as shown below.

Duet Configuration	The second s	×
Video Device Control GPI	Timecode MPx System Timecode 12:34:24:0 Internal Sync External Drop Frame	4
Duet LE Configuration Configure Board Use Setup Board Con Syst	riguration Setup GPI Timecode em Timecode 11:32:00:06	OK Cancel
	External External Drop Frame	
	OK	Cancel Apply Help

Time Code Configuration

System Timecode is set either internally or via an externally generated signal.

Internal: Internal Timecode is synchronized with the Windows time clock. To update the synchronization between Duet's Timecode facility and the Duet's PC system clock, click **Sync**.

External: Externally generated timecode is fed to the Duet system. The timecode can be either **Drop Frame** or **Non-Drop Frame**. Check the **Drop Frame** checkbox to enable **Drop Frame** timecode; uncheck the **Drop Frame** checkbox to use **Non-Drop Frame** timecode. Duet SD/HD and Duet LE/LEX/PCI/PCI+ systems have different external timecode connections.

- **Duet SD/HD:** Connect the external timecode generator to the **LTC IN** (Longitudinal Timecode In) 9pin jack on the Video I/O board.
- Duet LE/LEX/PCI/PCI+: An optional PCI-LTC board from Adrienne Electronics must be installed to enable external timecode sync. Connect the external timecode generator to the LTC IN three-pin mini-XLR jack on the PCI-LTC board. Contact Chyron Customer Service at 1-631-845-2000 for information on obtaining the PCI-LTC board.

MPx

Config Menu > Duet Hardware > MPx

This panel controls the allocation of VGEs in Duet SD and HD. In multi-VGE systems, two VGEs may be paired for enhanced processing power in rendering complex animations on one of the system's outputs.

These controls also allow the operator to assign a specific VGE to the incidence of Lyric in which this panel is opened. (VGEs may be assigned to other copies of the Lyric program currently running or to other applications such as CAL.)

If a VGE board is Locked, Lyric has use of the frame buffer(s) on that board, excluding other applications such as CAL. An error will be generated by the CAL server if the client application tries to connect to that channel. If a VGE board is In Use, another application (e. g. CAL client) has connected to that board and has locked it for exclusive use. The Frame Buffer's settings are written to the registry on exit from Lyric.

In Figure 1 below, VGE 1 is assigned to the current incidence of Lyric (this was accomplished by clicking the **Locked** checkbox). VGE 2 is being used by another application, as shown by the **In Use** status indicator. No additional VGEs are installed, as shown by the **Not Installed** status indicators.

VGE 1 Image: Constraint of the second sec		Locked	In Use	Not Installed		
VGE 2 C C VGE 3 C Ungroup VGE 4 C C C	VGE 1		C	C	Group	
VGE 3 T C C Ungroup	VGE 2	Г	e	C		
VGE 4 T C 🕫	VGE 3	Г	C	C		
	VGE 4		С	6		
VGE 5 🗖 C @	VGE 5	Г	С	©		

Duet VGEs Allocated on the MPx Tab

To group 2 VGEs together for enhanced animation processing power:

1. Uses the standard Windows **Shift + Click** method to select them both. Click the Locked checkbox, as shown, and then click the **Group** button on the right.

VGE 2		0	Group
		C	
VGE 3		©	Ungroup
VGE 4	1 0	ତ	
VGE 5 🗖	1 C	©	

Selecting Two VGEs to Group Together

2. Press OK to make the change effective. The change will take a moment, during which time you may see a Wait cursor. When Duet has completed the operation, one of the Frame Buffer

FBD buttons will disappear (leaving something like **FBD** on the Duet toolbar). The remaining button symbolizes the two VGEs grouped together as a single Frame Buffer. Two VGEs grouped together look like this on the MPx panel:

	Locked	In Use	Not Installed	
VGE 1		0	0	<u>G</u> roup
VGE 2		0	0	
VGE 3		0	©	<u>U</u> ngroup
VGE 4		0	©	
VGE 5		0	©	

Two VGEs Grouped Together

To ungroup VGEs:

1. Select one of the VGEs on the menu, as seen below.

	Locked	In Use	Not Installed	
VGE 1	$\overline{\mathbf{v}}$	С	C	<u>G</u> roup
VGE 2		С	0	-
VGE 3	Г	C	ø	<u>U</u> ngroup
VGE 4		С	G	
VGE 5	Г	C	ø	

Ungrouping VGEs

- 2. Press **Ungroup**. Note that this action also <u>un</u>-assigns both VGEs from Lyric; when VGE #2's checkbox becomes visible again, both checkboxes will be "unchecked". Therefore...
- 3. ...You must re-assign the VGE (or VGEs) that you wish to use with Lyric by clicking the Locked checkbox(es).
- 4. Click OK to put the changes into effect.

4. Duet HD Hardware Configuration

High Definition Video I/O Settings and Hardware Overview

Start > Settings > Control Panel > Duet Hardware > Video I/O Driver

Overview

Basic Configuration and Connections



View of HD Video I/O Board Back Panel

	HD Duet Basic Configuration High Definition Video I/O Board Connections
Reference In	Tri-level reference input.
Video 1 Out	SMPTE 292 SDI (Serial Digital Interface) Video Output.
Key 1 Out	SMPTE 292 SDI (Serial Digital Interface) Key Output.
Video 2 Out	SMPTE 292 SDI (Serial Digital Interface) Video Output.
Key 2 Out	SMPTE 292 SDI (Serial Digital Interface) Key Output.
Video In	SMPTE 292 SDI (Serial Digital Interface) Program Video. May contain ancillary data that will be passed to the output.
Key In	SMPTE 292 SDI (Serial Digital Interface) Key/Alpha associated with Program Video Input. Used for Alpha blending.
(LTC) Timecode In	Currently not implemented.

Board Position

The Video I/O board is always in Slot 1 and the Mixer/Switcher board is always in Slot 2. Standard system setup is one VGE in Slot 5 and a second VGE in Slot 7. The VGE in Slot 5 is routed to the mixer through Compositor 1 and the VGE in slot 7 is routed to the mixer through Compositor 2.

The optional third VGE should go in Slot 6. On the Lyric **Duet Hardware Configuration MPx** menu, VGE2 and VGE3 should be grouped into a single frame buffer, which is buffer 1. The optional HD Capture board should always go in slot 3.

Note that:

- Lyric numbers the VGEs from the Video I/O Board out.
- Lyric number the Frame Buffers from the CPU out.

Video 1 and Video 2 can each key the internal Duet HD graphics over Program Video in.

The following is a recommended setup:



Duet HD Board Setup

NOTE

The recommended location of boards in Duet may change with software and hardware refinements and new options! Carefully read the installation instructions that accompany any field update you purchase, and when in doubt, call Chyron Customer Service for assistance at 888-4-CHYRON.

In conformance to SMPTE 292M specifications, the HD Video I/O board provides 1.485 GB/sec serial digital 1080i and 720P display formats. Prior to Lyric Version 1.2 and Duet Driver Version 2.5, the video standard was determined by the DIP switches on the board. In Lyric Versions 1.2 and later, and Duet Driver Versions 2.5 and later, the video standard is set by the drivers that are loaded when the system starts. A single reference input is provided for analog tri-level sync. The design of the HD Video I/O hardware is essentially standards-independent among the various HD formats. Different oscillators are available on board for the different required standards.

RGB to SMPTE292M Conversion

Inputs for Channel 1 are received on four channel links, giving an input bandwidth of 4 components (RGBK) at 74M pixels/sec. The parallel streams from the channel links are converted and synchronized to the internal clock, and re-multiplexed to RGBK streams of 8 bits at 74MHz. The RGBK streams are then passed to filters in order to reduce fast (0-1) edges, so that these edges do not ring later analog or digital filters. The RGB signals are then passed through a color space converter to get to YUV 10 bit, and then the U & V signals are passed through a down sampler. This down sampler implements a 29 point symmetric filter for half bandwidth reduction and decimation, and both the U & V channels can pass through a single LF3320. Delay compensation for the luminance signal and key signals are made. The key signal is level shifted to SMPTE292M levels for output, and to a 0-512 level for key processing.

Program Video In

Parallel Y and C data from the program input has its timing information extracted and passed to the Genlock area. The Y and C data are passed through a short synchronizer to synchronize to board clock phase. The C data is demultiplexed, and up-sampled through a 5-7 point filter. Color space conversion to RGB is accomplished, after which the data is demultiplexed and passed to channel link transmitters to go to the VGE board. Timing information can also be put on the channel links.

Genlock

The reference input BNC connector is intended for a tri-level sync source that will synchronize HD Duet with your facility's master timing. The oscillators are VCXOs, and 4 positions are provided for different standards. Automatic detection of frame rate is incorporated (including differentiation of 59.94Hz & 60Hz). Only one oscillator will be active at any one time in normal mode to prevent cross-talk. The timing generator provides clocks and timing signals both for on board use, and for the channel links to drive the rest of Duet.

Mixer and Output Matrix

The HD Mixer board will enable routing and mixing of up to four VGE boards in a single Duet chassis. Support is provided for two separate graphic "layers", with each layer consisting of two VGE boards. The mixer can also perform dissolves and simple cuts between layers.

Available choices for Output 1 or Output 2 include: Layer 1, Layer 2 or Layers 1 and 2.

Setup

Before using the Duet HD, the High Definition Video I/O parameters must be set. To access

- 1. Open the Windows Start menu, select Settings > Control Panel > Duet Hardware. The Duet Hardware Configuration list opens.
- 2. Click on the + next to Duet Hardware, then click on the + next to Video I/O Driver to view the driver name for the HD video I/O driver.
- 3. Highlight VIDIO0: HD Video I/O Board, then click the settings button at the bottom of the **Duet Hardware Configuration** list. The **High Definition Video I/O Settings** dialog box is displayed.

Note that the **HD Video** tab of the **Duet HD Configuration** menu's **Duet Hardware Configuration** dialog box in Lyric has many settings in common with the **High Definition Video I/O Settings**. Settings common to both can be set in either dialog box, except for **Video Standard**, which must be set in the **High Definition Video I/O Settings** dialog box below. This setting is then reflected in the Lyric **Duet Hardware Configuration>HD Video** tab.

IMPORTANT!

The High Definition Video I/O Settings determine the configuration of the Duet HD on power-up of the Duet system. The settings in the HD Video tab accessed in Lyric from the Configuration menu, however, are user name-specific. When Lyric is exited, the settings in the HD Video tab are stored in the registry. When Lyric is reopened using the same login (user) name, the stored settings for that user name are applied. If a user logs into Windows under a different name, the settings previously stored in the registry *under the different login name* are applied. The only settings that are always controlled by the High Definition Video I/O Settings are the Video Standard and the Field Dominance.

	Duet Har	dware Devices		
	Due	t Hardware Video I/O Driver VIDIO0: HD Video I Miver Driver	/O Board	
		HD Capture Driver Video Graphic Engine (\ General Purpose I/O (G	/GE) Driver PIO) Driver	
h Definitior	n Video I/O 9	5ettings		
Video St 1080i / 59.9	andard 4 Hz	Field Dominance	Output 1	Output 2
Analog	Output	Reference Select	Input 1	C Input 1
Enable S	Sync	C Locked	C Input 2	• Input 2

Duet Hardware Devices: High Definition Video I/O Settings

Set parameters as described in the following table:

Parameter	Description
Video	Specifies Video Standard for the facility. Select from the scrollable list:
Standard	• 720P / 59.94 Hz • 1035i / 60Hz *
	• 1035i / 59.94 Hz * • 1080i / 60Hz
	• 1080i / 59.94 Hz • 1080sf / 24 Hz
	• 1080sf / 23.98 Hz • 1080i / 50Hz **
	• 720P /60 Hz
	* The 1035i / standards set the Video I/O board to display the proper number of scanlines for that format, but Lyric will continue to work as if the system were 1080i /. About the only visual impact of this is that the center page operation may not vertically center the graphics correctly.
	** 1080i / 50 Hz sets the Video I/O board to Genlock and generate the 1080i / 50 Hz video standard. As of April 2003, the changes to Lyric required to support animations at this frame rate have not been implemented.
Analog	Specifies type of analog video applied to the MON 1 and MON 2 outputs.
Output	Enable Sync: Select to adds a sync signal to the color outputs.
	RGB: Sends RGB output to monitor(s).
	• YUV: YUV output to monitor(s).
	 MON 1 is the analog monitor output of Duet HD from Video 1. MON 2 is the analog monitor output of Duet HD from Video 2.
	These are analog video outputs that allow you to monitor the digital video output from Video 1 and Video 2 . They can be connected directly to any SVGA monitor that is capable of supporting the required video standard. They can also be connected to an analog HD monitor with a standard 15-pin SVGA-to-BNC breakout cable.
	 In general, when using these connections with an HD monitor, the selection should be set for YUV with Sync Enabled on the video outputs.
	 When used with an SVGA monitor, the selection should be set for RGB with sync disabled from the analog outputs. Most SVGA monitors work using the external horizontal and vertical sync supplied on the SVGA connector.

Parameter	Description
Field Dominanc e	This setting, which can also be applied to frames, affects only Duet HD systems set to an interlace standard of either 1080i (interlaced) or 1080sf (segmented frame), and which use grouped VGEs to produce animations such as Rolls , Crawls , etc. It specifies which field or frame is to be treated as Field/Frame 1 when rendering animations.
	If the appearance of an animation is jagged or has vertical serration, switch the Field/Frame Dominance . This setting has no bearing on operation when the Standard is 720p/ .
	 If the Standard is 1080i/ or 1035i/, select either Field 1 or Field 2 from the scrollable list.
	• If the Standard is 1080sf/ , select either Frame 1 or Frame 2 from the scrollable list.
Reference	Specifies a sync reference. Select appropriate radio button:
Select	Locked: References a tri-level sync source applied to the REF IN BNC connector.
	Free Run: Select if a reference is either unavailable or unnecessary.
Output 1	In the Output 1 area, select the output of the HD Mixer Board that you wish routed to Output 1 . Select Incoming Video if you wish that signal routed to Output 1 . If no HD Mixer is installed, the output of VGE 1 or VGE 2 may be selected.
Output 2	In the Output 2 area, select the output of the HD Mixer Board that you wish routed to Output 2 . Select Incoming Video if you wish that signal routed to Output 2 . If no HD Mixer is installed, the output of VGE 1 or VGE 2 may be selected.
Slot Delays	Slot Delays have no bearing on Duet HD operation.
Horizontal Delay	The Horizontal Delay control moves the horizontal position of output video as much as one-half a scanline earlier or later than incoming reference. Nominal delay of video in to video out is 5 microseconds if the reference input is in time with the video input.
	 Click the slide box to display current value. Click and hold to drag slide box to new value.
	Horizontal Delay Vertical Delay III
	HD Horizontal Delay

Parameter				Des	criptio	า			
Vertical Delay	The Vertica respect to ir scanlines.	n l Delay ncoming	r control g sync s	sets th ources;	e vertica the ran	al positio ge is -4	on of ou scan lin	tput syr ies to +:	ncs with 3
	 Clic drag 	k the sl g slide l	ide box box to n	to displ ew valu	ay curre e.	ent value	e. Click	and ho	ld to
		Horizont	al Delay—		-1-	-Vertical	Delayj	5	-
	HD Vertical Delay								
	The normal scanline off	Vertica set, as s	al Delay shown i	setting n the fol	is 4 , wh lowing t	nich cor table.	respond	s to a 0	I
	Value	0	1	2	3	4	5	6	7
	Offset	-4	-3	-2	-1	0	1	2	3
Advanced	Currently no	ot imple	mented						
ок	Click OK to	accept	the sett	ings an	d close	the dial	og box.		
Cancel	Click Cance box was op	el to rev ened.	rert to th	e settin og box f	gs that hen clo	were in ses.	effect w	hen the	e dialog

Duet Hardware Configuration

Config Menu > Duet Hardware

Duet Hardware configuration sets video specifications, parameters for external device control via the **BVW-75** protocol and **GPIs**, as well as **Timecode setup**. Note that **Device Control**, **GPI**, **Timecode** and **MPx** configuration procedures are the same for Duet SD and Duet HD. **Timecode** and **Device Control** setup are the same for all systems. Hardware requirements for accepting external **Timecode** differ between systems.

Duet Hardware Configuration		×
Video Device Control GPI	Timecode <u>M</u> Px	
Video Standard © <u>525 line (NTSC)</u> © <u>6</u> 25 line (PAL)	Reference Select C <u>A</u> nalog sync In C <u>S</u> DI Video In C Free <u>R</u> un	Video In <u>E</u> nable Video Shaping Enable Key Input
Horizontal Delay	Vertical Delay	Output 1 • Keyer Off • Keyer On
Ancillary Data Enable Ancil <u>D</u> ata Blank Line 10	Analog Output	Output 2
		Sa <u>v</u> e Re <u>c</u> all
		OK Cancel

Duet Hardware Configuration Dialog Box - Duet SD

Video Standard	Reference Select	Video 1 Out	Video 2 Out
C 720p / 59,94 Hz	C Locked	🗖 Keyed	I Keyed
1080i / 59.94 Hz		Input 1	C Input 1
C 1080 S.F. / 23.98 Hz	Free Run	C Input 2	Input 2
Analog Output		C Incoming Video	C Incoming Video
🔽 Enable Sync			1
C RGB	Horizontal Delay	Vertical D)elay
 YUV 		r	

Duet Hardware Configuration Dialog Box - Duet HD

There are five tabs which contain configuration settings:

- Video (Duet SD) or HD Video: Specifies parameters such as Video Output Standard, Genlock, etc. for the selected board.
- Device Control: Specifies the configuration information for the optional RS-422 Serial I/O Board & GPI/O board, which enables serial control of external devices using the BVW-75 protocol, as well as in- and out-bound GPI triggering.
- GPI: Specifies how the GPI assignments are set up.
- Timecode: Specifies Timecode source and other parameters.
- **MPx**: Specifies the allocation of VGEs in Duet SD and HD. For example, in multi-VGE systems, two VGEs may be paired for enhanced processing power in rendering complex animations.

Note that if the optional **RS-422 Serial I/O Board & GPI/O** and its driver are not installed in the system, the **Device** and **GPI** tabs are not accessible, and are grayed out. For information on **Device** configuration, refer to **Duet Hardware Configuration - Device Control**.

HD Video

Config Menu > Duet Hardware > HD Video

The HD Video tab of the Duet Hardware Configuration dialog box has many settings in common with the High Definition Video I/O Settings set in Control Panel>Duet Hardware. Settings common to both can be set in either dialog box, except for Video Standard, which must be set in the High Definition Video I/O Settings dialog box. This setting is then reflected in the HD Video tab.

IMPORTANT!

The High Definition Video I/O Settings set in the Control Panel determine the configuration of the Duet HD on power-up of the Duet system. The settings in the HD Video tab accessed in Lyric from the Configuration menu, however, are user name-specific. When Lyric is exited, the settings in the HD Video tab are stored in the registry. When Lyric is reopened using the same login (user) name, the stored settings for that user name are applied. If a user logs into Windows under a different name, the settings previously stored in the registry *under the different login name* are applied. The only settings that are always controlled by the High Definition Video I/O Settings are the Video Standard and the Field Dominance.

Video Standard	⊢ Reference Select ¬	Video 1 Out	Video 2 Out
C 720p / 59.94 Hz	C Locked	Keyed	☐ Keyed
1080i / 59.94 Hz		Input 1	C Input 1
C 1080 S.F. / 23.98 Hz	Free Run	C Input 2	Input 2
Analog Output		C Incoming Video	C Incoming Video
🔽 Enable Sync			
C RGB	Horizontal Delay	Vertical D)elay
• YUV		ł	

Duet Hardware Configuration - HD Video

Parameter	Desc	ription				
Video Standard	Specifies Video Standard. This mu Video I/O Settings dialog box, acco Hardware.	ust be set in the High Definition essed from Control Panel > Duet				
	• 720P / 59.94 Hz	• 1035i / 60Hz *				
	• 1035i / 59.94 Hz *	• 1080i / 60Hz				
	• 1080i / 59.94 Hz	• 1080sf / 24 Hz				
	 1080sf / 23.98 Hz 	• 1080i / 50Hz **				
	• 720P /60 Hz					
	* The 1035i / standards set the Vide number of scanlines for that format, the system were 1080i /. About the center page operation may not verti ** 1080i / 50 Hz sets the Video I/O I 1080i / 50 Hz video standard. As of	o I/O board to display the proper but Lyric will continue to work as if only visual impact of this is that the cally center the graphics correctly. board to Genlock and generate the April 2003, the changes to Lyric				
	required to support animations at th implemented.	is frame rate have not been				
Analog Output	 Specifies type of analog video appli Enable Sync: Select to adds a syn RGB: Sends RGB output to 	ed to the MON 1 and MON 2 outputs. Ic signal to the color outputs. o monitor(s).				
	YUV: YUV output to monitor	or(s).				
	 MON 1 is the analog monito MON 2 is the analog monito 	or output of Duet HD from Video 1 . or output of Duet HD from Video 2 .				
	These are analog video outputs that allow you to monitor the digital video output from Video 1 and Video 2 . They can be connected directly to any SVGA monitor that is capable of supporting the required video standard. They can also be connected to an analog HD monitor with a standard 15-pin SVGA-to-BNC breakout cable.					
	 In general, when using thes the selection should be set video outputs. 	e connections with an HD monitor, for YUV with Sync Enabled on the				
	 When used with an SVGA r for RGB with sync disabled SVGA monitors work using sync supplied on the SVGA 	nonitor, the selection should be set from the analog outputs. Most the external horizontal and vertical connector.				
Reference Select	Specifies a sync reference. Select a Locked: References a tri-level synconnector. Free Run: Select if a reference is e	appropriate radio button: c source applied to the REF IN BNC either unavailable or unnecessary.				

Parameter	Description								
Output 1	In the Output 1 area, select the output of the HD Mixer Board that you wish routed to Output 1 . Select Incoming Video if you wish that signal routed to Output 1 . If no HD Mixer is installed, the output of VGE 1 or VGE 2 may be selected.								
Output 2	In the Outp wish routed routed to O VGE 2 may	n the Output 2 area, select the output of the HD Mixer Board that you wish routed to Output 2 . Select Incoming Video if you wish that signal routed to Output 2 . If no HD Mixer is installed, the output of VGE 1 or VGE 2 may be selected.							
Horizontal Delay	The Horizo video as mu reference. the reference • Clic dra	The Horizontal Delay control moves the horizontal position of output video as much as one-half a scanline earlier or later than incoming reference. Nominal delay of video in to video out is 5 microseconds if the reference input is in time with the video input. • Click the slide box to display current value. Click and hold to drag slide box to new value. Horizontal Delay Vertical Delay Vertical Delay HD Horizontal Delay							
Vertical Delay	The Vertica respect to in scanlines. • Clic dra	The Vertical Delay control sets the vertical position of output syncs with respect to incoming sync sources; the range is -4 scan lines to +3 scanlines. • Click the slide box to display current value. Click and hold to drag slide box to new value.							
	E HD Vortical Dalay								
	The normal Vertical Delay setting is 4 , which corresponds to a 0 scanline offset, as shown in the following table.								
	Value	0	1	2	3	4	5	6	7
	Offset	-4	-3	-2	-1	0	1	2	3
ок	Click OK to	accept	the sett	ings an	d close	the dialo	og box.		
Cancel	Click Cancel to revert to the settings that were in effect when the dialog box was opened. The dialog box then closes.								

Configuration for Display of Video Source

Duet HD: Config Menu > Duet Hardware > HD Video

Video from a variety of sources can be incorporated as part of a Lyric composition. Lyric provides creative tools for displaying video, including **Masks** and application of video to 3D surfaces.

Video can be displayed as a continuous live or prerecorded source. In this situation, the video is not a component of the Lyric composition itself, in that it is not an object that can be manipulated through Lyric. It is a straight video display, with no set beginning or end controlled through Lyric.

Playback from a video source is routed through Duet's internal keyer. The video is not visible on the Lyric **Canvas** as seen on Duet's SVGA monitor. Rather, the clip is keyed behind the Lyric composition and is visible on the output monitor. To enable Duet's internal keyer:

- 1. From the Config menu, select Duet Hardware.
- 2. Select the **HD Video** tab, click **Keyed** for either or both channels, and then click **OK**. The figure below shows **Keyed** disabled for **Video 1 Out**, and **Keyed** enabled for **Video 2 Out**.

Duet Hardware Configuratio	n		×
HD Video Device Control	GPI Timecode <u>M</u> F	×]	
Video Standard C 720p / 59.94 Hz I 1080i / 59.94 Hz C 1080 S.F. / 23.98 Hz	C Locked	Video 1 Out Keyed Input 1 C Input 2	Video 2 Dut Keyed Input 1 Input 2
Analog Output	Horizontal Delay	C Incoming Video	O Incoming Video
2			OK Cancel

HD Video Settings for Display of Video

Device Control

Config Menu > Duet Hardware Configuration > Device Control

Lyric can control or be controlled by external devices such as videotape tape recorders (VTRs), digital disk recorders (DDRs) and switchers by using GPIs (General Purpose Interface triggers) or by the BVW-75 Serial Digital Protocol via the RS-422 Serial Digital Interface.

Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights. *Refer to GPIs - Overview for comprehensive information on GPI setup.*

The most common use of the BVW-75 protocol/RS-422 connection is for cueing and playback of video from the **Clip Control Panel**. In addition, segments of existing video on external playback devices can be defined, saved and played back as **Clips** either on their own, or as components of a Lyric message.

NOTE

To enable BVW-75 via RS-422 (all systems) capability or GPI (Duet SD/HD) capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board and must be installed in the Duet SD/HD system. This board is not necessary for GPI function on Duet LE/LEX/PCI/PCI+, but is necessary for BVW-75/RS-422 communication. *Call Chyron Customer Service at 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup.*

- While each type of system displays its own set of system-specific tabs in Duet Configuration, the Device tab on all systems is the same.
- If this board is not present in a Duet SD/HD system, the Device and GPI tabs are grayed out.

The following example shows configuration on a Duet SD of serial device control of a Sierra DDR, using the **BVW-75** protocol.

- 1. Be sure that the external DDR or VTR is properly connected to the Duet system. For additional information on connection, refer to the Duet Hardware Reference Manual.
- 2. From the **Config** menu, select **Duet Hardware**. The **Duet Hardware Configuration** tabs are displayed. Click the **Device Control** tab to display the **Device Control** settings.

Duet Co	nfiguration	×
Video	Device Control GPI Timecode MPx Port:	
	Protogol Sony BVW-75 Rs422 Port Configuration Baud 38400 Data Bits 8 Stop Bits 1 Parity ODD	
2		
	OK Car	icel

Duet Configuration - Sony® BVW-75 Protocol

- 3. From the **Port** drop-down list box, select the number (1 4) of the port on the Chyron RS-422 Serial I/O & GPI/O Board that is to be connected to the external device.
- 4. In the Description field, enter a description of the device. When the external device is selected in the Clip Control Panel Playback Device drop-down list box, this description is reflected in the Playback Device field. Refer to Clip Control Panel for additional information on clip operations.
- 5. Select (check) the **Port Allocated** checkbox. If this checkbox is not enabled, the device is not recognized by the **Clip Control Panel**, and therefore cannot be accessed for clip creation.
- The Protocol drop-down list box defaults to the BVW-75 protocol, using an RS-422 connection. BVW-75 is the currently the only protocol supported by Lyric. Lyric detects connected machines that use BVW-75 protocol, and then automatically sets the Port Configuration values for Baud Rate, Data Bits, Stop Bits and Parity. The Master radio button is always selected. The Slave function is not implemented at this time.
- 7. Enter a **Pre-Roll Time**, in frames, for the VTR that is connected. **Pre-Roll** for a DDR is **0**. Remember that this adjustment is in **Frames**.
- 8. Click **OK**. **Device Control** is now set up for the DDR.

GPI Config Menu > Duet Hardware > GPI

Overview

Lyric can control or be controlled by external devices such as tape machines, digital disk recorders (DDRs) and switchers by using **GPIs (General Purpose Interface** triggers) or by the **BVW Serial Digital Protocol** via the **RS-422 Serial Digital Interface**. Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. In addition, **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights.

NOTE

To enable GPI and/or RS-422 capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board must be installed in the Duet SD/HD system. *Call Chyron Customer Service at* 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup. If this board is not present in the system, the GPI and Device tabs are grayed out.

<u>Setup</u>

To access **GPI** setup:

• From the **Config** menu, select **Duet Hardware**, then click the **GPI** tab. The following two figures show sample **GPI INPUT** and **GPI OUTPUT** settings.

Duet Configuration	×
Video Device Control GPI Timecode	
<u>G</u> PI: 7	
Direction INPUT HIGH Pulse Width (ms) 500 Iest	
ОК	Cancel

Duet Configuration - Setting GPI INPUT

Duet Configuration	×
Video Device Control GPI Timecode MPx	
<u>G</u> PI: 3 Desc <u>r</u> iption:	GPI <u>A</u> llocated: 🔽
Direction Active Level OUTPUT IOUTPUT Pulse Width (ms) Iest	
	OK Cancel

Setting GPI OUTPUT

The following parameters should be set to enable GPI capability:

ltem	Description
GPI	GPI designates which is assigned to a specific event. The number of GPIs available depends on the number of RS-422 Serial I/O & GPI/O Boards installed in the system. In the GPI dropdown list box, default GPIs 1 - 8 for the first installed RS-422 Serial I/O & GPI/O Board; 9 - 16 for the second board; 17 - 24 for the third board, and 25 - 32 for the fourth board. Click on the up or down arrow spin control box to set.
	If multiple RS-422 Serial I/O & GPI/O boards are installed in the system, then the DIP switches must be correctly set in order to ensure availability of all GPIs.
Description	A descriptive name can be assigned to the GPI in the Description field to make it easier to identify.
GPI Allocated	The GPI Allocated checkbox must be checked to enable GPI control.
Direction	The Direction setting determines whether the designated port is to receive the incoming pulse (INPUT) or send an outgoing pulse (OUTPUT).
Active Level	The Active Level setting determines whether a voltage change in the GPI signal low to high (HIGH) or from high to low (LOW) is to be recognized as the trigger.
Pulse Width	Pulse Width defines the minimum duration of the GPI pulse in milliseconds. This should be set to ignore a short accidental contact with a physical GPI button or a slight signal anomaly which could unintentionally trigger the GPI .

NOTE

When a GPI assigned to a specific event, such as to trigger a Playlist step or trigger a Squeezeback Effect, make sure that the same GPI is not also assigned as a Global GPI, as there may be a conflict when the GPI or Global GPI is triggered. *Refer to GPIs and Global GPIs for additional information. Refer to Chapter 6 - GPIs and Global GPIs for additional information.*

<u>Test Messages</u>		



Cannot Test for Input - GPI Not Enabled

Lyric	×
•	OK/RETURN to toggle GPI again
	OK Cancel

GPI Enabled and Assigned

Wait for Input	
	Waiting for GPI

GPI Enabled - Waiting for Input

Timecode

Config Menu > Duet Hardware > Timecode

Timecode parameters can now be set for all Duet systems in the Config Menu > Duet Hardware > Timecode tab, as shown below.

Ouet Configuration					2
Video Device Cont	trol GPI	Timecode MPx System Timecode 12: C Internal Sync C External Drop Frame	34:24:04		
u <mark>et LE Configuration</mark> Configure Board Use Se	tup Board Cor Syst	figuration Setup GPI Timecode em Timecode 11:32:00:06	•]	ОК	Cancel
		External Drop Frame			

Time Code Configuration
System Timecode is set either internally or via an externally generated signal.

Internal: Internal Timecode is synchronized with the Windows time clock. To update the synchronization between Duet's Timecode facility and the Duet's PC system clock, click **Sync**.

External: Externally generated timecode is fed to the Duet system. The timecode can be either **Drop Frame** or **Non-Drop Frame**. Check the **Drop Frame** checkbox to enable **Drop Frame** timecode; uncheck the **Drop Frame** checkbox to use **Non-Drop Frame** timecode. Duet SD/HD and Duet LE/LEX/PCI/PCI+ systems have different external timecode connections.

- **Duet SD/HD:** Connect the external timecode generator to the **LTC IN** (Longitudinal Timecode In) 9pin jack on the Video I/O board.
- Duet LE/LEX/PCI/PCI+: An optional PCI-LTC board from Adrienne Electronics must be installed to enable external timecode sync. Connect the external timecode generator to the LTC IN three-pin mini-XLR jack on the PCI-LTC board. Contact Chyron Customer Service at 1-631-845-2000 for information on obtaining the PCI-LTC board.

MPx

Config Menu > Duet Hardware > MPx

This panel controls the allocation of VGEs in Duet SD and HD. In multi-VGE systems, two VGEs may be paired for enhanced processing power in rendering complex animations on one of the system's outputs.

These controls also allow the operator to assign a specific VGE to the incidence of Lyric in which this panel is opened. (VGEs may be assigned to other copies of the Lyric program currently running or to other applications such as CAL.)

If a VGE board is Locked, Lyric has use of the frame buffer(s) on that board, excluding other applications such as CAL. An error will be generated by the CAL server if the client application tries to connect to that channel. If a VGE board is In Use, another application (e. g. CAL client) has connected to that board and has locked it for exclusive use. The Frame Buffer's settings are written to the registry on exit from Lyric.

In Figure 1 below, VGE 1 is assigned to the current incidence of Lyric (this was accomplished by clicking the **Locked** checkbox). VGE 2 is being used by another application, as shown by the **In Use** status indicator. No additional VGEs are installed, as shown by the **Not Installed** status indicators.

VGE 1	v	C	0	Group
VGE 2	Г	¢	C	
VGE 3	Г	C	0	Ungroup
VGE 4	Г	С	©	
VGE 5	Г	C	C	

Duet VGEs Allocated on the MPx Tab

To group 2 VGEs together for enhanced animation processing power:

1. Uses the standard Windows **Shift + Click** method to select them both. Click the Locked checkbox, as shown, and then click the **Group** button on the right.

VGE 2 Image: Constraint of the constraint o	STOLES.		in Use		1
VGE 3 T C © Ungroup	VGE 2		0	0	Group
VGE 4	VGE 2	Г	c	0	<u>U</u> ngroup
	VGE 4	Г	C	©	
VGE 5 🗖 C 💿	VGE 5		o	©	

Selecting Two VGEs to Group Together

2. Press OK to make the change effective. The change will take a moment, during which time you may see a Wait cursor. When Duet has completed the operation, one of the Frame Buffer buttons will disappear (leaving something like on the Duet toolbar). The remaining button symbolizes the two VGEs grouped together as a single Frame Buffer. Two VGEs

grouped together look like this on the MPx panel:

	Locked	In Use	Not Installed
VGE 1		0	0
VGE 2		0	0
VGE 3	Γ	0	C
VGE 4	Г	0	۲
VGE 5		0	0

Two VGEs Grouped Together

To ungroup VGEs:

1. Select one of the VGEs on the menu, as seen below.

	Locked	In Use	Not Installed	
VGE 1	~	С	C	<u>G</u> roup
VGE 2		С	0	-
VGE 3		C	ø	<u>U</u> ngroup
VGE 4		C	C	
VGE 5	Г	C	C	

Ungrouping VGEs

- 2. Press **Ungroup**. Note that this action also <u>un</u>-assigns both VGEs from Lyric; when VGE #2's checkbox becomes visible again, both checkboxes will be "unchecked". Therefore...
- 3. ...You must re-assign the VGE (or VGEs) that you wish to use with Lyric by clicking the Locked checkbox(es).
- 4. Click **OK** to put the changes into effect.

Duet HD Dual Board Operations

Duet's Dual-Channel option allows the dedication of one Video Graphics Engine (VGE) to each of two output channels. The **Duet HD Mixer** can mix the outputs of two VGEs simultaneously to a single **Mixer** output.

Complete information on installation and software setup for Lyric control of multiple VGE boards can be found in the *Duet Hardware Reference Guide*. To set up the Dual-Channel option:

- 1. Select Duet Hardware from the Config menu.
- 2. The **Duet Configuration** dialog box opens. The **HD Video** tab should be displayed. Is it is not, click the **HD Video** tab.

in the second seco	1 1 -		
Video Standard	Reference Select	Video 1 Out	Video 2 Out
C 720p / 59.94 Hz	C Locked	🗖 Keyed	🗖 Keyed
1080i / 59.94 Hz		Input 1	C Input 1
C 1080 S.F. / 23.98 Hz	Free Run	C Input 2	Input 2
Analog Output		C Incoming Video	C Incoming Video
🔽 Enable Sync		L]	
C RGB	Horizontal Delay	Vertical E)elay
• YUV			

Duet Hardware Configuration - HD Video

- 3. Set the controls appropriately for your facility's needs. *Refer to the section on HD Video for details on setup.*
 - The **Video Standard** area automatically displays Duet's current output format. See Section 5 in the Duet Hardware Reference Guide for more information on setting the output video standard.
 - **Reference Select**: The only valid external reference for Duet HD is an appropriate tri-level sync source applied to the REF IN BNC connector. If such a reference source is unavailable or not needed, set the radio button to Free Run.
 - Analog Output: Use these radio buttons to select the type of output you wish to send to your system's SVGA monitor(s). The Enable Sync button adds a sync signal to the color outputs. MON 1 is the analog monitor output of the Duet HD video being applied to the Video 1 output. MON 2 is the analog monitor output of the Duet HD video being applied to the Video 2 output.

These are analog video outputs that allow the operator to monitor the Digital Video outputs from Video 1 and Video 2. They can be connected directly to any SVGA monitor that is capable of supporting the required video standard. They can also be connected to an analog HD monitor with a standard 15-pin SVGO to BNC breakout cable.

In general, when using these connections with an HD monitor, the selection should be set for YUV with sync enabled on the video outputs. When used with an SVGA monitor, the selection should be set for RGB with

sync disabled from the analog outputs. Most SVGA monitors do not work with tri-level sync and work better using the external horizontal and vertical sync supplied on the SVGA connector.

- Horizontal Output Position: The nominal delay of video in to video out is 5 microseconds if the reference input is in time with the video input. This control moves the horizontal position of output sync as much as ½ scan line earlier or later than incoming reference.
- Vertical Output Position: Sets the vertical position of output syncs with respect to incoming sync sources; the range is -4 scan lines to +3 scanlines.
- 2. Click on the **MPx** tab (see the illustration below). Confirm that Lyric is detecting all installed VGE boards; you should be able to click their **Locked** checkboxes.

The In Use buttons are status indicators.

VGF 1		C	C	
VGE 2	Г	•	C	
VGE 3		С	©	
VGE 4	Г	C	©	
VGE 5	Г	С	G	

Duet VGEs Allocated on the MPx Tab

The Not Installed column indicates the status of the remaining slot positions.

5. Duet LE/LEX/PCI/PCI+ Hardware Configuration

Cabling Options - Duet LE/LEX/PCI/PCI+

Introduction

Different effects can be produced by connecting Duet LE/LEX/PCI/PCI+'s Video Processor and Squeezeback Boards in different orders.

Three different cabling configurations are presented, each resulting in a different set of visual display priorities.

VPB and Internal Clip Player

This configuration can reproduce character generator text over a keyed clip background. In this configuration, the Duet LE/LEX/PCI/PCI+ system is placed upstream of the switcher. There is no Program In; Video Out and Key Out are fed to the switcher. An analog Genlock signal is fed to the Internal Clip Player's gray color-coded **Ref In** connector. The Genlock signal is then looped from the Internal Clip Player's black color-coded **Ref Loop Out** connector on the VPB.



Duet LE/LEX/PCI/PCI+ - VPB and Internal Clip Player

VPB, PCI-Squeezeback and Internal Clip Player - Clip as Background Video

This configuration can place Program video and a video clip in two separate, "squeezable" windows, over fullscreen CG text and a Background. In this configuration, the Duet LE/LEX/PCI/PCI+ system is placed downstream of the switcher. An analog Genlock signal is fed to the Internal Clip Player's gray color-coded **Ref** In connector. The Genlock signal is then looped from the Internal Clip Player's black color-coded **Ref Loop Out** connector to the **Ref In** connector on the VPB. This configuration also requires that the **3 x 2 box header** on top of the VPB be connected by an internal analog sync jumper cable to the 3 x 2 box header on top of the PCI Squeezeback Board.



Duet LE/LEX/PCI/PCI+ - VPB, PCI-Squeezeback and Internal Clip Player - Clip as Background Video

VPB, PCI-Squeezeback and Internal Clip Player - Clip in Squeezeback Window

This configuration can place CG text over Squeezeback-treated Program video, and both over a full-screen clip Background. In this configuration, the Duet LE/LEX/PCI/PCI+ system is placed downstream of the switcher. An analog Genlock signal is fed to the Internal Clip Player's gray color-coded **Ref In** connector. The Genlock signal is then looped from the Internal Clip Player black color-coded **Ref Loop Out** connector to the **Ref In** connector on the VPB. This configuration also requires that the **3 x 2 box header** on top of the VPB be connected by an internal analog sync jumper cable to the 3 x 2 box header on top of the PCI Squeezeback Board.



Duet LE/LEX/PCI/PCI+ - VPB, PCI-Squeezeback and Internal Clip Player -Clip in Squeezeback Window

Duet LE/LEX/PCI/PCI+ Hardware Configuration

Config Menu > Duet Hardware

Duet Hardware Configuration is the setup facility for Duet systems. It encompasses functions such as VPB/PCI+ Squeezeback board allocations, **GPI**, **Video Standard**, **Timecode**, and much more. When **Duet Hardware Configuration** is selected from the **Config** menu, a set of configuration tabs is displayed for the system on which Lyric is installed.

To access these settings:

• Select **Duet Hardware** from the **Config** menu. The **Duet Hardware Configuration** dialog box is displayed.

Duet Hardware Config	guration						×
Configure Board Use	Setup Boa	rd Configuration	Setup GPI	Timecode			
Board 1 C Unused Air Channel C Preview Char C Link To UN	inel ILINK 💌	Board 2 O Unused O Air Channel O Preview Ch O Link To	annel JNLINK 💌	Board 3 C Unused Air Chan C Preview C Link To	nel Channel JUNLINK 💌	Board 4 C Unused C Air Channel C Preview Channel C Link To	Y
Serial Numbers: B) B) B) B)	oard 1: oard 2: SB oard 3: SB oard 4:	6A31336-E092- 6A31311-QE03- 6A31331-A102-	0212-Q 1Q01-0 0009-D				
				OK	Cancel	Apply	Help

Duet Hardware Configuration Dialog Box

There are four tabs, plus one optional tab, which contain configuration settings:

- Configure Board Use: Specifies how boards are used.
- Setup Board Configuration: Specifies parameters such as Video Output Standard, Genlock, etc. for the selected board.
- Setup GPI: Specifies how the GPI assignments are set up.
- Timecode: Specifies Timecode source and other parameters.
- Device Control: If the optional RS-422 Serial I/O Board and its driver are installed in the system, a Device Control tab, specifying the configuration of the board, is displayed as well. The RS-422 Serial I/O Board enables serial control of external devices using the BVW-75 protocol.

Configure Board Use

Config Menu > Duet Hardware > Configure Board Use

The **Configure Board Use** tab controls the routing of the Duet LE/LEX/PCI/PCI+ VPBs and PCI-Squeezeback boards. To access these settings:

• Select **Duet Hardware** from the **Config** menu. The **Duet Hardware Configuration > Configure Board Use** tab (*shown below*) is displayed. It indicates that there are three boards in the system.

et Hardware Configuration	and the second		
Configure Board Use Setup Bo	ard Configuration Setup GPI	Timecode	
Board 1	Board 2	Board 3	-Board 4
C Unused	O Unused	C Unused	💿 Unused
Air Channel	C Air Channel	Air Channel	C Air Channel
C Preview Channel	Preview Channel	C Preview Channel	C Preview Channel
		C Link To UNLINK	C Link To
Serial Numbers: Board 1:	6A31336-E092-0212-Q		
Board 2: SB	6A31311-QE03-1Q01-0		
Board 3: SB	6A31331-A102-0009-D		
Board 4:			
		OK Cancel	Apply Help

Duet Hardware Configuration Dialog Box

Each of the boards in the systems can be assigned as Unused, to Air, to Preview or Linked.

Parameter	Description
Unused	NOTE For this version of Lyric, if the system contains one or more PCI-Squeezeback boards, do not set any of the boards in the system to Unused. All VPBs and PCI-Squeezeback boards should be active. The Unused radio button inactivates the board for use by Lyric.
Air Channel	 Air Channel designates the board as the main output to the facility's Master Control or production switcher. Where multiple VPBs and/or PCI-Squeezeback boards are installed in Duet LE/LEX/PCI/PCI+, any or all of the boards may be designated as Air Channel. Each board has only one broadcast-quality digital output, and if more than one board is present, these outputs function independently. They can, however, be Genlocked. See Analog and Digital Genlock for Genlock information.
Preview Channel	Preview Channel holds the message that is next in line in a Read Next or Read Previous operation. For additional information, refer to Read Next/Read Previous operations.
Link	Link provides the ability to link multiple boards for linked operation. This requires that the Video output, and if available, the Key output of one VPB or PCI-Squeezeback board are connected via BNC cables to the Video input, and if available, the Key input of the next board, and so on until all boards are connected. The last board in the linkage provides the Video Out and Key Out. Linking boards allows the execution of complex, simultaneous, multi-layered effects that would not be not be possible using a single board.

Setup Board Configuration

Config Menu > Duet Hardware > Setup Board Configuration

Overview

In the **Setup Board Configuration** tab (*see below*), each board can be independently set for a variety of parameters such as **Genlock** source and **Key/Video** signal characteristics. Depending on the type of board that is selected, some parameters may be unavailable (grayed out).

NOTE

As of Lyric v5.0, the Video setting has been removed. Video Insert is now always active. To "disable" the VPB graphics from output, simply clear the frame buffer.

Duet Configuration			×
Configure Board Use	Setup Boa	rd Configuration Device Control	Setup GPI Timecode
Selected Board		Video Output Standard:	NTSC
Туре	Version	Genlock:	Ref In (Analog) 💽 🗖 Auto
● 1 L64 [4.208		
C 2 SQZ	4.142	Video In Layer:	🖲 On 🔘 Off
◯ 3 L64-A [4.207	Shape Video In:	C On 🖲 Off
C 4 [n/a	Key Input:	€ On C Off
-		Ancillary Data Pass Thru:	C On 🕫 Off
		Ancillary Reset Line:	10 -
		Vertical Video Adjust:	2 *
		Horizontal Video Adjust:	
		Background Line:	20 · Wizard
		Color Phase:	0 🚊 🗖 Invert (PAL)
			OK Cancel Apply Help

Setup Board Configuration

Setup Board Configuration Parameters

Parameters and Board Types

The following table provides a breakdown of the parameters that are available to each type of board.

Parameter	Lantern 32/64	Lantern 64-A	PCI-Squeezeback
Selected Board	Yes	Yes	Yes
Video Output Standard	Yes	Yes	Yes
NTSC	Yes	Yes	Yes
PAL	Yes	Yes	Yes
Genlock	See Below	See Below	See Below
Ref In (Analog)	Yes	Yes	Yes
Video In (Digital)	Yes	No	Yes
Video In (Analog)	No	Yes	No
Free Run	No	Yes	No
Auto	No	Yes	No
Video In Layer	Yes	No	No
Shape Video In	Yes	Yes	No
Key Input	Yes	Yes	No
Ancillary Data Pass Thru	Yes	No	Yes
Ancillary Reset Line	Yes	No	Yes
Vertical Video Adjust	Yes	No	Yes
Horizontal Video Adjust	Yes	No	Yes
Background Line	Yes	Yes	No
Color Phase	No	Yes	No
Invert (PAL) - PAL Systems Only	No	Yes	No

Selected Board

Available on All Boards

The **Selected Board** area lists the available boards by **Type** and **Version**. **L64** indicates a Lantern 64 digital board; **L64-A** indicates a Lantern 64 analog board, **L32** (not shown) indicates a Lantern 32 digital board, and **SQZ** indicates a PCI-Squeezeback digital board. The **Version** refers to the version of the *.out file, which is the real-time operating system that runs on the board. This file is found in the Lyric installation directory, and can have a name such as *DuetLE64.out*, *DuetLE64A.out*, *DuetLE.out* or *pcCODISqzLE.out*.

When the radio button for a board is selected, the parameters for the selected board are displayed and can be modified.

Video Output Standard

Available on All Boards

From the Video Output Standard drop-down list box, NTSC or PAL can be selected. A system cannot contain a board(s) set to NTSC, and another board(s) set to PAL. Selecting a Video Output Standard applies the selection to all boards in the system.

<u>Genlock, Auto</u> Available on All Boards

Ref In, Video In or Free Run Genlock can be set as follows:

- Ref In (Analog) Lantern 32/64, PCI-Squeezeback: Genlock is supplied by an external analog Genlock reference.
- Ref In (Analog) Lantern 64-A: Genlock is supplied by an external analog Genlock reference. If Auto is enabled (checked), and then the external reference is removed, the board automatically switches to an internally generated Free Run Genlock *only if* Auto is enabled (checked).
- Video In (Digital) Lantern 32/64, PCI-Squeezeback: Genlock is supplied from a digital video input. Note that on a PCI-Squeezeback board, the digital video signal to be used as the Genlock signal is fed through the BACKGROUND IN connector. See Genlocking PCI-Squeezeback Boards for additional information.
- Video In (Analog) Lantern 64-A: Genlock is supplied by an analog video input. If Auto is enabled, and then the external reference is removed, the board automatically switches to an internally generated Free Run Genlock only if Auto is enabled (checked).
- Free Run Lantern 64-A: Genlock is internally generated.

Video In Layer

Available on Lantern 32/64, Lantern 64-A*, PCI-Squeezeback

In the Video Layer radio button group:

- Select **On** to keep the program **Video Layer** on.
- Select Off to generate a black background.

NOTE

On a PCI-Squeezeback board, Video layer display ON/OFF and display priority are controllable from the Squeezeback Panel dialog boxes (ON and A Over B, B Over A) or the Squeezeback Designer (START/END) dialog box (Video A/B Mixer). The Configuration Video Layer In setting is ignored by the PCI-Squeezeback board settings.

Note that if Video In Layer is set to Off on a PCI-Squeezeback board, and then turned On in the Squeezeback Panel, the Video In Layer retains its Off setting in operations outside of the current Squeezeback message, and vice versa.

*Duet LEX/PCI+ Systems Only: The Video In layer cannot be turned off on a Lantern 64-A board.

Shape Video In

Available on Lantern 32/64, Lantern 64-A

In the Shape Video In radio button group:

- Select **On** to attenuate **Input Video** to the **Key** signal, so that color components do not exceed the key level.
- Select **Off** to leave the signal unattenuated.

Key Input Available on Lantern 32/64, Lantern 64-A

In the Key In radio button group:

- Select **On** to enable the board to use the video input's accompanying alpha signal when **Key In** is supplied from a cable connected to the board. **Key In** must be set to **On** when the board is used in conjunction with a **CMix SD/HD**.
- Select **Off** to set the board to ignore the alpha information. Note that if a signal is present and **Key In** turned off, the system behaves as if a full white background is present at the **Key Input**.

Ancillary Data Pass Thru, Ancillary Reset Line

Available on Lantern 32/64, Lantern 64-A**, PCI-Squeezeback

When **Ancillary Data Pass Thru** is enabled, all ancillary data, including **Closed Captioning**, passes through the **Keyer** unaffected. This means that no Duet video is inserted into the first displayed scanline of each field, in order to preserve the **Closed Captioning** or other ancillary data. The **Ancillary Reset Line**, also known as the **Blank Line** or **Vertical Reset**, is normally **Line 10** or **NTSC**, and **Line 6** for **PAL**. A different line, however, can be selected for non-standard video formats.

In the Ancillary Data radio button group:

- Select On to pass through ancillary data carried on the Video In blanking interval and insert it into the Video Out blanking interval.
- Select **Off** to ignore ancillary data. Additionally, select **Off** if **Ancillary Data** is not in the video stream.

Ancillary Reset Line Range: 6 - 12

**Duet LEX/PCI+ Systems Only: Ancillary Data settings do not apply to a Lantern 64-A board.

Vertical Video Adjust, Horizontal Video Adjust

Available on Lantern 32/64, Lantern 64-A***, PCI-Squeezeback

Vertical Video Adjust and Horizontal Video Adjust set the Vertical and Horizontal delays with respect to an incoming video reference in order to synchronize the outputs of multiple VPBs and PCI-Squeezeback boards.

• To set Vertical Video Adjust and Horizontal Video Adjust settings, click the up or down arrow in the respective spin control box.

Vertical Video Adjust Range: 0 - 7

Horizontal Video Adjust Range: -511 - +511

***Duet LEX/PCI+ Systems Only: Vertical and Horizontal Video settings cannot be delayed on a Lantern 64-A board.

<u>Background Line</u> Available on Lantern 32/64, Lantern 64-A

NOTE

Background Scanline Control is not available on a PCI-Squeezeback board, as there is no Background graphic layer in the board.

The **Background Scanline Control** is used to align the graphic layers present in each LE/LEX/PCI/PCI+ VPB. Normally, this control is set at **23** for PAL systems, and **20** for NTSC systems. The **Background Scanline** can be set using one of the following methods:

• Click on the up or down arrow in the spin control box to display the desired setting.

OR

• Click the **Wizard** button to open the **Background Scanline Adjustment Wizard** dialog box (*see below*). Click the up or down arrow in the spin control box to adjust the value until the red line is hidden by the white line on the system's video output, AND then click **OK** to close the dialog box.

Background Scanline Adj	ustment Wizard	X
Use the arrows to until it is hidden by	move the red line / the white	
클 20		
ОК	Cancel	

Background Scanline Adjustment Wizard

Background Line Range: 0 - 63

Color Phase

Available on Lantern 64-A

Subcarrier (**S/C-PHASE**) or color phase adjustment is required to match the color phase of the Lantern 64-A signal to that of the incoming video signal. As viewed on a vector scope, adjusting the subcarrier phase rotates the encoded Lantern-64 color vectors about a 360° circle so that the color vectors match the color phase of the video input signal.

Color Phase Range: 0 - 255 (corresponds to HSB/HSV values)

Invert (PAL) Available on Lantern 64-A

PAL Systems Only: If the color is 180° out of phase, select (check) **Invert (PAL)** to correct the color. To make a finer color adjustment, modify the **Color Phase** setting. Note that it may be necessary to reselect **Invert (PAL)** each time the system is restarted.

Configuration for Display of Video Source

Duet LE/LEX/PCI/PCI+: Config Menu > Duet Hardware > Setup Board Configuration

Video from a variety of sources can be incorporated as part of a Lyric composition. Lyric provides creative tools for displaying video, including **Masks**, **Video Squeezeback** (**LE/LEX/PCI/PCI+**) and application of video to 3D surfaces.

Video can be displayed as a continuous live or prerecorded source. In this situation, the video is not a component of the Lyric composition itself, in that it is not an object that can be manipulated through Lyric. It is a straight video display, with no set beginning or end controlled through Lyric.

Video can also be displayed as a clip, where playback parameters are controlled either directly from Lyric's **Clip Control Panel**, or where the playback parameters are set up from the **Clip Control Panel**, but the clip itself is an object in a Lyric animation and is played back as part of the Lyric animation. The **Clip Control Panel** provides the ability to play back video or audio clips files (*.*ccf*). Lyric does not perform actual edits on the recorded content of the source material. The **Clip File** contains the **In** and **Out** point information that defines the duration of the clip for playback, however, the source video/audio remains unchanged. In order to play back the video/audio, the original material and the playback device *must* be available. Clip files can be created from sources such as an **External VTR or DDR** (Digital Disk Recorder), a **Chyron Aprisa DDR**, Duet's **Internal Clip Player**, or **Audio** files processed through audio hardware in Duet.

Playback from a video source is routed through Duet's internal keyer. The video is not visible on the Lyric **Canvas** as seen on Duet's SVGA monitor. Rather, the clip is keyed behind the Lyric composition and is visible on the output monitor.

Previous to Lyric v5.0, it was necessary to select **Video Insert** in the **Video** setting in the **Setup Board Configuration** dialog box in order to display a video source. As of Lyric v5.0, the **Video** setting has been removed. **Video Insert** is now always active. As a result, special configuration is no longer required for display of a video source.

Setup GPI

Config Menu > Duet Hardware > Setup GPI

Lyric can control or be controlled by external devices such as tape machines, digital disk recorders (DDRs) and switchers by using **GPIs** (**General Purpose Interface** triggers) or by the **BVW Serial Digital Protocol via the RS-422 Serial Digital Interface**. Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. In addition, **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights. Each Duet LE/LEX/PCI/PCI+ VPB includes a facility for 16 **GPI** (**General Purpose Interface**) connections per video channel.

NOTES

The Setup GPI facility in the Duet LE/LEX/PCI/PCI+ is not available to PCI-Squeezeback boards, however, GPIs set up from other boards can be used to trigger Squeezeback effects. Additionally, the SQZ Kwik Tool must be enabled in order that the GPIs trigger Squeezeback effects. *Refer the section on Squeezeback Panel for information.*

After parameters are set, Lyric must be closed and relaunched in order to apply GPI settings.

To perform GPI setup:

• From the **Configuration** menu, select **Duet Hardware**, then click the **Setup GPI** tab.

Duet Hardware Configuration	×
Configure Board Use Setup Board Configuration Setup GPI Timecode	
GPI: 1 💌 Description: Read Next GPI Allocated: 🔽	
Direction Active Level	
Pulse Width (ms) From Board 1 20 GPIO Number 14	
UK Cancel	Apply Help

Setup GPI

The following parameters should be set to enable **GPI** capability:

Parameter	Description
GPI	GPI designates which is assigned to a specific event. The number of available GPIs depends on the number of VPBs installed in the system. In the GPI dropdown list box, default GPIs 1 - 16 represent those available from Board #1 , 17 - 32 from Board #2 , and so on. Click on the up or down arrow spin control box to set.
Description	A descriptive name <i>must</i> be entered in the Description field for the GPI to function.
GPI Allocated	The GPI Allocated checkbox must be checked to enable GPI control.
Direction	The Direction setting determines whether the designated port is to receive the incoming pulse (INPUT) or send an outgoing pulse (OUTPUT).
Active Level	The Active Level setting determines whether a voltage change in the GPI signal low to high (HIGH) or from high to low (LOW) is to be recognized as the trigger.
Pulse Width (ms)	Pulse Width defines the minimum duration of the GPI pulse in milliseconds. This should be set to ignore a short accidental contact with a physical GPI button or a slight signal anomaly which could unintentionally trigger the GPI .
From Board	From Board specifies which Duet LE/LEX/PCI/PCI+ board originates or receives the GPI pulse. Click on the up or down arrow in the From Board spin control box to set.
GPIO Number	GPIO Number specifies the pin combination to be used on the Duet LE/LEX/PCI/PCI+ board's GPI/O "D" connector. The valid range for this value is 1 - 16 . Click on the up or down arrow in the GPIO Number spin control box to set.

After setting **GPI** parameters, click **OK**, then exit and relaunch Lyric.

NOTE

When a GPI assigned to a specific event, such as to trigger a Playlist step or trigger a Squeezeback Effect, make sure that the same GPI is not also assigned as a Global GPI, as there may be a conflict when the GPI or Global GPI is triggered. *Refer to GPIs and Global GPIs for additional information. Refer to Chapter 6 - GPIs and Global GPIs for additional information.*

Timecode

Config Menu > Duet Hardware > Timecode

Timecode parameters can now be set for all Duet systems in the Config Menu > Duet Hardware > Timecode tab, as shown below.

Duet Configuration	The second s		×
Video Device Contr	SI GPI Timecode MPx System Timecode 12:34:24:04 Internal Sync Sync External Drop Frame Drop Frame		
Duet LE Configuration Configure Board Use Set	p Board Configuration Setup GPI Timecode System Timecode 11:32:00:06	OK	Cancel
	Sync.		
	OK Cancel		Help

Time Code Configuration

System Timecode is set either internally or via an externally generated signal.

Internal: Internal Timecode is synchronized with the Windows time clock. To update the synchronization between Duet's Timecode facility and the Duet's PC system clock, click **Sync**.

External: Externally generated timecode is fed to the Duet system. The timecode can be either **Drop Frame** or **Non-Drop Frame**. Check the **Drop Frame** checkbox to enable **Drop Frame** timecode; uncheck the **Drop Frame** checkbox to use **Non-Drop Frame** timecode. Duet SD/HD and Duet LE/LEX/PCI/PCI+ systems have different external timecode connections.

- **Duet SD/HD:** Connect the external timecode generator to the **LTC IN** (Longitudinal Timecode In) 9pin jack on the Video I/O board.
- Duet LE/LEX/PCI/PCI+: An optional PCI-LTC board from Adrienne Electronics must be installed to enable external timecode sync. Connect the external timecode generator to the LTC IN three-pin mini-XLR jack on the PCI-LTC board. Contact Chyron Customer Service at 1-631-845-2000 for information on obtaining the PCI-LTC board.

Device Control

Config Menu > Duet Hardware Configuration > Device Control

Lyric can control or be controlled by external devices such as videotape tape recorders (VTRs), digital disk recorders (DDRs) and switchers by using GPIs (General Purpose Interface triggers) or by the BVW-75 Serial Digital Protocol via the RS-422 Serial Digital Interface.

Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights. *Refer to GPIs - Overview for comprehensive information on GPI setup.*

The most common use of the BVW-75 protocol/RS-422 connection is for cueing and playback of video from the **Clip Control Panel**. In addition, segments of existing video on external playback devices can be defined, saved and played back as **Clips** either on their own, or as components of a Lyric message.

NOTE

To enable BVW-75 via RS-422 (all systems) capability or GPI (Duet SD/HD) capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board and must be installed in the Duet SD/HD system. This board is not necessary for GPI function on Duet LE/LEX/PCI/PCI+, but is necessary for BVW-75/RS-422 communication. *Call Chyron Customer Service at 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup.*

- While each type of system displays its own set of system-specific tabs in Duet Configuration, the Device tab on all systems is the same.
- If this board is not present in a Duet SD/HD system, the Device and GPI tabs are grayed out.

The following example shows configuration on a Duet SD of serial device control of a Sierra DDR, using the **BVW-75** protocol.

- 1. Be sure that the external DDR or VTR is properly connected to the Duet system. For additional information on connection, refer to the Duet Hardware Reference Manual.
- 2. From the **Config** menu, select **Duet Hardware**. The **Duet Hardware Configuration** tabs are displayed. Click the **Device Control** tab to display the **Device Control** settings.

Duet Co	nfiguration	×
Video	Device Control GPI Timecode MPx Port: 1 Description: Sierra DDR Port Allocated:	
	Protogol Sony BVW-75 Rs422 Port Configuration Baud 38400 Data Bits 8 Stop Bits 1 Parity ODD	
2	Master Pre- <u>R</u> oll Time O (frames) O	
	OK Car	ncel

Duet Configuration - Sony® BVW-75 Protocol

- 3. From the **Port** drop-down list box, select the number (1 4) of the port on the Chyron RS-422 Serial I/O & GPI/O Board that is to be connected to the external device.
- 4. In the Description field, enter a description of the device. When the external device is selected in the Clip Control Panel Playback Device drop-down list box, this description is reflected in the Playback Device field. Refer to Clip Control Panel for additional information on clip operations.
- 5. Select (check) the **Port Allocated** checkbox. If this checkbox is not enabled, the device is not recognized by the **Clip Control Panel**, and therefore cannot be accessed for clip creation.
- The Protocol drop-down list box defaults to the BVW-75 protocol, using an RS-422 connection. BVW-75 is the currently the only protocol supported by Lyric. Lyric detects connected machines that use BVW-75 protocol, and then automatically sets the Port Configuration values for Baud Rate, Data Bits, Stop Bits and Parity. The Master radio button is always selected. The Slave function is not implemented at this time.
- 7. Enter a **Pre-Roll Time**, in frames, for the VTR that is connected. **Pre-Roll** for a DDR is **0**. Remember that this adjustment is in **Frames**.
- 8. Click OK. Device Control is now set up for the DDR.

Common Board Configurations - Duet LE/LEX/PCI/PCI+

Config Menu > Configure Board Use

A Duet LE/LEX/PCI/PCI+ system can be set up in a variety of configurations depending on the requirements of the facility and the production. Four common configurations are described in this section:

- Single Board Configuration
- Dual Board Air/Air Configuration
- Dual Board Air/Preview Configuration
- Dual Board Link Mode Configuration

Single Board Configuration

The base hardware configuration for both Duet LE/LEX/PCI/PCI+ is one VPB. A single VPB can perform any of Duet LE/LEX/PCI/PCI+'s transition effects. In this mode of operation, the only available preview of an upcoming message is the Duet LE/LEX/PCI/PCI+'s VGA monitor. If you wish to use only one board in a system with more than one installed, be sure to designate the boards that are not to be used as **Unused**. *Refer to Duet Hardware (LE/LEX/PCI/PCI+) - Configure Board Use for details about this setting.*

Here is a simple exercise in one-VPB operation.

1. Compose a message with on-screen content that clearly identifies the message itself.

*** FB1 Msg: Untitled	-0×
	<u></u>
2D Taut 1	
20 TEAC 1	
7000	
	<u>(55</u>
c	*
	0
	-

Creating Message 7000

- Save the message by pressing the Record (Duet keyboard) or the minus (-) key on the numeric keyboard. Don't forget that the message number display at lower right advances after a messages is saved, and the title bar of the Canvas reflects the ID of the saved message.
- 3. Leave the Canvas as it is for a moment and pull down the Tools menu to select **Duet** LE/LEX/PCI/PCI+ Message FX.

4. The **Duet LE/LEX/PCI/PCI+ Message FX** dialog box opens. Select **Split** for both the **OUT** and **IN** effects. Be sure to set these effects to a slow enough speed, i.e. higher **Frames** setting, that you will be able to observe them working

	2
	-Weave Size
	1 15 🛁 1

Setting up a Message Effect Message

- 5. Save these effects settings as message #7001.
- 6. Compose and record another readily-identifiable message as **#7002**.

FB1 Msg: Untitled		_D×
20	тежt 1 7002	
		7002

Creating Message 7002

7. Record a different set of effects as message **#7003**. Again, make sure they are set to run slowly enough for you to see them clearly.

8. Compose and save another two messages at ID numbers **7004** and **7006**, and another, different **Effects** message at #**7005**.



- 9. Now, clear the Canvas.
- 10. Make sure the LE/LEX/PCI/PCI+ we button is not clicked on the Lyric interface.
- 11. On the numeric keypad, type **7000**, then press **Read** (Duet keyboard) or the **Enter** key on the numeric keypad. This is the Lyric **Read** command.
- 12. Message 7000 displays on the Canvas using the IN effect specified in Step 4.
- 13. Press Read Next (Duet keyboard) or the + ("plus") key on the numeric keypad. This is the Lyric Read Next command. Notice that the Message Number display advances two message numbers, not one as you may be accustomed to on other Chyron equipment. This is a function of Lyric automatically reading an Effects message and skipping ahead to the next composition message to prepare it for output.

Dual Board Air/Air Configuration

Configure Board Use Setup Bo	ard Configuration 🛛 Setup GPI 🗍
Board 1	Board 2
C Unused	O Unused
Air Channel	 Air Channel
C Preview Channel	C Preview Channel

Air/Air Configuration

With both VPBs designated as **Air**, each board is set up to function independently. It is important to note that with two Air channels, the **Read Next** command only performs transitions between messages on the channel selected with the VPB **O** or **O** buttons.

When using Duet LE/LEX/PCI/PCI+'s two outputs as separate Air channels, take special note that *the Read Next function continues to advance the message number* if you switch between outputs! In other words, using the **Swap** function between Read Next operations may cause an unexpected message to appear on the

channel on which you are working. Remember that the **1** and **2** buttons dictate which output channel you are controlling with the Lyric interface.

Be especially aware that the **Swap** button simply switches the image on each VPB to the other VPB. This operation **does** include an effects transition if programmed, but does **not** perform a Read Next operation.

Dual Board Air/Preview Configuration

Configu	e Board Use Setup Boa	rd Configuration Setup GPI
⊢Bo	ard 1	Board 2
0	Unused	O Unused
œ	Air Channel	C Air Channel
0	Preview Channel	Preview Channel
0	Link To UNLINK -	

Air/Preview Configuration

The **Air/Preview** configuration specifies that the output of the **Preview** board is always next in line in a **Read Next** operation. The **Preview** setting affects the display of the video only within the Duet environment. The video output from the designated **Preview** board can also be fed to Master Control, a switcher or other device.

The following exercise simulates a control room situation where each Canvas message and each effects message is previewed on the **Preview** channel before transfer to the **Air** channel. Remember that the evennumbered messages you have created for these exercises are the composition messages; odd-numbered messages are **Effects** messages.

- 1. Click the ¹ and VPB ² buttons on the Lyric interface.
- 2. Enter **7000** on the numeric keypad, then press **Enter**. The message appears on Video Output #2, which is the **Preview** channel.
- Press the key combination Alt + Xfer (Duet keyboard) or Alt + / (the backslash or 'division' symbol on the numeric keypad). The system performs a transition that displays message 7000 on the Air channel, using the effects programmed in message 7000.
- 4. Press the **Read** (Duet keyboard) or **Enter** key on the numeric keypad to Read message 7002 into the Preview channel.
- 5. Press Alt + Xfer (Duet keyboard) or Alt + / again to transfer message 7002 to the Air channel.
- 6. Press **Read** or **Enter** again to preview message 7004 and the effects that were saved in message 7003.

Remember that use is Duet LE/LEX/PCI/PCI+'s interactive mode. Changes made on the Canvas appear

in real time on the selected video output, which in this instance, was selected by clicking the **Preview** button. With a new message on the **Preview** channel, changes can be made before transferring the message to the **Air** output.

Dual Board Link Mode Configuration

Duet LE/LEX/PCI/PCI+'s VPBs are capable of only one transition effect at a time, even though they can perform the effects in very quick succession. When two simultaneous effects are desired, the VPBs may be linked together.

For Linked operation, identify the VPB which is to provide the bottom layer of graphics. This board will be first in the signal path. In the following example, use VPB 2.

- 1. Use BNC cables to connect VPB 2's Video Out to VPB 1's Video In and VPB 2's Key Out to VPB 1's Key In.
- 2. Next, set up the Duet LE/LEX/PCI/PCI+ Configuration menus as shown in the two following illustrations.



VPB Assignment For Linked Operation

	Cattions For		4		
	 Board 	1 C Board 2	C Board 3	C Board 4	
- Video Output Sta	ndard PAL	Genlock Ĉ Analog . Ĉ Digital	Key In O On	© 0ff	Shape Video In
Video C Only C	Insert	Video Layer	Ancillary Data	C 0#	te un e un
E Configuration gure Board Use	Setup Board C	onliguration Setup GPI	OK	Cancel	Apply He
E Configuration	Setup Board C - Settings For C Board	Configuration Setup GPI	OK)	Cancel C Board 4	ApplyHe
E Configuration igure Board Use S - Video Output Sta I NTSC I C	Setup Board C - Settings For C Board ndard PAL	Configuration Setup GPI	OK	Cancel C Board 4	Apply He
E Configuration igure Board Use S Video Output Sta NTSC O Video	Setup Board C - Settings For C Board ndard - 1 PAL	Configuration Setup GPI 1 © Board 2 Genlock C Analog © Digital Video Layer © On C Off	OK	C Board 4	Apply He Shape Video In © On © Off

Configuration For Linking VPBs 1 and 2

The **Horizontal Video** and **Vertical Video** settings shown for **Boards 1** and **2** are commonly used for this type of setup. Depending upon the setup of the specific system, however, they may need adjustment.

In Linked operation, when IN and OUT effects are set up in the Duet LE/LEX/PCI/PCI+ Message Effects dialog box (accessed from the Tools drop-down menu), the OUT effect is assigned to VPB 2 and the IN effect to VPB 1. With each effect using a discreet VPB, the effects can overlap in time, instead of being limited to executing sequentially when only one board is used.
To simplify the following exercise, it is suggested that you create a series of Canvas messages with sequential ID numbers. Omit the Effects messages at alternate ID numbers.

Set up one combination of effects in the Duet LE/LEX/PCI/PCI+ **Message Effects** dialog, and don't perform a **Save**. This combination of effects will be applied to each transition.

- 1. Press the utton.
- 2. Enter the ID number of the first message and press **Read** (Duet keyboard) or **Enter**. The message appears.
- 3. Press **Read** (Duet keyboard) or **Enter** again and the second message appears, using the IN effect while the first message disappears, using the **OUT** effect.

You may also use the **Read** command and the backslash key (the keypad equivalent of Xfer) in combination.

- 1. Set up the same combination of effects in the Duet LE/LEX/PCI/PCI+ **Message Effects** dialog, and again, don't perform a **Save**.
- 2. Enter the ID number of the first message, then press Read (Duet keyboard) or Enter.
- Press Xfer (Duet keyboard) or the backslash key (\) on the numeric keypad to transfer the message to the Duet LE/LEX/PCI/PCI+ output. Remember that even though you're using both VPBs, there's only one output. The first message displays on the output using the IN effect.
- 4. Press Read or Enter again to open the next message on the Canvas.
- 5. Press Xfer or backslash (\) on the numeric keypad again, and the first message disappears while the second message is displayed using both effects simultaneously.

6. Optional Duet Hardware

Overview

A wide variety of optional internal and external optional hardware can augment the scope and flexibility of Duet systems. These include:

- **Duet Keyboard All Systems:** While a PC keyboard can run Lyric on a Duet system, the Duet keyboard provides dedicated keys for quickly executing Duet operations. The Duet keyboard is covered later in this chapter.
- Internal Clip Player Duet SD/LE/LEX/PCI/PCI+: The Internal Clip Player enables the recording and playback of video/audio clips in Lyric compositions. *Refer to the chapter on the Internal Clip Player for in-depth information.*
- Squeezeback Board Duet SD: The internal Squeezeback board enables the creation of regions which display input video in a Lyric composition. *Refer to the chapter on Video Regions and Squeezeback Objects for in-depth information.*
- PCI-Squeezeback Board Duet LE/LEX/PCI/PCI+: The internal PCI-Squeezeback board adds cutting-edge animated video effect creation capability, including resizeable, animatable video regions which display input video. *Refer to the chapter on Video Squeezeback* for in-depth information.
- RS-422 Serial I/O & GPIO Board (All Duet Systems Configuration and use differs among systems.): The internal RS-422 Serial I/O & GPIO board provides GPI capability to Duet SD and HD systems, and RS-422 interface capability with all Duet systems. Note that Duet LE/LEX/PCI/PCI+ Video Processing Boards (VPBs) have built-in GPI capability, although PCI-Squeezeback boards do not. Refer to the chapter on the RS-422 Serial I/O & GPIO Board for in-depth information.
- Video Capture Board (All Duet Systems Boards differ among systems.): The internal Video Capture board allows the Duet to capture a frame of video, display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats. *Refer to the chapter on Video Capture for in-depth information.*
- Video Mixer Duet SD: The internal Video Mixer board enables the mixing of video on a Duet SD system. Refer to the chapter on Video Mixing for in-depth information.
- **HD Mixer Duet HD:** The internal **HD Mixer** board enables the mixing of video on a Duet HD system. *Refer to the chapter on Video Mixing for in-depth information.*
- **CMix Duet SD/LE/LEX/PCI/PCI+:** The external **CMix** unit enables the mixing of video. While it can be used for mixing video on a Duet SD, it is generally used for Duet LE/LEX/PCI/PCI+ systems. *Refer to the chapter on Video Mixing for in-depth information.*
- KwiKeys GPI/O Trigger Device All Systems: KwiKeys provides an easy method of executing GPI-triggered events. Refer to the chapter on the Duet Optional Hardware for in-depth information.
- **ReCall Keys: ReCall Keys** provides a means for the Lyric operator to quickly call up Lyric messages, play animations and manipulate Duet's program outputs. **ReCall Keys** can be connected to a Duet system or a PC running Lyric, and communicates with the system via the **RS-232** protocol. *Refer to the chapter on the Duet Optional Hardware for in-depth information.*

Duet Keyboard

The Duet keyboard is custom-designed for use with Duet systems running Lyric software. It is not necessary to have a Duet keyboard in order to run Lyric on a Duet system. A PC keyboard can be used as well. *Refer to the chapter on Keyboard/Mouse Shortcuts* for a comprehensive list of equivalent keystrokes.

The Duet keyboard may be located up to six feet from the Duet chassis using the supplied cables. For longer connections, Chyron recommends the use of a Keyboard/Video/Mouse Extender, which also facilitates placement of a monitor at the remote keyboard location. Contact Chyron Customer Service to purchase the recommended Keyboard/Video/Mouse Extender, Chyron Part No. 5A01298 for 110-volt systems, or 5A11298 for 220-volt systems.

Keyboard Layout

The Duet keyboard goes beyond PC keyboards in easy definition and use of hotkeys. These hotkeys, labeled **F1** - **F10**, double as conventional PC function keys, but are grouped together at the left side of the keyboard for quick access. The large number of hotkeys and other special keys reduces the need to use the mouse. The layout of the Duet keyboard is similar to that of the familiar iNFiNiT!® keyboard.

There are also standard Windows functions and a few Lyric functions that are accessed by meta-enabled keys. Such functions are executed by pressing and holding the **Fn** key, located directly to the right of the **?** key, while then pressing the key that is labeled with the function name. For example, to execute a **Print Screen**, press **Fn + Print Screen**. **Print Screen** is printed in red on the front of the **Erase** keycap. All functions that require pressing the **Fn** key are printed on the fronts of the keycaps in red. There is a list of meta-enabled keys below.



6-3

Some hotkey positions replace commonly used Windows keys, to make standard PC functions easily available. These standard Windows functions are printed on the front of the key. For example, keys that generate the same scan code have their standard function printed in GREEN on the front of the key. Keys that generate different scan codes have their standard function printed in BLUE on the front of the key. To generate standard PC keyboard codes, press the Chyron **Fn** key. The Chyron **Fn** key has its function printed in BLUE on the front of the key.

Occasionally, the system interprets keys as being engaged when they are not. To release the keys:

• From the Config menu, select Reset Duet Keyboard.

The Numeric Keypad on the Duet Keyboard



Duet Numeric Keypad

A number of the **Numeric Keypad** keys perform the same operations available on a PC keyboard **Address Keys**. The fronts of these keys are labeled with the names of these functions.

Кеусар	Front of Key	How to Access Function
Ctrl	Num Lock	Fn + Ctrl
Xfer	1	Outside of Lyric, this key functions as a division key.
Change	*	Outside of Lyric, this key functions as a multiplication key.
Swap	-	Outside of Lyric, this key functions as a minus key.
Read Next	+	Fn + Read Next
Read	Enter	Fn + Read
Clear	Del	Outside of Lyric, this key functions as a Del key.

Reset Duet Keyboard

Config Menu > Reset Duet Keyboard

Reset Duet Keyboard releases any keys that the system interprets as being engaged.

Keyboard Map

The **Duet Keyboard Map** shows the **ASCII** codes for the key combinations for each keycap on the Duet keyboard. For example, the codes for the keycap **A** are as follows:

a = 97 A = 65 a = 97 • = 149 - = 150



Duet Keyboard Map

7. Triggering Events: GPIs, RS-422/232 Serial Protocols

GPI Overview

Duet SD/HD: Config Menu > Duet Hardware > GPI

Duet LE/LEX/PCI/PCI+: Config Menu > Duet Setup GPI

A **GPI**, or **General Purpose Interface**, provides Lyric with the ability to transmit and receive triggers for internal and external events. **GPI** triggers can be executed from Duet to Lyric, from Duet to external devices, or from external devices such as Chyron **KwiKeys** or Master Control Switchers, to Duet.

A GPI can have a wide variety of uses, among them:

- Triggering a **Playlist** event.
- Triggering a Squeezeback Effect.
- Turning on and off a tally light.
- Releasing a **Pause**.
- Stopping/starting a Clock or Timer.

A **Global GPI** can also be set to allow an incoming **GPI** pulse to read any type Lyric file using the extension **.lyr*. Message types saved with this extension include conventional Lyric files, as well as specialized Lyric messages such as **SD Mixer** messages, **CMix** messages and **Macro** messages, etc.

NOTE

When a GPI assigned to a specific event, such as to trigger a Playlist step or trigger a Squeezeback Effect, make sure that the same GPI is not also assigned as a Global GPI, as there may be a conflict when the GPI or Global GPI is triggered. *Refer to Chapter 6 - Global GPIs for additional information.*

GPI capability is built-in on Duet LE/LEX/PCI/PCI+ systems, and can be added to Duet SD/HD systems with the installation of Chyron's optional RS-422 Serial I/O & GPI/O Board.

Refer to **GPI Configuration - Duet SD/HD** or **GPI Configuration - Duet LE/LEX/PCI/PCI+** for **GPI** configuration details.

RS-422 Serial I/O & GPI/O Board

Overview

Duet systems have the ability to control external devices or receive triggers from external sources. With the installation Chyron's optional RS-422 Serial I/O & GPI/O Board, a Duet, for example, could control playback on a VTR or DDR, as well as have events triggered by an external Chyron® KwiKeys unit, a production switcher, a master control system and/or other external device(s). On Duet SD/HD systems, **Timecode** functionality is also provided. Incoming and outgoing triggers and commands are received and sent via **GPI/O**, or **RS-422** using the **BVW-75** or other protocols.

- **GPI/Os** can trigger events on the Duet system, such as messages in a **Playlist**, **Squeezeback** effects (Duet LE/LEX/PCI/PCI+) and resuming an animation after a **Pause**. **GPI/O** can also send triggers to external devices.
- **RS-422** enables control of external BVW-75-protocol and other devices such as a VTR, the Chyron Aprisa 200/250 DDR or other DDRs.

System Differences

For all systems, the RS-422 Serial I/O & GPI/O Board must be installed to enable RS-422 functionality. There are, however, differences between systems regarding requirements for **GPI/O** and **Timecode** functionality.

Duet SD/HD

Duet SD/HD can accommodate up to four RS-422 Serial I/O & GPI/O Boards, and each individual board can control four RS-422 serial ports and eight **GPI/O** inputs and/or outputs.

The RS-422 Serial I/O & GPI/O Board is accompanied by a GPI/O Extension Bracket that provides **GPI/O** and a **Timecode Reader** that synchronizes outgoing commands with **LTC** (**Longitudinal Timecode**) supplied from an external source. **GPI/O** ports are **DB-25** connectors mounted on the GPI/O Extension Bracket. The GPI/O Extension Bracket should be installed directly adjacent to the RS-422 Serial I/O & GPI/O Board. Installation procedure follows **Dip Switch Settings for Multiple RS-422 Serial I/O & GPI/O Board Installation** later in this section.

The **GPI/O** pins are of the **Open Collector** type, allowing the use of whatever voltage is appropriate in your facility. The required voltage must be supplied to **Pin #10** or **Pin #11** of the 25-pin cable. The pull-up resistor on the RS-422 Serial I/O & GPI/O Board is 4.7k ohms. If, however, **5** volts is appropriate, this voltage is already available on **Pins #12 and #13** of the cable.

Duet LE/LEX/PCI/PCI+

The RS-422 Serial I/O Board is installed on its own without the GPI/O component. Duet LE/LEX/PCI/PCI+ can accommodate up to four RS-422 Serial I/O Boards, and each individual board can control four RS-422 serial ports. **GPI/O** capability is built into a Duet LE/LEX/PCI/PCI+, therefore an RS-422 Serial I/O Board & GPI/O Board is not necessary to enable this function. If installing in a Duet LE/LEX/PCI/PCI+, disregard references to GPI/O installation. To provide **Timecode** function, an optional **Timecode** input panel is available. *Please contact Chyron Customer Service for information on ordering.*

Installation Order

All hardware and software installation is covered in this section. It is recommended that the order of installation is as follows:

- 1. If installing multiple RS-422 Serial I/O & GPI/O Boards, set the **DIP switches** on the boards. Otherwise, this step is unnecessary. *The procedure is described below.*
- Install the RS-422 Serial I/O & GPI/O Board, then its GPI/O Extension Bracket, then, if applicable, the second RS-422 Serial I/O & GPI/O Board then its GPI/O Extension Bracket, and so on until all boards are installed. The procedure is described below.
- 3. Install the GPI/O Driver. This is a software installation. The procedure is described below.
- 4. Configure the **Device Control** (all systems) and **GPI** (Duet SD/HD) tabs in the **Duet Hardware** dialog box, accessible from the Config menu. *Refer to the chapter on* **Duet Hardware Configuration: Device Control** for details on setup.

Installing the RS-422 Serial I/O & GPI/O Board

IMPORTANT !!!

If more than one RS-422 Serial I/O & GPI/O Board is to be installed in the Duet system, it is strongly advised, that for ease of access and electrical safety, the DIP switches on the boards be set before installation. Refer to Dip Switch Settings for Multiple RS-422 Serial I/O & GPI/O Board Installation later in this section for details.

For information on the pinouts and cabling associated with the GPIO Board and the GPI Extension Bracket see Figure 6-3 in Chapter 6 of the Duet Hardware Reference Guide.

Two PCI slots are needed for installation of the RS-422 Serial I/O & GPI/O Board. Each RS-422 Serial I/O & GPI/O Board is installed in one of Duet's eight PCI slots. The extension bracket holding the **GPI/O** ports and **LTC** connection should occupy an additional PCI slot next to the RS-422 Serial I/O & GPI/O Board to which it is connected.

IMPORTANT !!!

It is strongly recommended that measures be taken to dissipate any static electrical charge before touching the RS-422 Serial I/O & GPI/O Board. When using an anti-static wrist strap, the grounding cord must contain a 1-meg ohm to-10 meg ohm series isolation resistor.

Additionally, POWER DOWN THE DUET SYSTEM before starting installation!!!

To install the RS-422 Serial I/O & GPI/O Board:

- 1. Using an appropriate screwdriver, remove the rear panel cover plate for the PCI slot where the new board will be installed. When viewed from the rear panel, each cover plate is slightly to the left of its matching board slot. Retain the screw for installation of new PCI boards, and retain the cover plate for possible future use.
- 2. Remove the RS-422 Serial I/O & GPI/O Board from its anti-static packing material.
- 3. Remove the nut from the BNC connector that projects from the board's rear panel.

NOTE

Remember that the first (or only) RS-422 Serial I/O & GPI/O Board to be installed in the system *must* be installed in PCI Slot #8, which is to the extreme right (when looking at the front of the Duet).



Installing the RS-422 Serial I/O & GPI/O Board

- 4. The BNC connector projecting from the rear of the RS-422 Serial I/O & GPI/O Board prohibits pressing the board straight down into the H-connector in the chassis. Lower the rear of the board into Duet's PCI area first and then move the board toward the openings at the back of Duet.
- 5. Insert the board into the board slot. Carefully press down on the board's upper edge using firm pressure, until the board is seated securely into the slot.
- 6. Reinstall the nut that you removed from the BNC connector, tightening it against the brackets supporting the GPIO board.
- 7. Secure the GPIO board's rear panel to the chassis by aligning the metal retaining bracket with the screw hole in the top edge of the Duet chassis. Then, secure the bracket to the chassis using the original screw that secured the Rear Panel Cover Plate.

Dip Switch Settings for Multiple RS-422 Serial I/O & GPI/O Board Installation

IMPORTANT!!!

The following image is taken from a legend silk-screened on the RS-422 Serial I/O & GPI/O Board itself. Note that when the board is installed, the legend is obscured by the system's DRAM modules. For ease of access and electrical safety, each board's DIP switches should be set before the board is installed in Duet.

Each RS-422 Serial I/O & GPI/O Board is shipped with its **S1 DIP** (**Dual In-Line Package**) switches set to identify that board as **RS-422 Serial I/O & GPI/O Board #1** in the Duet system. Each additional RS-422 Serial I/O & GPI/O Board's **DIP** switches *must* be set to identify the board as **#2**, **#3** or **#4** within Duet. The following illustration shows the appropriate settings. Note that only switches **S1.1** and **S1.2** are used; the others are set to **OFF**. This is the factory default, and these switches should be left undisturbed.

The first (or only) board's GPI/Os are numbered **1** - **8**. Remember that each can be designated as an input or output. Each additional RS-422 Serial I/O & GPI/O Board's GPI/Os are numbered successively. A second RS-422 Serial I/O & GPI/O Board's ports appear to Duet as GPI/Os **9** - **16**; a third board's GPI/Os would be numbered **17** - **24**; and a fourth board's GPI/Os would be numbered **25** - **32**.

		BOARD
S1.1	S1.2	I.D. #
OFF	OFF	1
ON	OFF	2
OFF	ON	3
ON	ON	4

Dip Switch Settings for Multiple RS-422 Serial I/O & GPI/O Boards

Installing the GPI/O Extension Bracket - Duet SD/HD Only

IMPORTANT !!!

It is strongly recommended that measures be taken to dissipate any static electrical charge before touching the RS-422 Serial I/O & GPI/O Board. When using an anti-static wrist strap, the grounding cord must contain a 1-meg ohm to-10 meg ohm series isolation resistor.

Additionally, POWER DOWN THE DUET SYSTEM before starting installation!!!

The GPI/O Extension Bracket consists of the LTC connector (DB-9) and the GPI/O connector (DB-25) mounted on a simple PCI panel. The bracket is shipped with ribbon cables for LTC and GPI/O signals already connected to their respective DB-9 and DB-25 connectors, respectively. *If there is no need to use the GPI/Os or LTC, it is not necessary to install this bracket.* To install the GPI/O Extension Bracket, follow these steps:

- 1. Remove the rear panel cover plate where the GPI/O Extension Bracket will be installed, preferably the slot next to the RS-422 Serial I/O & GPI/O Board to which it is connected. Retain the plate and the screw that held it in place. Take note of the way that the lower end of the rear panel cover plate is inserted into the groove that runs across all the PCI slots.
- Connect the large ribbon cable from the extension bracket's GPI/O connector to the 26-pin connector at JP-5 header on the RS-422 Serial I/O & GPI/O Board. The extra pin on this connector is not used for GPI/O or BVW-75 function.



Installing the GPI/O Extension Bracket

3. Connect the smaller cable from the extension bracket's LTC connector to the 10-pin connector at JP-9 (see above).

IMPORTANT !!!

Be careful to connect the smaller ribbon cable to the connector at JP-9, just below the Debug port. *Do not* connect this cable to the shrouded connector at JP-7!

- 4. Make sure that **Pin #1** (indicated by the red wire in the ribbon cable) is at the top of the connector. The red wire in the ribbon should run parallel to the top of the board as it leaves the connector, even though you will have to twist both cables to get the GPI/O Extension Bracket situated properly.
- 5. Note the similarity between the GPI/O Extension Bracket and the rear panel cover plate that you removed in the first step. Mount the extension bracket just as the original rear panel cover plate was mounted, sliding the lower end of the bracket into the groove that runs across the PCI slots.
- 6. Secure the bracket to the chassis by aligning the metal retaining bracket with the screw hole in the top edge of the Duet chassis, then secure the bracket to the chassis using the original screw that secured the rear panel cover plate.
- 7. Replace Duet's top cover before turning on the unit.

If multiple external systems are to be connected, connect the GPI cable to an appropriate breakout box.

RS-422 Serial I/O & GPI/O Board Driver Installation

After installing the RS-422 Serial I/O & GPI/O Board, the driver must be installed to enable Lyric to communicate with the board.

- 1. In Duet's Windows Control Panel, use the Add/Remove function to uninstall Duet System Files.
- 2. Load the current Duet/Lyric CD.

- 3. In the very first screen that appears, select Install Drivers.
- 4. The **Welcome** screen appears next. Review it, then click **OK**.
- Click the GPIO checkbox in the next screen if you have installed the RS-422 Serial I/O & GPI/O Board.

Select Duet Hardware O	ptions	×
	Please check the boxes corresponding to your Duet Options GPIO HD MIXER SD MIXER	
	< <u>B</u> ack. <u>N</u> ext > Cancel	

Select Duet Hardware Options

- 6. Follow the on-screen prompts to complete the remainder of the driver installation procedure.
- 7. Reboot the system before running Lyric. The RS-422 Serial I/O & GPI/O Board is now ready to use.

Establishing and Testing Connections

When establishing GPI or RS-422 connections, it is strongly recommended that you power down both Duet and external devices before connecting them. Consult the documentation for the external device to determine the proper signal level and duration, and configure Duet appropriately through the Lyric software described above.

- Connect an appropriate male DB-25 connector to the port labeled GPIO on the GPI Extension Bracket.
- Connect the GPI cable to the piece of equipment that will be sending or receiving GPIs to or from Duet. If multiple external systems will be connected, connect the GPI cable to an appropriate breakout box.

The example given below assumes connection of a Sony Betacam VTR. The **Transport Controls**, however, operate in the same manner for digital disk recorders (DDRs).

- 1. Power down both Duet and the VTR. Connect one of Duet's serial ports to the VTR's DB-9 REMOTE connector. Restore power to both machines and launch Lyric.
- 2. From the Lyric Tools menu, select Clip Control Panel. The Clip Control Panel is displayed.

	Panel1 📃 🗆 🗙
Port 1 : SONY P	VW-2800 💌
GoTo 00 00	00 00 🗧 🔳
≪	
AVI File	
Load	Browse
- In Point	
Mark	
GoTo	ninninn
- Out Point	
Mark	
GoTo	
Play to End	🗖 Loop
Clip File	
<u>S</u> ave	<u>R</u> ecall
TLine Add	TLine Update
Play Clip	ОК

Clip Control Panel

- 3. In the Device Playback drop-down list box, select the playback device.
- 4. Load a tape with recorded content, and that has space on which content can be recorded.
- 5. Test the Transport Controls: Rewind, Previous Frame, Stop, Play, Next Frame and Fast Forward.
- 6. Try the **Scrub** slide box immediately beneath the **Transport Controls**. The slide box is equivalent to the **Jog/Shuttle** knob on the playback device itself.

To create a clip from a segment of recorded material on the external machine:

- 1. Use the transport controls to cue the tape or disk to the beginning of the desired content.
- 2. In the **In Point** area, click the **Mark** button. Note that the current timecode appears in the timecode window.
- 3. Use the transport controls to cue the tape or disk to the end of the desired content.
- 4. In the **Out Point** area, click the **Mark** button. Note that the current timecode appears in the timecode window.
- 5. To program the clip to play to the end then stop, select **Play to End**. To program the clip to loop until stopped externally, select **Loop**.
- 6. Give the clip you are creating a **Clip Number**.
- 7. Click the **Save** button and then click **OK**.

To record:

- 1. Click the red dot to the right of the topmost timecode display. The button will change to a darker red, signifying that the VTR is in 'standby' mode.
- 2. Press the **Play** button, and a record command will be sent to the device. During recording, the red button will flash on and off. Press the **Stop** button to stop the recording. Note: If the **Record** button is pressed while the device is playing, recording will start immediately.

Refer to the chapter on the Internal Clip Player and the Clip Control Panel for additional information.

Device Control

Config Menu > Duet Hardware Configuration > Device Control

Lyric can control or be controlled by external devices such as videotape tape recorders (VTRs), digital disk recorders (DDRs) and switchers by using GPIs (General Purpose Interface triggers) or by the BVW-75 Serial Digital Protocol via the RS-422 Serial Digital Interface.

Such control inputs to Duet from external sources can start and stop **Clocks** and **Timers**, execute an individual step within a Lyric **Playlist** or release a programmed **Pause**. **GPI** control outputs from Duet can be used to trigger external devices such as keyers and tally lights. *Refer to GPIs - Overview for comprehensive information on GPI setup.*

The most common use of the BVW-75 protocol/RS-422 connection is for cueing and playback of video from the **Clip Control Panel**. In addition, segments of existing video on external playback devices can be defined, saved and played back as **Clips** either on their own, or as components of a Lyric message.

NOTE

To enable BVW-75 via RS-422 (all systems) capability or GPI (Duet SD/HD) capability, the Chyron's optional RS-422 Serial I/O & GPI/O Board and must be installed in the Duet SD/HD system. This board is not necessary for GPI function on Duet LE/LEX/PCI/PCI+, but is necessary for BVW-75/RS-422 communication. *Call Chyron Customer Service at 845-2132 for information about this product. Refer to RS-422 Serial I/O & GPI/O Board for details on installation and setup.*

- While each type of system displays its own set of system-specific tabs in Duet Configuration, the Device tab on all systems is the same.
- If this board is not present in a Duet SD/HD system, the Device and GPI tabs are grayed out.

The following example shows configuration on a Duet SD of serial device control of a Sierra DDR, using the **BVW-75** protocol.

- 1. Be sure that the external DDR or VTR is properly connected to the Duet system. For additional information on connection, refer to the Duet Hardware Reference Manual.
- 2. From the **Config** menu, select **Duet Hardware**. The **Duet Hardware Configuration** tabs are displayed. Click the **Device Control** tab to display the **Device Control** settings.

deo Device	Control GPI Timecode	MPx	-
<u>P</u> ort:	1 Description: Si	ierra DDR	Port <u>Allocated</u> : 🔽
	Protocol		
	Sony BVW-75 💌 F	38422	
	Port Configuration		
	<u>B</u> aud 38400	Data Bits 8	
	Stop Bits 1	Parity OD	D V
		Pre- <u>R</u> oll Time	
	C <u>S</u> lave	(frames)	

Duet Configuration - Sony® BVW-75 Protocol

- 3. From the **Port** drop-down list box, select the number (1 4) of the port on the Chyron RS-422 Serial I/O & GPI/O Board that is to be connected to the external device.
- 4. In the Description field, enter a description of the device. When the external device is selected in the Clip Control Panel Playback Device drop-down list box, this description is reflected in the Playback Device field. Refer to Clip Control Panel for additional information on clip operations.
- 5. Select (check) the **Port Allocated** checkbox. If this checkbox is not enabled, the device is not recognized by the **Clip Control Panel**, and therefore cannot be accessed for clip creation.
- The Protocol drop-down list box defaults to the BVW-75 protocol, using an RS-422 connection. BVW-75 is the currently the only protocol supported by Lyric. Lyric detects connected machines that use BVW-75 protocol, and then automatically sets the Port Configuration values for Baud Rate, Data Bits, Stop Bits and Parity. The Master radio button is always selected. The Slave function is not implemented at this time.
- 7. Enter a **Pre-Roll Time**, in frames, for the VTR that is connected. **Pre-Roll** for a DDR is **0**. Remember that this adjustment is in **Frames**.
- 8. Click **OK**. **Device Control** is now set up for the DDR.

Global GPIs Config Menu > Global GPIs

This facility allows an incoming **GPI** pulse to read any type Lyric file using the extension **.lyr*. Message types saved with this extension include conventional Lyric files, as well as specialized Lyric messages such as **SD Mixer** messages, **CMix** messages and **Macro** messages.

NOTE

After parameters are set, Lyric must be closed and relaunched in order to apply GPI settings.

- 1. From Lyric's **Config** menu, select **Duet Hardware**, then click on the **GPI** tab (Duet SD/HD systems) or the **Setup GPI** tab (Duet LE/LEX/PCI/PCI+ systems).
- 2. Set up and allocate one of the available GPIs. Make sure that the GPI Allocated checkbox is selected (checked). If you wish, enter a Description. Make sure that the GPI that is assigned as a Global GPI is not already assigned to be used in another capacity (for example, in a Playlist or to trigger a Squeezeback effect), as there may be a conflict when the GPI or Global GPI is triggered. Refer to the chapter on Duet Hardware Configuration for detailed GPI setup information.
- 3. Click **OK**. The tab closes.
- 4. Return to the Config menu and select Global GPIs to open the Configure Global GPIs dialog

Config	ure Global GPIs		×
J.	Enable Global GPIs		
	GPI	File	
	■ * GPI 1 : INPUT ()		
		OK Conset	
		UK Lancel	

Configure Global GPIs Dialog Box

 Double-click the entry for the GPI that you allocated in Step 2. The Select File To Assign To GPI 1 dialog opens.

Select File To	o Assign To G	SPI 1			? ×
Look jn:	🔄 Lyric		•	£	<u>r i i i i i i i i i i i i i i i i i i i</u>
📄 Images	00	000501.lyr	000051	53.lyr	00008888.
🚞 Lyric	00	000502.lyr	000051	54.lyr	 00008889.
📄 Messages	00	000510.lyr	000060	101.lyr	00008890.
00000000.	lyr 🛛 💳 00	005150.lyr	000060	102.lyr	 00008891.
00000001.	lyr 🛛 💳 00	005151.lyr	000088	181.lyr	 00008896.
00000500.	lyr 🛛 💳 00	005152.lyr	000088	182.lyr	· 00008901.
•					F
File <u>n</u> ame:	00005153.lyr				<u>O</u> pen
Files of <u>t</u> ype:	Lyric Files (*.ly	v)		-	Cancel

Selecting a File to Assign to GPI 1

Select the file that is to be opened by the incoming GPI pulse.

Co	onfigure Global GPIs	×
	Enable Global GPIs	
	GPI File	1
	✓ GPI 1 : INPUT (autoplay 5153) D:\Program Files\Chyron\Lyric\00005153.lyr	
		J
	OK Cancel	

GPI 1 Set as Global GPI

The **Configure Global GPIs** dialog reappears as shown above. Note that the **GPI** assignment is labeled with the **Description** entered in Step 2. This user-defined description on the left is not to be confused with the actual filepath on the right-hand side of the entry.

- 6. Click OK. The selected *.lyr file will now open when the GPI is triggered.
- 7. If the Lyric file read by the **GPI** contains an animation, it is necessary to set playback parameters. From the **Config** menu, select **Preferences**, then the **Animation Settings** tab.
- To play the animation immediately when read, select (check) AutoPlay On Read and deselect (uncheck) Prompt to Play on Duet. The animation plays when read, without Lyric generating a prompt confirming playback. To manually trigger playback, deselect (uncheck) AutoPlay On Read.
- 9. Click OK to close Preferences.
- 10. Exit Lyric, then relaunch Lyric to apply the Global GPI settings.

KwiKeys GPI/O Trigger Device

Chyron's KwiKeys GPI/O trigger device can send GPI triggers to the Duet system to execute Playlist events, Squeezeback Effects, resume animations after Pauses, etc. KwiKeys consists of sixteen illuminated keys and connects, via an adapter (*see below*), to the GPI/O interface connector on the RS-422 Serial I/O & GPI/O Board in a Duet SD, or directly to the GPI/O interface connector on a VPB in a Duet LE/LEX/PCI/PCI+. It does not connect to a PCI-Squeezeback board, but, when properly configured, can trigger Squeezeback Effects. *Refer to GPI Setup - Duet LE/LEX/PCI/PCI+ and Effect Activation Button - GPI Control/SQZ Kwik Tool for details on Squeezeback Effect execution.*

KwiKeys triggers only in an outbound direction to Duet; it does not receive triggers from Duet. Buttons **1 - 8** can connect to the eight **GPIs** that can be set up on one 422 Serial I/O & GPI/O Board in a Duet SD/HD. Buttons **1 - 16** can connect to the sixteen **GPIs** that can be set up on the VPB of a Duet LE/LEX/PCI/PCI+.



KwiKeys

IMPORTANT - DUET SD/HD!!!

Do not connect KwiKeys directly to GPI/O interface connector on the 422 Serial I/O & GPI/O Board. Although their connectors fit together, the pinouts do not match. To assemble the appropriate adapter, consult appendix C of the handbook for Chyron's digital pcCodi, Chyron Publication No. 2a02137, Revision B. This publication is available on the Chyron web site at http://www.chyron.com. To purchase an appropriate adapter, please contact Chyron Customer Service. *Refer to Chapter 6 in the Duet Hardware Reference Guide, Chyron Publication No. 2a02105, Revision B for complete hardware information on the GPI/O board.*

ReCall Keys

Overview

Chyron's **ReCall Keys** provides a means for the Lyric operator to quickly call up Lyric messages, play animations and manipulate Duet's program outputs. The **ReCall Keys** can be connected to a Duet system or a PC running Lyric.

The **ReCall Keys** can be connected to either the **COM 1** or **COM 2** serial port of a Duet or a PC, and communicates with the system via the **RS-232** protocol. The **ReCall Keys** (*shown below*) consists of an **LCD** (**Liquid Crystal Display**) and a keypad. Installation and Communications Setup (both for Windows® 2000 and Windows NT®) is described following the **ReCall Keys** Functions section.

FB: 1* MSG: 151 ReCall Keys	
Monu Zou Zou Do 7 8 9 Eraso 4 5 6 Read 1 2 3 Read Next 0 Clear Insert Read	A DESCRIPTION OF

Chyron ReCall Keys

ReCall Keys Functions

This photograph of the ReCall Keys has been modified so that the LCD appears more clearly.

The controls, starting at the upper left corner of the keypad, and going clockwise around the number keys, are as follows:

Function	Description		
Menu	Menu functions are not currently implemented for use with Duet.		
	The key is used with the Menu function. Menu functions are not currently implemented for use with Duet.		
Xfer	Performs the same function as the Xfer button on the Lyric interface, sending the contents of the active Frame Buffer to Air.		
	The S key is used with the Menu function. Menu functions are not currently implemented for use with Duet.		
Chng	Selects the next available Frame Buffer as the active Frame Buffer for editing or transfer to output. Order of availability is as follows: 1 , 2 , 3 , 4 , 1 , 2 etc.		
Do	Issues the Play command to Duet when a Lyric message containing an animation is loaded.		
Erase	Clears the Canvas.		
Read Prev	Prebuilds the message with the next lowest Message ID in a numeric sequence of messages.		
Read Next	Prebuilds the message with the next highest Message ID in a numeric sequence of messages.		
Read	Reads the message stored at the numerical address most recently entered on the keypad.		
Insert	Performs the same function as the Live button on the Lyric interface, sending the contents of the active Frame Buffer to the Air output.		
Clear	Deletes any keypad entry from the Recall Keyboard 's display.		

Installation

NOTES

- The maximum distance for a remote connection of the Recall Keyboard is 10 meters (approximately 32 feet). If it is necessary to exceed this maximum distance, a suitable RS-232 to RS-422 converter must be used.
- The Power and Data cables are clamped together prior to shipment. This is done in order to avoid accidental removal of the power connector during operation. If the Power and Data cables are not clamped together, tie them together as shown in Figure 2 using a suitable cable tie. Cut and discard excess length of cable tie.



ReCall Keys Components

To connect the ReCall Keys to a Duet or PC's COM2 port:

- 1. Make sure that power is *not* connected to the Duet or PC.
- 2. Connect the female end of the **Data Cable** to the appropriate **COM2** serial connector of the Duet or PC. Hand-tighten the connector.
- 3. Connect the **Power Cable** to the power receptacle on the **ReCall Keys**.
- 4. Connect the male end of the **Data Cable** to the corresponding connector on the **Recall Keyboard**. Hand-tighten the connector.
- 5. Connect the **ReCall Keys** power supply to a suitable AC power source.
- 6. After the **ReCall Keys** is connected, configure the Communications Setup. Procedures for Windows® 2000 and Windows NT® follow.

Communications Setup - Windows 2000, XP

- 1. After the installation of the **ReCall Keys**, access **Windows Start > Settings > Control Panel >** System > Hardware > Device Manager > Ports (COM & LPT).
- Expand the Ports (COM & LPT) listing, then select Communications Port (Com 1) or Communications Port (Com 2). This example shows COM 2. The Communications Port (COM2) Properties dialog box is displayed.
- 3. Select the **Port Settings** tab to display the settings.

ommuni	cations Port (COM2) Propertie	25	?
General	Port Settings Driver Resource	es	
24	<u>B</u> its per second:	19200	
	<u>D</u> ata bits:	8	-
	Parity:	None	•
	<u>S</u> top bits:	1	•
	<u>F</u> low control:	None	•
	Adv	vanced.	Bestore Defaults
		OK	. Cancel

COM2 Setup - Windows 2000

4. Enter the following settings: Baud Rate = 19200; Data Bits = 8; Parity = None; Stop Bits = 1; Flow Control = None.

5. Move to the Lyric interface. From the **Config** menu, select **Intelligent Interface**. The **Intelligent Interface** dialog box is displayed.

Intelligent Interface	×			
○ <u>Option Disabled</u> Recall Keys ○ Enable Serial Port 1 Enable <u>Becall</u> ○ Enable Serial Port 2 ○ Com 1 ○ Enable Both Ports ○ Com 2				
Message Directory C:\Sales Demo\Messages\				
Machine Code □ □ □ □ □ □ □ Cancel □ □ □ □ □ □ □ □ □ □ □ □ □				
	Diagnostics			

ReCall Keys Setup - Windows® 2000

- 6. In the Serial Port Enable area (unlabeled), select either Enable Serial Port 2 (or Enable Serial Port 1 if using Port 1) or Enable Both Ports.
- 7. In the **Recall Keys** area, select (check) the **Enable Recall Keys** checkbox, and select the **Com 2** (or **Com 1** if using **Com 1**) radio button.
- 8. Click OK. ReCall Keys setup is now complete.

Communications Setup - Windows NT

1. After the installation of the **ReCall Keys**, access **Windows Start > Settings > Control Panel > Ports**. The **Ports** dialog box is displayed. Select **Com 1** or **Com 2**. This example shows **Com 2**.

Ports	×
Ports:	Cancel
	<u>S</u> ettings
	<u>A</u> dd
	<u>D</u> elete
,	Help

ReCall Keys - Selecting a COM Port

2. Click **Settings**. The Settings for **COM2** (or **COM1** if using **COM1**) dialog box is displayed.

Settings for C	:OM2:	×
Baud Rate:	19200 💌	ОК
<u>D</u> ata Bits:	8 💌	Cancel
Parity:	None 💌	
<u>S</u> top Bits:	1 💌	Advanced
Elow Control:	None] <u>H</u> elp

Recall Keys - Settings for COM2

- 3. Perform the following settings: Baud Rate = 19200; Data Bits = 8; Parity = None; Stop Bits = 1; Flow Control = None.
- 4. Move to the Lyric interface. From the **Config** menu, select **Intelligent Interface**. The **Intelligent Interface** dialog box is displayed.

Intelligent Interface	X
 <u>Option Disabled</u> Enable Serial Port <u>1</u> Enable Serial Port <u>2</u> Enable <u>Both Ports</u> 	Recall Keys Enable <u>R</u> ecall Keys C Serial Port 1 € Serial Port 2
Message Directory	Messages\
Machine Code ⊡ ☑ Ignore Machine Cod	OK Cancel

Recall Keys Setup - Windows NT®

- 5. In the Serial Port Enable area (unlabeled), select either Enable Serial Port 2 (or Enable Serial Port 1 if using Port 1) or Enable Both Ports.
- 6. In the **Recall Keys** area, select (check) the **Enable Recall Keys** checkbox, and select the **Com 2** (or **Com 1** if using **Com 1**) radio button.
- 7. Click OK. ReCall Keys setup is now complete.

8. Preferences

Preferences

Config Menu > Preferences

Lyric provides a host of options for customizing Lyric to a user's requirements. Many of these options are set in the **Preferences** window, in which can be found settings for interface display, animation, **Browser**, etc.

• Once **Preferences** have been set, they can be applied by selecting **OK** in the **Preferences** window.

Preference settings can also be saved to **User Profile** files for later recall. This eliminates the need to reset **Preferences** each time after they have been changed, and enables the storage of multiple **User Profiles** which can be tailored to specific users and/or production situations. *Refer to* **Save/Load User Profile** for additional information.

To access these settings:

• Select Preferences from the Config menu. The Preferences window is displayed.

Cursor Shape	,	Show-	Save/Recall	Shift Page
I-Beam	œ	Safe Title 🔽	Disable Undo 🗖	Selected Objects
Box	С	4:3 Title in 16:9 🗖	Auto-Increment on Read/Record	All Objects
Initial Edit Mo	de	Confirm	Track Message	Xfer Mode
Full Screer	n 🖲	On Delete Msg 🔽	Number Fer Fb	Basic 📀
Windowed	0	On Overwrite 🔽	Read Next 10	Swap VGE with C
Tab Width	100			
i ab width	1100			

Preferences Window

There are seven tabs which contain configuration settings:

- CG Preferences: The settings in CG Preferences determine how the Canvas appears, how the Message Number updates when messages are recorded or read, and how Shift Page, Xfer and Tab operations execute.
- Spelling: The User Dictionary against which spelling is checked is specified in Spelling tab.
- **Default Paths:** The **Default Paths** settings determine the default directories which Lyric automatically accesses for reading/recording messages, fonts, and other Lyric assets.
- Animation Settings: Default length, execution, memory allocation, and other parameters with regard to animations set in Animation Settings.
- Browser: Default Font and Default Message data sources, data source Import or Create, and other Browser-related defaults are set in the Browser settings.

- Alignment: The Alignment function allows the operator to superimpose a customized grid on the Canvas, and to force alignment of objects to the nearest grid line(s). The Alignment Grid is useful for precise positioning of text, templates and other objects within the composition.
- Windows: Display options for the Lyric windows and the Canvas are set in the Windows tab.

All **Preferences** are covered in this chapter, except for the following:

- Browser Preferences, which are covered in the chapter on Browsers.
- Animation Settings Preferences, which are covered in the chapter on Animation.

CG Preferences

Config Menu > Preferences > CG Preferences

The settings in **CG Preferences** determine how the **Canvas** appears, how the **Message Number** updates when messages are recorded or read, and how **Shift Page**, **Xfer** and **Tab** operations execute.

Cursor Shape	120	Show		Save/Recall	Shift Page	
I-Beam	•	Safe Title		Disable Undo 🛛 🗖	Selected Objects	•
		Viewport Labels	V			~
Box		4:3 Title in 16:9		Read/Record		
nitial Edit Mode		- Confirm		Track Message	Xfer Mode	
Full Screen	0	On Delete Msg		Number Per FB	Basic	•
Windowed	•	On Overwrite	~	Read Next Range 10	Swap Output with VGA	c
		ili			Lunicode Oplu	

CG Preferences

Cursor Shape

The shape of the cursor can be set to suit user preference. Select either an **I-Beam**- or **Box**-shaped cursor:



Cursor Shapes

Show

The **Show** parameters determine which informational graphics are displayed on the **Canvas**. These graphics are to aid in graphic composition only, and do not appear on the output.

Safe Title

The **Safe Title Area** on the **Canvas**, by default, encompasses what is generally considered to be the safe area in which significant text elements and graphics should be placed. Outside of the **Safe Title Area**, there is a risk of cutoff due to the differences in the physical frame in which a TV is mounted.

- When Safe Title is enabled (checked), the Safe Title Box, which encloses the Safe Title Area, is displayed.
- When Safe Title is disabled (unchecked), the Safe Title Box is not displayed.

The **Safe Title Box** is adjustable via **Config Menu > Safe Title Adjust**, and can also be used to crop graphics or **Flipbooks** when they are saved.

Î	
 Safe Title Box	
*	

Safe Title

Viewport Labels

Viewport Labels specify which **Canvas View** is active. The **Viewport Labels** consist of a text label and a representation of the axes of the Lyric composition which are currently displayed.

- When Viewport Labels is enabled (checked), the Viewport Labels are displayed.
- When **Viewport Labels** is disabled (unchecked), the **Viewport Labels** are not displayed.



Viewport Labels

4:3 Title in 16:9

When Lyric's **Canvas Resolution** has been set for a **16:9** aspect ratio, a movable **4:3 Safe Title** can be displayed within the **16:9 Safe Title** display. By default, the **4:3** display initially appears centered within the **16:9** display.

4:3 Title in 16:9 can be useful for planning compositions that will appear in both **4:3** and **16:9** formats. This setting is available only when a **16:9** resolution has been set.

- When 4:3 Title in 16:9 is disabled (unchecked), only the 16:9 Safe Title Box is displayed.
- When 4:3 Title in 16:9 is enabled (checked), a 4:3 Safe Title Box is displayed in addition to the 16:9 Safe Title Box.

	4:3 2D Text Window
	Safe for simultaneous 16:9 and
	4:3 broadcast.
16:9 2D	Text Window
S	afe for 16:9 broadcast only.
Te	ext beyond 4:3 boundary is cut off on 4:3 screens.
1	1

4:3 and 16:9 Safe Title Boxes in 16:9 Canvas Resolution

The size, proportions and position of the **Safe Title Area** itself can be adjusted to aspect ratios other than **4:3** and **16:9**. *Refer to Safe Title for additional information on adjusting Safe Title*.

Initial Edit Mode

When opening a new Canvas, it can open as completely blank or containing a full-screen 2D Text Window.

- Full Screen: On opening a new Canvas, opens a full-screen-sized 2D Text Window. The blue boundaries of the 2D Text Window are visible at the edges of the Canvas, to allow the ability to grab with it the mouse.
- Windowed: The Canvas is opens as completely blank. To place a 2D Text Window on the Canvas, click in the Chyron Toolbar.

Confirm

When deleting a message (**Delete** key or **Alt + F5**) or overwriting a message, Lyric can display a message asking for confirmation. This lessens the possibility of accidentally deleting a message.

• **On Delete Msg:** If **On Delete Message** is enabled (checked), Lyric displays a message asking for confirmation. **OK** must be clicked before the delete operation is executed.



Delete Confirmation

If **On Delete Msg** is disabled (unchecked), Lyric proceeds with the deletion without confirmation.

• If **On Overwrite** is enabled (checked), Lyric displays a message asking for confirmation. **OK** must be clicked before the overwrite operation is executed. If **On Overwrite** is disabled (unchecked), Lyric proceeds with the overwrite without confirmation.

This functionality is duplicated and extended in the **Browser** when **On Delete Msg** is enabled. Selecting **Delete** from the **Browser** right-click menu **Browser** causes the system not only to confirm the deletion as a **Browser** entry, but also displays an additional confirmation for deleting the file. Clicking **Yes** in the first dialog displays the second dialog.



Deleting a File from the Browser

Similarly, enabling **On Delete Msg** causes the system to display a prompt to confirm that the new message should overwrite the existing message.

00000000 Roy Flobbing	Confirm Overwrite
0000002	Overwrite existing file? C:\Program Files\Chyron\Lyric MC\Messages\00000222.lyr Modified: 09/16/2002 04:04:54 PM, Size: 504984 bytes Yes
Roy Flobbing	2D Text 1 New Message 222
00000222	

Overwriting a File on a Browser

This prompt appears whether you begin overwriting a message via the keypad or by using the **Browser's Save to Database** button, shown circled above. *Refer to* **Browser Overview** for additional information.

Save/Recall Options

The following options determine how information is saved for reuse during while composing a Lyric message: *Disable Undo*

Specific to **Undo** operations (the button or **Ctrl + Z**) in 2D text composition. In any case, the operator can always **Undo** operations in other activities such as 3D composition or the use of bitmaps.

Auto-Increment on Read/Record

The displayed message number can be set to advance so that the next file saved is assigned the next number in ascending order. Auto-Increment on Read/Record was formerly known as Auto-Increment on Save.

- When **Auto-Increment** is enabled, the displayed message number is set to advance every time a Lyric message is read or recorded and saved with a numeric file name. This is helpful when recording a series of messages, as it aids in preventing accidental overwrite of the previously saved message. It also eliminates the need to enter a new **Message Number** when recording or reading each message.
- When **Auto-Increment** is not enabled, the displayed **Message Number** does not advance after a read or record.

Remember that regardless of the **Auto-Increment** setting, a **Message Number** can entered on the numeric keypad to read or record an out-of-sequence message.
Track Message Number Per FB (Duet Systems Only - Not Offline)

The operator may now select whether the **Message Number** display changes with the **Frame Buffer** selected for editing. When this option disabled (unchecked), the Message Number display reflects the Message Number most recently read or recorded.

Read Next Range

Specifies the number of numerically-named messages through which Lyric will search during Read Next and Read Previous. The default setting is 10.

Shift Page

Shift Page operations (Ctrl + Alt + $\uparrow \downarrow \leftarrow \rightarrow$) can either affect just the selected objects on the Scene Graph or Timeline, or all objects on the Canvas.

- If Selected Objects is enabled, only the objects selected on the Scene Graph or Timeline are shifted when a **Shift Page** operation is executed.
- In All Objects is enabled, all objects on the Canvas are shifted when a Shift Page operation is ٠ executed, whether or not they are selected.

Xfer Mode

The Xfer Mode setting determines how an Xfer operation is executed.

Basic: Once a composition has been transferred to the video output, it can no longer be modified in real time. Further changes must be made on the Canvas, and then rendered to the video output by

executing Xfer again, or by clicking the utton.

Swap VGE with VGA: This option allows the Xfer operation to be used repeatedly to switch the composition on the **Canvas** on the VGA monitor with the signal on the VGE output. This action may be used as another method of Air/Preview operation.

Tab Width

A Tab space may be added (press Ctrl + Tab) between characters in a 2D Text, Roll, Crawl or Type On Window. The size of the Tab space, specified in pixels, can be set in the Tab Width field. 100 pixels is the default setting. For sake of clarity, references to 2D Text Windows include 2D Roll, 2D Crawl and 2D Type On Windows.

- When a **Tab Width** is set, the **Tabs** are set at *fixed* positions in the **2D Text Windows**. Be mindful that if the first character in a line is between **Tab** positions, it results in a shorter spacing before the next Tab. With columns created in this manner, it will appear as if the first column is too close to the second. To avoid this, make the 2D Text Window wide enough that the first character of the first column can be typed *immediately* following a **Tab**.
- A change in the Tab Width value updates all Tabs currently on the Canvas. •
- Be aware that when a new **Tab Width** is set, if the text overlaps the updated **Tabs** or vice versa, the • results could be unexpected. Typing new **Tabs** into text created with **Tabs** at a different **Tab Width** can also produce unexpected results.
- If the **Tab Width** has been changed, and then a message created with a different **Tab Width** is read, • the original **Tab Width** is preserved in the read message. If a **Tab** is then typed into a **2D Text** Window of the read message, the Tabs in the 2D Text Window update to the new Tab Width. Other **2D Text Windows** are unaffected. Note that as mentioned above, a change made to the **Tab** Width while a recorded message is displayed results in an update to all Tabs currently on the Canvas.

Unicode Only

The Unicode Only setting determines the use of Unicode fonts in Lyric.

If **Unicode Only** is enabled (checked), all 2D/3D text entry and editing in the **Canvas** uses the Unicode character set and is designed to work with Unicode fonts. Although this is not the default mode, it is required if any Asian language (Korean, Chinese or Japanese) is selected.

 Unicode Only should be disabled (unchecked) if the Duet SD/HD or offline PC is running the Windows NT[®] operating system, or if it is necessary to maintain compatibility with older, non-Unicode fonts (e.g., double-byte or ASCII). Note that Windows NT is not supported on Duet LE/LEX/PCI/PCI+.

Spelling Preferences

Config Menu > Preferences > Spelling

Lyric's **Spell Check** operates in the same manner as standard word processing **Spell Check** applications. **Spell Check** is launched by pressing **F7** or by selecting **Spelling** from the **Tools** menu. When **Spell Check** runs, the program compares all 2D text on-screen to a standard English dictionary and a **User Dictionary** simultaneously. As with word processors, the operator may add specialized terms to the **User Dictionary**.

Preferences	×
CG Preferences Spelling Default Paths Animation Settings Browser Alignment Windows	
Current User Dictionary:	
C:\Program Files\Chyron\Lyric\dict.u	
Change Dictionary	
OK He	P

Spelling Preferences

It may be desirable to have **User Dictionaries** to be used for specific purposes, such as particular types of sports or news. The current **User Dictionary** is displayed in the **Current User Dictionary** field. The **User Dictionary** used can be changed using one of the following methods:

- Enter the absolute path of the User Dictionary in the User Dictionary field.
- Select Change Dictionary. The Open menu is displayed. Navigate to the User Dictionary file, then click Open. The new User Dictionary is loaded, and the name is reflected in the Current User Dictionary field. A User Dictionary always has the extension *.u.*

Open					?×
Look jn: 🔂	Lyric 4.0	•	(- E	-111 *	
License Playlists Plugins dict.u					
File <u>n</u> ame: Files of <u>t</u> ype:	dictFootball.u User Dictionaries (*.u)		•	<u>O</u> pe Cano	n j

Open New User Dictionary

Default Paths Preferences

Config Menu > Preferences > Default Paths

Default Paths enables the operator to set default (predetermined) file paths for storage and recall of messages, images, **Playlists**, effects, **Clip** files and 3D objects. This makes it easier for different file types associated with a project to be automatically saved to and easily accessed from an organized set of directories. The **Default Paths** settings can then be saved as part of a saved **User Profile**, which can be recalled for future use.

Setting **Default Paths** does not prevent the use of non-default file paths. **Save As** or **Open** (**Ctrl + O**), accessed from the **File** menu, can be used to save or open, respectively, files which are to be stored to or read from non-default directories. Additionally, non-default file types can be stored in default directories. For example, it may be advantageous to store a **Macro** file in a **Default Messages** directory for a particular project.

To view the **Default Paths**, click on the **Default Paths** tab in the **Preferences** dialog box. The **Default Paths** tab is displayed.

ferences							
G Preferences	Spelling	Default Paths	Animation Settings	Browser	Alignment	Windows	
Messages	C:\Prog	ram Files\Chyroi	n\Lyric			1	
Images Plauliste	C:\Prog	ram Files\Chyroi ram Files\Churoi	n\Lyric n\Lyric				
Effects	C:\Prog	ram Files\Chyroi	n\Lyric				
Clip Files	C:\Prog	ram Files\Chyrol	n\Lyric				
3D Ubjects	U:\Prog	ram Files\Chyroi	n\Lyric				
			1				
_	Create Pro	oject Hierarchy					

Default Paths Preferences

If previous changes have not been made, the original **Default Paths** that were set in Lyric on installation are displayed. There are six **Default Paths** listed:

Directory Name	Description
Messages	The default directory for saving and reading Lyric messages (<i>.lyr</i>). This directory also determines the Intelligent Interface directory, i.e. the directory to which Intelligent Interface -generated messages are written.
Images	Contains 2D bitmap images. Lyric supports many bitmap formats.
Playlists	Contains Playlists (. <i>ply</i>).
Effects	Contains effects messages (<i>.efx</i>), such as those created using Read Effects .
Clip Files	Contains Clip files (.ccf).
3D Objects	Contains 3D objects. Lyric supports .3ds, .prj and .obj formats.

Note that file such as **Macros** (*.lmx*, *.lyr*) and **User Profiles** (*.reg*, *.lup*), unless otherwise set in a **Save** dialog box, automatically save to the directory in which Lyric is installed.

There are two methods which can be used to change **Default Paths**:

- Change an individual **Default Path**.
- Change the **Default Paths** as a group.

To change an individual **Default Path**:

1. Double-click on the directory name in the list of Default Paths. In this example, **Playlists** is selected. A directory-type-specific dialog box is displayed. In this instance, it is **Choose a new directory for Playlists**.

Preferences		<
CG Preferences 9	Spelling Default Paths Animation Settings Browser Alignment Windows	
Messages Images Plavlists	C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric	
Effects Clip Files 3D Objects	Choose a new directory for Playlists ?	×
		-
-		
<u>5</u>		
	Ok Cancel	

Changing an Individual Default Directory

2. Navigate to the new directory. If necessary, a new directory can be created using the **Create New Folder Tool**, located in the upper right corner of the dialog box.



Create New Folder Tool

- 3. Select the new directory. The directory name appears in the **Dir.** field.
- 4. Click OK. The name of the new directory is now reflected in the Default Paths list.

Lyric has a convenient facility that enables the creation of grouped directories and subdirectories for each of Lyric's file types and other assets.

- 1. In the **Default Paths** dialog box, click **Create Project Hierarchy**. The **Select Root Directory** dialog box opens.
- 2. Use the **New Folder** tool to create a new directory. In this example, it will be called **LyricResourcesII**.
- 3. You will be prompted to create a subdirectory for each file type. Click **Yes** for each.

Create this directory?	Create this directory?
C:\LyricResourcesII\Messages	C:\LyricResourcesII\Images
Yes No Cancel	Yes No Cancel
Create this directory?	Create this directory?
C:\LyricResourcesII\Playlists	C:\LyricResourcesII\Effects
Yes No Cancel	Yes No Cancel
Create this directory?	Create this directory?
C:\LyricResourcesII\Clip Files	C:\LyricResourcesII\3D Objects
Yes No Cancel	Yes No Cancel

Creating a Group of Default Directory Paths

4. After confirming the creation of the **3D Objects** directory, the **Select Root Directory** dialog box should appear as follows:

Select Root Directory	?	×
Root> 🔁 LyricResourcesII	- 🗈 😁 🗾	
 3D Objects Clip Files Effects Images Messages Playlists 		
	Ok Cancel	

Root Directory with Updated Default Directories

The Default Paths list in the in the Default Paths dialog box will also reflect the new settings.

Alignment Preferences

Config Menu > Preferences > Alignment

The **Alignment** function allows the operator to superimpose a customized grid on the **Canvas**, and to force alignment of objects to the nearest grid line(s). The **Alignment Grid** is useful for precise positioning of text, templates and other objects within the composition.

Preferences	×
CG Preferences Spelling Default Paths Animation Settings Browser Alignment Windows	1
X Y Grid Spacing : 10 📫 10 📫	
Snap To Grid : 🔲 🗖	
Show Grid : 🗖 🗖	
OK	Help

Canvas Grid Settings

Set the following parameters, the click **Apply** to apply the settings and check the appearance of the grid lines on the **Canvas**, or **OK** to apply the settings and exit **Preferences**.

Parameter	Description				
Grid Spacing	The distance between the grid's horizontal lines (Y axis) and vertical lines (X axis) can be independently adjusted by entering values directly or using the up/down arrows (Grid Spacing). Units are in pixels for X , and scanlines for Y .				
Snap to Grid	The Snap to Grid function causes an object to "settle" at the nearest horizontal and/or vertical grid lines as specified in Alignment Preferences , when it is newly created or imported or moved from one place on the Canvas to another.				
	 To enable/disable horizontal Snap to Grid, check/uncheck the Snap to Grid X checkbox. 				
	 To enable/disable vertical Snap to Grid, check/uncheck the Snap to Grid Y checkbox. 				
Show Grid	The Show Grid function displays or hides the horizontal and/or vertical grid lines as specified in Alignment Preferences .				
	 To enable/disable display of horizontal grid lines, check/uncheck the Show Grid X checkbox. 				
	 To enable/disable display of vertical grid lines, check/uncheck the Show Grid Y checkbox. 				

Windows Preferences

Config Menu > Preferences > Windows

Display options for the Lyric windows and the Canvas are set in the Windows tab.

Basic Windows

The user may specify any combination of on the Lyric interface as **Basic Windows**. There are two **Windows** display choices accessible on the from the **Chyron Tools** on the Lyric interface:

- Basic Windows On: When Basic Windows is turned on ,only the Canvas and the windows specified in Preferences > Windows are displayed. Any other open windows are hidden from view.
- Basic Windows Off: When Basic Windows is turned off _____, all open windows are displayed.

Note that the **Basic Windows** button was formerly known as the **Canvas Only** button.

The Basic Windows, as well as Canvas display preferences, are set in the Windows tab.

 Timeline Scene Graph Browser SD Mixer 	 Properties Keyframe Graph Playlist Clip Control 	 Display All Frame Buffers Lock Canvas Size and Position Lock Viewport Sizes 	

Windows Preferences

To set the Basic Windows:

• In the **Basic Windows** area, select (check) the checkboxes next to the names of the windows that are to be displayed when **Basic Windows** is turned on.

Canvas

Display All Frame Buffers

Lyric provides the option of displaying all available frame buffers.

- When Display All Frame Buffers is enabled (checked), each frame buffer that is currently not active is displayed on its own miniature Canvas, allowing preview of the inactive Frame Buffers. The figure below shows Frame Buffer 2 displayed in the lower right corner of the interface. It cannot be edited until it becomes an active frame buffer through a Swap operation.
- When Display All Frame Buffers in disabled (unchecked), only the active Frame Buffer is displayed.

Lyric User Guide



Lyric Interface Showing All Available Frame Buffers

Lock Canvas Size and Position

Lock Canvas Size and Position allows the user to lock the size and position of the **Canvas** in the Lyric interface, in order to prevent accidental resizing or repositioning. To enable/disable:

• Select (check) or deselect (uncheck) the Lock Canvas Size and Position checkbox.

Lock Viewport Sizes

When the **Multi Canvas View** is displayed, the individual **Canvas Views** in the **Multi View** can be resized. The displayed sizes can be locked to prevent unintentional resizing, or they can be unlocked to allow resizing. To toggle between locked and unlocked:

• Select (check) or deselect (uncheck) the Lock Viewport Sizes checkbox.

Refer to the section on the Canvas for additional information regarding Canvas Views.

9. File Menu

File Menu

From the **File** menu, familiar Windows file operations such as **Open**, **Save**, **Save** As and **Close** can be performed. The **File** menu also contains Lyric-specific file **Import** and **Export** functions.

Certain File Open, Save and Save As operations can be performed using Lyric's Read and Record functions, as well as via the Lyric Browser. *Refer Recording and Reading Messages and to Browser: Message Asset Operations for additional information.*

File		
New	Ctrl+N →	Canvas
Open	Ctrl+O	Browser
Close		Playlist
Save	Ctrl+S	
Save As		
Import From iNFiNiT!		
Export To iNFiNiT!		
Import from Aprisa		
Export to Aprisa		
Import from Quantel		
Export to Quantel		
Export to ITV		
Print	Ctrl+P	
Print Preview		
Print Setup		
Summary Info,		
1 GroupingExercise.lyr		
2 KFgraphDemo2.lyr		
3 Untitled2.lyr		
4 Untitled.lyr		
5 00000893.lyr		
6 TemplateDemoFirstTry.lyr		
7 00009035.lyr		
8 00009034.lyr		
Exit		

File Menu

All File menu items are covered in this chapter except the following:

- Import from iNFiNiT! and Export to iNFiNiT! are covered in depth in the chapter on iNFiNiT! Family Systems and Lyric.
- Import from Aprisa and Export to Aprisa are covered in depth in the chapter on Aprisa Systems and Lyric.
- Import from Quantel and Export to Quantel are covered in depth in the chapter on Quantel Systems and Lyric.
- Export to iTV is covered in depth in the chapter on iTV.

New

```
File Menu > New; Windows Toolbar ; Ctrl + N
```

File			
New	- N	Ctrl+N 🕨	Canvas
Open	75	Ctrl+O	Browser
Close			Playlist
Save		Ctrl+S	
Save As			
Import From iNFiNiT!			
Export To iNEiNiTI			

Creating New Canvas, Browser, or Playlist

Use the New command to create a new Canvas, Browser, or Playlist in Lyric.

Open

File Menu > Open; Windows Toolbar 😕; Ctrl + O

Use this command to open an existing Lyric messages, Playlists or any of the other file types shown below.

Open				? ×
Look in: 🔂	Messag	es	- 🗢 🗈 (* 📰 •
00000000	.lyr .lyr .lyr	00000086.lyr 00000088.lyr 00000099.lyr		996.lyr 999.lyr 000.lyr 016.lyr
00000004	.lyr .lyr .lyr		00001	405.lyr 406.lyr
File name:	000000	103.lyr		Open
Files of type:	Lyric Fi	les (*.lyr) les (*.lyr)		Cancel
	Playlist Clip Col HTML I Lyric M HTML I Flash F All Files	Files (*.ply) ntrol Files (*.ccf) Files (*.htm) acro Files (*.lmx) Files (*.htm) iles (*.swf) (*.*)		

Opening a Playlist File

Take note, however, that the presence of the **All Files** option does not allow opening bitmap files in a Lyric composition. These files must be imported into a composition using the **Graphic Import** command.

Close

File Menu > Close

The familiar Windows Button is *never* available on the Canvas itself. This is a safety measure. If you wish to close a composition when the Canvas is the active window:

• Select File > Close.

File > Close can be used to close the currently active Canvas, Browser, or Playlist. If a file such as a Canvas or Playlist has unsaved changes, Lyric displays a Save prompt.

Lyric X	Lyric 🔀
Save changes to Untitled?	Save changes to del.ply?
Yes No Cancel	Yes No Cancel
Canvas	Playlist

Clicking Yes opens the Save As dialog box , in which File Name, File Type and other associated information can be entered.

Selecting **Exit** on the **File** menu or selecting the *is* button on the Lyric interface also closes the current composition. If the composition has unsaved changes, Lyric displays one of the prompts seen above.



Windows Close Button

Save

File Menu > Save; Windows Toolbar 🛄; Ctrl + S

Save saves, or records, a file. The type of file depends on the current focus, or cursor location, in the Lyric interface. The **Save** function is accessed as follows:

1. In the **Windows Toolbar**, click the **Save** icon **I**, press **Ctrl + S** or select **Save** from the **File** menu. A prompt is displayed asking for overwrite permission. If the file has not yet been named, it is assumed by Lyric that the name is **Untitled**.

Confirm	Overwrite	X
?	Overwrite existing file? C:\Program Files\Chyron\Lyric\Images\News_Logo Modified: 02/11/2004 10:47:18 AM, Size: 178463 b	lyr bytes
	OK Cancel	

Overwrite Confirm

2. Click **OK** to save, or **Cancel** to cancel the save.

The different files types are described in the following sections.

Saving a Lyric Message

If the focus is on any part of the Lyric interface other than a **Playlist** or the **Macros** dialog box, **Save** saves the Lyric message (*.*lyr*) using the file name currently displayed on the **Canvas Title Bar**. If the file has not previously been saved, it is saved under the name **Untitled**, to the **Default Message Directory**. The file is saved to the **Default Message Directory** as set in **Config Menu > Preferences > Default Paths**.

The message file is also saved to the **Browser** database if **File Save Adds to Browser** is selected (checked) in **Config Menu > Preferences > Browser**. Name in file name displayed in the **Browser** is the same as that displayed in the **Canvas Title Bar**.

Saving a Playlist

If the focus is on the **Playlist**, the **Save As** dialog box is displayed. and **Playlist Files (*.ply)** is automatically displayed in the **Save as Type** field. *Refer to the chapter on Playlists for additional information.*

Saving a Macro

If the focus is on the **Macros** dialog box, the **Save Macros To** dialog box is displayed, and **Lyric Macro Files** (*.Imx) is automatically displayed in the **Save as Type** field. *Refer to the chapter on Macros for additional information.*

Additional Save Methods and File Types

There are many saving options in Lyric. Refer to the section on the particular type of file or feature. For example, there are **Clock/Timer** files, two types of **Macros** files, etc.

Save As

File Menu > Save As

Save As can be used to store a modified version of the file without overwriting the original, store a Lyric message or other type of file to a destination or name other than the default path or a numeric message number, or store the file as a different type of file. For example, a Lyric animation can be stored as an **.avi* animation.

If **Save As** is used to store duplicate versions of the same message to different locations, it can cause the same thumbnail to appear twice in a **Browser Window**. This may be useful to remind the operator that a message is stored in two different locations. When duplicate assets appear in the **Browser**, the **Text Only** view or **Icons and Text** view can be checked to verify the location of each copy.

The following example demonstrates how to save an animation.

1. From the File menu, Select Save As. The Save Animation dialog box opens.

Save Anima	tion				? ×
Start Fra <u>m</u> e <u>E</u> nd Frame	0	Image <u>W</u> idth 720 Image <u>H</u> eight 486		Save <u>R</u> GB <u>F</u> ield Render <u>C</u> lip to Safe Title	Save <u>A</u> lpha
Save jn: 🧲	🔄 Message	18	• 🗢 🖻	I 📸 🎟 -	_
0000000	1.lyr 5.lyr				
0000555	5.lyr				
0000999	9.lyr 0.lyr				
				25	
File <u>n</u> ame:	000100	1.lyr		<u>S</u> ave	
Save as <u>t</u> ype	e: Lyric (*.1	yr)	•	Cancel	

Save Animation Dialog Box

Take note of the option checkboxes in the upper-left corner of the dialog. Remember that the availability of these options will vary with the file-format you're saving in.

Also note that when a Playlist is the active window on the interface, the Save As dialog defaults to the Playlist format.

Save As							? ×
Save in: 🔂	playlists				▼ ← €		
Playlist1.pl	У						
File name:	Playlist2.pl	R					Save
Save as type:	Playlist File	es (*.ply)	ĵ		•		Cancel
		Playlis	t2.ply				
		Line	Control	Parameter	Effect	Speed	File Na
	•	0	Delay	00:00:00:00	Wipe Right		laylists\0000
		-	D.L	00.00.00.00	KONCOMPANY.		1.11.1.0000

Saving File as a Playlist

To save changes to a file without altering its name or format, use the **Save** command.

Print/Print Preview

Print: File Menu > Print; Windows Toolbar 🙆; Ctrl + P Print Preview: File Menu > Print Preview

Printing a Lyric Composition

Print and **Print Preview** functionalities for printing images of Lyric compositions are not implemented at this time. An image of the entire Lyric interface can, however, be captured, pasted into a paint or other graphics program, and then printed.

To perform a screen grab and paste:

 From a Duet keyboard: Press Fn + Erase/Print Screen. The Fn key is located directly to the left of the right Shift key. The top of the keycap is blank; the front is labeled "Fn." The Erase/Print Screen key is at the top right of the keyboard.

From a PC keyboard: Press Print Screen.

2. Launch a paint or graphics program; open a new file; then paste the captured image into the blank Canvas. The image can now be saved and printed.

Printing Online Help

If the Duet system or PC is connected to a printer, **Online Help** topics can be printed.

From within the Online Help window:

• Right-click, then select **Print...** from the context menu, then proceed as usual from the **Print** dialog box.

OR

• Click on the Print icon in the **Online Help** toolbar, then proceed as usual from the **Print** dialog box.

울 Lyric He	lp			
Hide	⟨⊐ Back	⊂> Forward	(2) Befresh	Print

Print Icon in Online Help

Print Setup

File Menu > Print Setup

Printing parameters such as printer choice and connection are set from **Print Setup**. Note that while Lyric does not currently support printing, a printer can still be set up for use outside of Lyric. Consult *Windows* and printer-specific documentation for complete details on printer setup.

To access Print Setup:

• Select **Print Setup** from the **File** menu.

Backup Utility

File Menu > Backup

Lyric provides a **Backup Utility** for the various types of files used by Lyric, as well as **Browser** databases. The **Backup Utility** can be used to back up files created in older versions of Lyric, and then convert the files into Lyric 5.0-compatible files. It is also useful for backing up specified sets of **Message Assets**, **Files Types**, and/or **Browser Assets**. For example, a different show may just need a set of fonts that are stored in a particular **Browser** database. The fonts alone can be backed up and then restored to another system. Files and **Browser** databases are restored using Lyric's **Restore Utility**. To access the **Backup Utility**:

• From the File menu, select Backup. The Lyric Backup Utility dialog box opens.

yric Backup Utility		×
Message Assets Bitmaps Flipbooks Video Clips Audio Clips True Type Fonts Data Sources	From Directory Browser To File:	.
File Types Messages Playlists Macros	Options Convert Messages to Current Version Status	
Browser Assets Messages Bitmaps Fonts		

Lyric Backup Utility

The Lyric Backup Utility dialog box is comprised the following areas:

- From: Files can be backed up from either a directory or a Lyric Browser.
 - When Browser is selected, the dropdown list box in the From area displays a list of Lyric Browsers from which a backup can be generated. The File Types area at the left of the dialog box is grayed out. When the backup is generated, it includes the selected Message Assets and Browser Assets, as well as the Browser database itself. Where applicable, images that are part of RGB Fonts are included as well.
 - When **Directory** is selected, the drop-down list box becomes a field into which a directory

path can be entered. A navigation button appears next to the field. A directory can also be selected by clicking the navigation button, and then navigating to a directory in the **Browser for Folder** dialog box. The **Browser Assets** area at the left of the dialog box is grayed out. When the backup is generated, it includes the selected **Message Assets** and **File Types**, as well as any fonts that are necessary for restoring backed-up messages. Note that files in subdirectories of the selected directory are not backed up.

D	esktop			
	My Docu My Comr	iments nuter		
Đ	My Netw	vork Places		

Browse for Folder

• To: The destination file for the backup is entered in the To field. A file can also be selected by

clicking the navigation button, and then navigating to a directory in the **Save As** dialog box and entering a file name. Note that the file is saved with the extension **.lbu*, which is a **Lyric Backup File** format.

Save As	<u>? ×</u>
Save in: 🗇 Local Disk (C:)	
Backup CAMIO COMIC DELL COCUMENTS and Settings COCUMENTS	ENPS ER Globe_Animation Globe_New Globe_New Gloiven
File name:	Save
Save as type: Lyric Backup Files (*.	lbu) Cancel



- **Options Convert Messages to 4.3 Format:** If selected, any backed up messages are converted to Lyric 5.0 format. If not selected (unchecked), backed up messages are saved in their original format.
- Status: Displays the status of the backup as it is in progress.
- Message Assets: A list of message asset types from which can be selected any or all for backup. Message Assets are the assets that belong to a message. For example, a message can contain TrueType fonts, bitmap images, and a data source as its message assets. Selecting (checking) an asset type includes all files of that asset type from the selected Browser/directory in the backup. Message Assets include:
 - o **Bitmaps:** 2D images in supported formats.
 - Flipbooks: Lyric Flipbooks.
 - Video Clips: Animations in supported formats.
 - Audio Clips: Sound files in supported formats.
 - **TrueType Fonts:** Fonts on which Lyric fonts are built. Note that **RGB Fonts** are automatically backed up with the message, even if **Bitmaps** is not selected.
 - **Data Sources:** Data sources such as Microsoft Excel spreadsheets which are referenced by Lyric messages for update.
- File Types: A list of file types from which can be selected any or all for backup. Selecting (checking) a file type includes all files of that file type from the selected directory in the backup. File Types include Messages, Playlists and Macros. File Types are not available to Browser backup.
- Browser Assets: A list of Browser assets from which can be selected any or all for backup. Selecting (checking) a Browser asset includes all files of that Browser asset type from the selected directory in the backup. Browser Assets include Messages, Bitmaps and Fonts. Browser assets are not available to directory backup.
- Start: Starts the backup process.
- Stop: Stops the backup process.
- Close: Closes the Lyric Backup Utility dialog box.

To perform a backup:

- 1. In the From area, select either Directory or Browser.
- 2. In the **To** area, enter the backup file name. The **File as Type** field is always set to *.*lbu* for this operation.
- 3. In the **Message Assets** and the **Browser Assets** (for **Browser** backup) or **File Types** (for **Directory** backup) areas, select the appropriate file types for backup.
- 4. Optional: In the **Options** area, select (check) **Convert Message to 5.0 Format**.
- 5. Click Start.
 - If **Convert Message to 5.0 Format** is selected, the following message is displayed. Click **Yes** to continue, or **No** to stop backup execution.

BackupR	estore	×
1	Converting messages to 4.2 will make them unreadable in older versions of Lyric. Do you want	to continue ?
	Yes No	

Conversion Warning

• If the file name entered in the **To** area **File** field is the same as the name of a file already in the same directory, the following message is displayed. Click **Yes** to continue, or **No** to stop execution.

BackupR	estore		×
<u>.</u>	Backup file C:\Program Files\Chyron\L	vric 4.2\Backup_Files\Brows	er.lbu exists. Overwrite?
	Yes	No	

Overwrite Confirm

6. The backup process proceeds, and files are recorded to a Lyric *.*lbu* file. The **Status** window displays the progress of the backup as the information is simultaneously recorded to a log file with the same name as the backup file.

yric Backup Utility	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	2
Message Assets Bitmaps Flipbooks Video Clips Audio Clips True Type Fonts	From C Directory Browser Browser To File:	
✓ Data Sources	C:\Lyric_Backup_Files\Backup_Browser_20040618.lbu Options Convert Messages To 4.2 Format Status	.
Browser Assets Image: Messages Image: Messages	C:\LyricDemo\00000006.lyr C:\LyricDemo\00000007.lyr C:\LyricDemo\00000008.lyr C:\LyricDemo\BG_720x486 Blue.tga C:\LyricDemo\BG_720x486 Stocks.tga C:\LyricDemo\BG_720x486 Yellow.tga C:\LyricDemo\Chyron_logo big.tga	×

Browser Backup Execute

The **Status** window may indicate that elements such as images are missing from a message. When the backup is complete, the following is displayed, specifying the number of files that have been archived. Click **OK**, and then click **Close** to exit the **Backup Utility** window.

BackupR	estore 🔀
	46 files in archive
	ОК

Backup Results

Both the backup and log files are saved to the directory specified in the **File** field. The backup file (*.*lbu*) is accessed by Lyric's **Restore Utility** to restore Lyric files. The log file (*<backup file name>_lbu_backup.log*) can be viewed by double-clicking on its listing or icon in its directory. It can also be opened in a text editor.

It is good practice to review the log file each time a **Backup** is performed. The log file lists the files that were backed up, as well as files that are referenced, but are missing.

Restore Utility

File Menu > Restore

Lyric's **Restore Utility** provides the ability to restore files and **Browser** databases that have been backed up using Lyric's **Backup Utility**.

To access the Restore Utility:

• From the File menu, select Restore. The Lyric Restore Utility dialog box opens.

Restore From					
Backup File					•
Restore To	 Specify Ne Specify Ne 	ew Root Drive ew Path	C:\ 💌		
Messages					
✓ Bitmaps				 	
✓ Flipbooks					
Video Clips					
🗸 Audio Clips					
🔽 Data Sources					
Bitmap Fonts				 	
Playlists					
Macro Files					

Restore Utility

The Lyric Restore Utility dialog box is comprised the following areas:

- **Restore From:** The source file for the restore operation is entered in the **From** field. This file has the **.lbu* extension.
- **Restore To**: Files can be backed up to either a specified root drive or to a specified path for each type of asset or file type.
 - When Specify New Root Drive is selected, the dropdown list box in the Restore To area displays a list of available drives to which the files can be restored. The filepath fields are grayed out.

When a restore is executed to the same drive as the backed-up files, the files are restored to their original locations.

When a restore is executed to a different drive from the original, the assets specified for restoration, the **Browser** database (if specified) and the directory structure containing the specified assets are copied to the new drive.

Regardless of the destination of the restored **Browser** and its assets, all TrueType[®] fonts associated with the **Browser** are restored to a **RestoredFonts** directory that Lyric creates in the Lyric installation directory on the system. Note that this may be different from the drive specified as the destination. If these fonts are not resident in the Windows **Fonts** directory, they must be copied into the directory to ensure that the restored Lyric messages display properly.

When Specify New Path is selected, the filepath fields become active, and separate filepaths can be entered for each file or asset type. When a Restore is executed, the selected groups of files are restored to the specified directories. If a file type is selected (checked), but no path is entered, the files of that type are copied to the same location as the backup file from which the restoration is generated. As previously described, the TrueType fonts must be copied from the RestoredFonts directory to the Windows Fonts directory. Note that Bitmap Fonts are the same as Lyric RGB Fonts and Data Sources are data files such as Microsoft Excel spread sheets which are references by Lyric messages. They are not to be confused with Browser databases.

	 Specify New Root Drive Specify New Path 		
🗸 Messages			
✓ Bitmaps			
✓ Flipbooks			
Video Clips			
Audio Clips			
Data Sources			
Bitmap Fonts			
Playlists			
✓ Macro Files			



To perform a **Restore**:

- 1. Enter the name of a **Backup File**.
- 2. Select either Specify New Root Drive or Specify New Path.
- 3. If **Specify New Root Drive** is selected, skip to the next step. If **Specify New Path** was selected, select the file types to restore, and then enter their file paths.
- 4. Click Start. The Restore operation proceeds, and progress is displayed in the Status window.

Program Files\Churon\Backup, Files\News, Noon Ibu	
Program Files\Churon\Backup, Files\News, Noon Ibu	
	×
Specify New Root Drive C:\ Specify New Path	
C:\News_Noon_Messages	
C:\News_Noon\Bitmaps	
C:\News_Noon\Bitmap Fonts	
ather bar barometer.tga ather bar blank.tga ather bar forecast.tga ather bar humidity.tga ather bar temp.tga ather bar UV.tga ather_bg_all elements.tga ather_bg_header bar.tga ather_bg_hi-low bar 2.tga	
	Specify New Root Drive Specify New Path C:\News_Noon_Messages C:\News_Noon\Bitmaps C:\News_Noon\Bitmap Fonts C:\News_Noon\Bitmap Fonts ather bar barometer.tga ather bar blank.tga ather bar loan.tga ather bar forecast.tga ather bar temp.tga ather bar temp.t

Restore in Progress

5. If the **Restore** operation encounters a file with the same name in the destination directory as a file it is about to restore to the directory, an overwrite prompt is displayed. Click **Yes** to overwrite the file; **Yes** to **All** to overwrite all files with duplicate file names; No to prevent overwrite of the file, or **No to All** to prevent overwrite of all files with duplicate file names.



Overwrite Confirmation

Note that even if **No** or **No to All** is selected, the **Restore** operation still decompresses all of the files, although it does not overwrite the indicated files. Additionally, TrueType[®] fonts that are components of the backup file are always written to the **RestoredFonts** directory (*see Step 8*), regardless of whether or not **No** or **No to All** has been selected.

6. The **Status** window indicates when the **Restore** is complete. If a directory has been backed up, skip to the next step. If a **Browser** has been backed up, the **New Browser Name** window is displayed. Enter the name of the new **Browser**, then click **OK**.

New Browser Name	×
Name	
OK Cancel	

New Browser Name

7. The **BackupRestore** prompt is displayed, indicating how many files were restored from the archive. Click **OK**.



Number of Files Restored from Archive

8. If a TrueType font(s) was a component(s) of any message in the backup file, the following is displayed when the messages are restored. Fonts that are not already in the destination system's Windows **Fonts** folder must be copied to the folder in order that the restored messages display properly. Click **OK**.



Font Copy Prompt

9. If necessary, copy the fonts from the **RestoredFonts** directory to the Windows **Fonts** directory. The messages are now ready to display.

Summary Info

File Menu > Summary Info Summary Info is not implemented at this time.

Recently Used File List

File Menu > File Listing Directly above Exit Menu Item

Lyric lists up to eight of the most recently accessed files in the **File** menu as shown below. Any listed file can easily be opened by clicking on the file listing.

Pline Secup	
Summary Info	
<u>1</u> Full Text Board.lyr	
<u>2</u> Baseball - Lineup.lyr	
<u>3</u> 00006005.lyr	
<u>4</u> 00006004.lyr	
<u>5</u> 00006003.lyr	
<u>6</u> 00006002.lyr	
<u>7</u> 00006001.lyr	
<u>8</u> 00006000.lyr	
E⊻it	

List of Recently Used Files

Exit

File Menu > Exit

Selecting **Exit** on the **File** menu or selecting the *is* button on the Lyric interface closes the application. If the current composition has unsaved changes, Lyric shows one of the prompts seen above.



Exit Button

10. Browsers

Overview

View Menu > Browsers File Menu > New > Browser

Introduction

The **Browser** is a powerful Lyric tool that enables the user to create catalogs of Lyric font, image, message and clip assets tailored to specific projects (news, baseball, features, etc.). These catalogs are databases, also called **Data Sources**, that contain identifying information about each asset, but not the asset itself.

This allows the asset to be included in multiple databases without the necessity of copying the asset to each location where the database resides. It is an important concept to understand, as *an entry for an asset can be added to and deleted from the database without disturbing the original asset*.

Databases can be quickly recalled for use as a sources for Lyric compositions or Lyric **Playlists**. Major features are as follows:

- Multiple **Browser** displays may be opened to list various asset types simultaneously.
- Asset entries can be displayed as just icons, just text or a combination of icons and text. Icons can be small, medium or large.
- Asset entries can be sorted in alphabetical or reverse alphabetical order.
- A database can be searched using a variety of criteria, making it easier to locate a specific asset.

The **Browser** also provides the ease of inbound and outbound drag-and-drop capability:

- Bitmap, Lyric Message, Aprisa and Quantel assets from the Browser window to the Lyric Canvas or into a 2D Text Window in the Canvas.
- Bitmap and Aprisa 100 (Still) assets from the Browser Window to Texture Chip in Properties > Surface.
- Lyric Message Assets from the Browser window to the File Name field in the Playlist.
- Assets from one **Browser** window to another **Browser** window.
- Font Assets from the Browser window into Properties > Fonts or Properties > 2D Font FX.
- Lyric messages and graphics from Windows® Explorer®-type windows into Lyric Browser Message Asset and Bitmap Asset Browser windows, respectively.
- Alt + drag-and-drop a Bitmap Asset or Aprisa 100 (Still) asset to create a background for a Canvas, 2D Text Window or 2D Text Template.

Browser databases are files separate from font, message graphics and clip files. They conform to the Microsoft® Access database format, and can be registered as **ODBC** data sources for use by Chyron's CAMIO and MOS Media Solutions. *Refer to Browser Preferences > Advanced* for additional information on **ODBC** registration.

NOTE

The terms "database" and "data source" are used interchangeably throughout Lyric documentation.

The Browser Window and Browser Menu

The figure below shows a **Browser** menu and a **Browser** window. If at least one **Browser** window is not visible on the Lyric interface, choose one of the following methods to display a **Browser**:

- Pull down the View menu, then, select Browsers.
- Pull down the File menu, then select New > Browser.

Click on the **Browser** window to make it active. The **Title Bar** should turn blue. Whenever a **Browser** window is active, a **Browser** menu heading appears on the **Menu Bar** of the Lyric interface. Pull down the

Browser menu. As shown in the figure below, each item on the menu corresponds to a **Browser** icon in the **Browser** window. Note that the **Browser** window/**Browser** menu items **Show Aprisa Stills**, **Show Aprisa** clips and **Show Quantel Images** are grayed out if the specified systems are not networked to the Duet.

Default Lyric Fonts and Lyric Messages assets are set in Config Menu > Preferences > Browsers, so that when a new Browser is opened, it is automatically loaded with user-defined sets of fonts and messages.

When Lyric is opened, the **Browser(s)** that was opened in the previous session of Lyric are displayed. When a new **Browser** window is opened, it displays the **Font Assets** catalogued in the last opened database from **Select Database**. If no database was opened, then it displays the default database set in **Config Menu > Preferences > Browsers > Set Font Source**.



Browser Menu and Browser Window (Showing Font Assets)

If the following warning is displayed on opening Lyric and/or on attempting to open a **Browser** window, the database(s) which it is attempting to access has either been moved, deleted or renamed.



Cannot Create Browser Window Warning

Either select a different data source(s) via the **Config Menu > Preferences > Browser**, or move and/or rename the data sources to the proper path(s).

Troubleshooting Browser Database Display

If there are problems displaying a particular database, where the database and the assets are in the correct locations:

• Select a different database to display in the **Browser** in order to close the affected database, then perform the **Repair** procedure from the **Configure** function in the **ODBC Data Source Administrator**. Refer to **Registering an ODBC Database** for information on accessing the **ODBC Data Source Administrator**, and Windows® documentation for details on the **Repair** function. For instructions on selecting a different database to display in the **Browser**, refer to **Browser**: **Creating/Selecting/Importing/Deleting a Database** or **Browser Preferences**.

The following prompts indicate that a database has been moved or deleted:



DSN Not Valid

Error Set	ting Font DSN
1	Cannot find database C:\Program Files\Chyron\Sports_OTS.mdb
	ОК

Cannot Find Database

If a database has been moved, one of the following methods can be used to restore the database:

- The database can be moved to the proper location.
- The **Browser** database can be backed up and restored to the proper location using the **Backup Utility** and then the **Restore Utility**, both available from Lyric's **File** menu.

If a **Browser** asset is unavailable (moved or deleted), a red slash is displayed across the icon (thumbnail) for the asset.

For **Font** assets, if the **Browser** is set to the **Text Only** view (no icons), a red line is displayed across the text. The following shows an unavailable **TrueType**[®] font asset as seen in a **Icons and Text** view.



TrueType[®] Font Asset Unavailable

The following shows an unavailable Message asset.



Message Asset Unavailable

If assets an have been moved, one of the following methods can be used to restore the assets to the **Browser**:

- The assets can be moved to the proper location.
- The assets can be re-added to the **Browser** database. The red-slashed assets can be deleted.
- The **Browser** assets can be backed up and restored to the proper location using the **Backup Utility** and then the **Restore Utility**, both available from Lyric's **File** menu.

If a Browser database and its assets have been moved:

• They can be restored to the proper location using the **Backup Utility** and then the **Restore Utility**, both available from Lyric's **File** menu.

Navigating the Browser Window

To quickly switch the focus in Lyric to the topmost **Browser Window**:

• Press F4.

The keyboard can be used to navigate the **Browser Window**:

- Press the cursor keys $\forall \uparrow \leftarrow \rightarrow$ to move from item to item in the **Browser Window**.
- Press Home to select the first item in the Browser Window.
- Press End to select the last item in the Browser Window.
- When a **Browser** item is highlighted, press either **Enter** key to open the selected item. Doubleclicking the item also opens the item.
- Typing any character key finds the next **Browser** entry with a title that starts with that character. For example, in a **Browser Window** containing images titled **Red**, **Rose** and **Yellow**, typing **r** selects **Red** and scrolls it into view. Typing **r** again selects **Rose**, and typing **y** selects **Yellow**.
- In the **Font Browser**, typing a character selects and scrolls to the image mapped to that character. *Refer to RGB Font Asset Operations for additional information.*

Browser Assets

View Menu > Toolbars > Browser Commands

There is a set of icons which form the **Browser Asset Toolbar**, usually found across the top of the **Browser** window. Like other toolbars, it can be moved and reoriented. If a **Browser** window is open, but the **Browser Asset Toolbar** does not appear:

• Pull down the **View** menu, select **Toolbars**, the select **Browser Assets**. The toolbar should now be displayed.

Selecting (clicking) an icon, or selecting the corresponding **Browser** menu item displays the available assets of that type from the current data source. The **Title Bar** of the **Browser** window displays the name of the **Data Source** for the selected set of assets. In the previous example, it is simply called **Browser**.

Browser Icon	Browser Menu Item	Description
A	Show Font Assets	Displays the available TrueType® -based and RGB (bitmap-based) fonts that can be used to create Lyric messages. Note that the two red lines at the left of the upper/lower case characters in the font icon represent the span of 50 scanlines in height. The example below shows the icon for a 150 - scanline font.
		150 Scanling Font
		Font assets can also be dragged-and-dropped into Properties > Fonts and Properties > 2D Font FX . Refer to Browser Font Operations and RGB Fonts for details on Browser font operations. Font Assets are covered in depth in the chapter on Creating and Using Fonts in Lyric .
	Show Message Assets	Displays the available Lyric messages that can be imported into the Canvas , or added to a Playlist . <i>Refer to Message Asset Operations for details.</i>
	Show Bitmap Assets	Displays the available 2D graphics, in graphic formats supported by Lyric, that can be imported into the Lyric Canvas. Bitmap Assets are covered in depth in the chapter on 2D Objects .
100	Show Aprisa Stills	Displays the available images (stills) from the database of a networked Chyron Aprisa 100/250 system. This icon/item is grayed out if an Aprisa 100/250 is not networked to the Duet Aprisa Still Assets are covered in depth in the chapter on Aprisa Systems and Lyric .
200	Show Aprisa Clips	Clips from the database of a networked Chyron Aprisa 200/250 system. This icon/item is grayed out if an Aprisa 200/250 is not networked to the Duet. Aprisa Clip Assets are covered in depth in the chapter on Aprisa Systems and Lyric .
8	Show iNFiNiT! Fonts	Displays available Fonts from a networked Chyron iNFiNiT!®, MAX!>® or MAXINE!® system. <i>iNFiNiT!</i> ® <i>Font Assets</i> are covered in depth in the chapter on <i>iNFiNiT!</i> ® <i>Family Systems and Lyric</i> .

Browser Icon	Browser Menu Item	Description
Q	Show Quantel Images	Images from a networked Quantel® system. This icon/item is grayed out if a Quantel system is not networked to the Duet. Quantel Assets are covered in depth in the chapter on Quantel [®] Systems and Lyric .
The following figures show sample data sources of Lyric Message and Bitmap assets:



Lyric Message Assets



Bitmap Assets

About Data Sources

All assets displayed in the **Browser** are catalogued in various databases. The **Title Bar** of the **Browser Window** displays the name of the data source from which the assets are displayed. For example, in the **Browser Windows** shown in this section, the **Title Bars** show that the **Font Asset** database is **Browser**, which is Lyric's default **Font** source. The **Message** data source, from which the **Bitmap Assets** are automatically drawn, is also **Browser**, which is Lyric's default **Message** source. Note that the **Font** and **Message** sources displayed in a **Browser** window can be different from each other. *Refer to Creating/Selecting/Importing/Deleting a Database* for additional information on data sources.

- When Font Assets are displayed, the Browser Title Bar displays the name of the data source set in the Set Font Source field in the Select Data Source dialog box or Browser Preferences tab. Refer to Creating/Selecting/Importing/Deleting a Database or Browser Preferences for information on selecting a data source.
- When **Message Assets** are displayed, the **Browser Title Bar** displays the name of the data source set in the **Set Message Source** field in the **Select Data Source** dialog box or **Browser Preferences** tab. Refer to **Creating/Selecting/Importing/Deleting a Database** or **Browser Preferences** for information on selecting a data source.
- When Bitmap Assets are displayed, the Browser Title Bar displays the name of the data source set in the Set Message Source field in the Select Data Source dialog box or Browser Preferences tab. Bitmap Assets are always drawn from the same data source as the Message Assets. Refer to Creating/Selecting/Importing/Deleting a Database or Browser Preferences for information on selecting a data source.

- When Aprisa 100 (Still) Assets are displayed, the Browser Title Bar displays the name Aprisa Stills. There is only one Stills database on each Aprisa Still system. Note that if the system accommodates both Stills and Clips, the system has one Still database and one Clips database.
- When Aprisa 200 (Clip) Assets are displayed, the Browser Title Bar displays the name Aprisa Clips. There is only one Clips database on each Aprisa Clips system. Note that if the system accommodates both Stills and Clips, the system has one Still database and one Clips database.
- When **iNFiNiT!** Font Assets are displayed, the Browser Title Bar displays the name **iNFiNiT!**. There is only one Machine Font database on each iNFiNiT! system.
- When **Quantel Assets** are displayed, the **Browser Title Bar** displays the name **Quantel**. The Quantel database is selected from within the **Quantel Import** dialog box, accessed from **File Menu** > **Import from Quantel**. *Refer to File Menu: Import from Quantel for additional information.*

Browser Commands

View Menu > Toolbars > Browser Commands

A set of icons, which form the **Browser Commands Toolbar**, is usually found along the left side of the **Browser** window. Like other toolbars, it can be moved and reoriented. If the **Browser Commands Toolbar** does not appear when a **Browser** window is open:

• Pull down the View menu, select Toolbars, the select Browser Commands. The Browser Commands Toolbar should now be displayed.

Browser Icon	Browser Menu Item	Description	
	Search Browser	Accesses a search function that searches the curre using a variety of user-selected criteria. This functi covered in detail later in this section.	ent database on is
There are th Icon (Thum correspondir	ree groups of di b nail) Size . Se ng Browser me	splay options: Icon(Thumbnail)/Text Display ; Sort lecting (clicking) a display option icon, or selecting the nu item sets the display.	Order ; and e
Wher identi autor Adds	a message is ify the messag natically updat to Browser is	NOTE recorded to a database, a thumbnail is created to e. If the message is modified, the thumbnail does e, even if the message is resaved, unless File Sav enabled in Browser Preferences.	help not e
If File updat	Save Adds to ted as follows:	Browser is not enabled, then the thumbnail can b	e
•	In the Brows display the o Browser upo	ser Window, highlight the message. Right-click to context menu. Select Update. The thumbnail and date.	the
	Text View	Shows text information only about an asset. The figshows a Browser window displaying the Text View Message Assets .	gure below / of Lyric
		Browser	
			Subject
		00000001 C:\LyricDemo\00000002.lyr 00000002 C:\LyricDemo\000000002.lyr 00000003 C:\LyricDemo\00000003.lyr 00000004 C:\LyricDemo\00000003.lyr 00000005 C:\LyricDemo\00000005.lyr 00000006 C:\LyricDemo\00000005.lyr 00000006 C:\LyricDemo\00000006.lyr 00000007 C:\LyricDemo\00000007.lyr 00000007 C:\LyricDemo\00000007.lyr	Market Stats Weather - 2- Weather - To Super - Name Super - Repo Super - Local Baseball See
		Text View	Dasobal JCO
5 5 5 5 5 5 5 5 5 5	lcon View	Displays an icon view of the asset. The Browsers preceding this table show Icon Views .	shown

Browser Icon	Browser Menu Item	Description
111	Icon/Text View	<text></text>
₹↓	Sort from A to Z	Sorts asset entries from A to Z , based on file and/or font name. Assets are sorted first by name, and then by number.
ZĮ	Sort from Z to A	Sorts asset entries from Z to A , based on file and/or font name. Assets are sorted in reverse order first by number, and then by name.
•	Show Small Icons	Shows small-sized icons.
	Show Medium Icons	Shows medium-sized icons.
	Show Large Icons	Shows large-sized icons.

Browser Icon	Browser Menu Item	Description
Browser Co	ommands	
4	Save to Database	 Saves to the current database as follows: Saves current message to the current Lyric Message database. If the message is an animation, the thumbnail reflects the frame of the animation that was displayed at the time that the message was saved to or updated in the Browser. Note that this does not affect a Preview Frame which may have been set for the message. Refer to Selective Recording - Message with Options and Animation Settings Preferences for additional information on Preview Frames. Saves currently active font to the current Font
		 database. Saves currently selected graphic to the current Bitmap database.
E>	Load from Database	Loads the currently selected asset to the Lyric Canvas .
BB	Select Database	Accesses the Select Database function, which enables selection of a new database for display in a Browser window. Databases can also be created, imported, deleted and registered as ODBC databases. Once a database is selected, the name of the database is displayed in the Title Bar of the Browser window. <i>Refer to</i> Creating/Selecting/Importing/Deleting a Database for <i>details.</i>
2	Refresh Database	Refreshes Browser display after changes have been made.
		NOTE A Refresh Database should always be performed: • On switching to a different set of assets in the Browser (e.g. from Aprisa Still to Aprisa Clip Assets). • After any change to or search of a database.

Deleting a Browser Asset

The procedure is similar for deleting various types of assets from a Browser:

1. Right-click the asset, then select **Delete** from the context menu.

OR

Select (click) the asset in the **Browser**, then press **Delete** on a PC keyboard or **Delete Character** on the Duet keyboard.

2. Respond to the confirmation prompt(s).

For **Delete** procedures specific to a particular type of asset, refer to the section on that asset.

WARNING! There is no undo for the Delete operation.

Updating a Browser Asset

The procedure is similar for updating (modifying) various types of assets from a **Browser**:

• Right-click the asset, then select **Update** from the context menu.

For **Update** procedures specific to a particular type of asset, refer to the section on that asset.

WARNING! There is no undo for the Update operation.

Editing a Browser Asset

Information about an asset, referred to as metadata, can be edited.

To edit Message or TrueType® font information:

- 1. Right-click the asset, then select **Edit** from the context menu.
- 2. Edit the fields in the Message/Font Information dialog box, then click OK or press Enter.

To edit **RGB Font** information:

- 1. Right-click the asset, then select Font Browser from the context menu.
- 2. Edit the fields in the Font Browser, then click OK or press Enter.

For Edit details specific to a particular type of asset, refer to the section on that asset.

Searching Browser Assets

TrueType®/RGB Font, Message, Bitmap and Aprisa Still and Clip Assets in a Browser database can be searched based on a variety of criteria including Keywords, Comments, Date Modified, etc. These Search operations are covered in Searching the Browser. Refer to iNFiNiT!® Font Asset Operations and Quantel® Asset Operations for information on searching these types of assets.

Aspect Ratio and Graphic Import

A graphic created in a resolution different from the current **Canvas Resolution** may result in a stretched or squashed appearance when imported. If this occurs, correct the **Use 1:1 Pixel Aspect for Graphics Import** setting and reimport the graphic. *Refer to Getting Started - Canvas Resolution* for details on setting these parameters.

Browser Message Asset Operations



Browser Menu > Show Message Assets

The **Message Asset Browser** enables quick import of Lyric messages to the **Canvas**, additions of Lyric messages to the **Browser** database and cataloging of **Message Assets**. The Message Asset Browser supports drag-and-drop of Lyric messages to the **Canvas** or **Playlist**, from one **Browser** window to another **Browser** window, and from Windows® Explorer®-type windows into the **Browser**.

Lyric also provides the ability to edit the **Message Asset** information (metadata), delete the **Message Asset** from the database, and update the **Message Asset** when changes are made to the message. Browser **Message Asset** entries contain information such as **Author**, **Title**, **Comments**, **Keywords** and **Date Modified**.

Adding (Saving) a Lyric Message to the Browser Database

When a Lyric message is added to the database, what is stored in the database is not the message itself, but rather the information about the message. This includes searchable metadata and the path information to the message. It does not, however, include the message itself. The **Browser** simply references the message. This makes it possible for the same message to be referenced by virtually an unlimited number of **Browser** databases.

Adding a Message to the Browser from the Canvas

To add a Lyric message to a **Browser** from the **Canvas**:

- 1. In Lyric, create, then save the message.
- 2. Click or select **Save to Database** from the **Browser** menu. The icon/text listing for the message is added to the **Browser** window. The message is assigned the currently displayed **Message Number**. The number name can be changed using the **Browser Message Asset Edit** function, which is described later in this section.

Adding a Message to the Browser from Another Browser

To add a Lyric message to a **Browser** window from another **Browser** window:

• Drag-and-drop the message from the originating **Browser** window to the destination **Browser** window.

Adding a Message to the Browser from a Windows® Explorer®-Type Window

To add a Lyric message from a Windows® Explorer®-type windows into the Browser window:

• Drag-and-drop the message or a group of messages from the Windows® Explorer®-type window to the **Browser** window. The files are assigned their file names, as opposed to a **Message Number**.

Adding a Message to the Browser Automatically When a Message is Saved

A message can automatically be added to the **Browser** when it is saved as a file. To enable operation:

- 1. From the **Config** menu, select **Preferences**, then the **Browser** tab..
- 2. Select (check) the File Save adds to browser checkbox, then click OK.

Whenever a message is saved using the **Record** function, **File > Save** or **File > Save As**, the message is added to the **Browser** database with its assigned name.

To disable this function:

- 1. From the Config menu, select Preferences, then the Browser tab..
- 2. Deselect (uncheck) the **File Save adds to browser** checkbox, then click **OK**. When a file is saved, it is no longer automatically added to the **Browser** database.

Loading a Lyric Message from the Browser to the Canvas/Playlist

To load a **Message Asset** from the **Browser** to the **Canvas**, make the **Canvas** active, then choose one of the following methods:

- Double-click the icon/text listing for the message.
- Select (click or by cursor) the **Message Asset**, then click or select **Load from Database** from the **Browser** menu.
- Drag-and-drop the Message Asset to the Canvas.

The **Message Asset** loads to the **Canvas**. If the message has a numeric file name, the **Message Number Display** usually found at the bottom of the **Canvas** increments to the following number.

To load a Message Asset from the Browser to a Playlist:

• Drag-and-drop the **Message Asset** into the **File Name** field of the step to which the message is to be added.

The Message Asset Context Menu

Information (metadata) about the **Message Asset** can be edited via the **Message Asset** context menu. A **Message Asset** can also be updated or deleted. To access this menu:

• Right-click on the **Message Asset**.



Message Asset Context Menu

<u>Edit</u>

A **Message Asset** consists of the metadata, which is information about the message, as well as a path to the message. The user-defined metadata enables easier access to the message by providing the means to easily search as well as identify the function of the message.

	Author: Ryan	
	<u>T</u> itle: News Live Re	porter
	Comments:	orter LOCATION
		v
	Keywords: News, Live, R	eporter, Super
NWS News Reporter	Subject: Live Report	
LOCATION	Last Modified: September 05	,2003

Message Asset with Message Information Dialog Box

Contents of the **Message Information** fields are reflected in the **Browser Text View** and **Icon/Text View** displays.



Browser Showing Message Information

There are both user-defined and non-editable parameters in the **Message Information** dialog box. The non-editable parameters are determined on creation/modification of the font.

Parameter	Description
Author	Identifies the author of the message.
Title	Identifies the title of the message. By default, it reflects the file name, but can be edited. The file name does not reflect any change to the Title .
Comments	 Reflects the text displayed in 2D Text windows in the message (see arrow above). Additional information can also be typed in the Comments field to further define use or provide other information. Text typed into the Comments field does not change the contents of the 2D Text windows on the Canvas. The text from the 2D Text windows can also be edited without changing the contents of the 2D Text window on the Canvas. The Comments field can accommodate 255 characters. Pressing Enter performs the same function as clicking OK, so it cannot be used to start a new line. To insert a carriage return in the field: Press Ctrl + Enter.
Keywords	Keywords that can be used for Browser Search purposes.
Subject	Identifies the subject of the message, e.g. news. sports, weather, etc.
Last Modified	Indicates date that the message was last modified. Information field only - not editable from within this dialog box.
Path and File	Identifies the path to the file.
OK or press Enter	Applies the parameter settings to the Message Asset .
Cancel	Cancels the application of the settings to the Message Asset .

Delete

The **Delete** function enables deletion of a **Message Asset** from the database. Deleting a **Message Asset** from a **Browser** database does not delete the message itself, only the reference to the message.

To delete an individual message from a Browser database:

1. Right-click on the Message Asset icon/text listing, then select Delete from the context menu.

OR

Select (click) the **Message Asset**, then press **Delete** on the PC keyboard or **Delete Character** on the Duet keyboard.

The following prompt is displayed.



Delete Message Asset Prompt

2. Click **Yes** to confirm the deletion of he message from the **Browser** database. The following prompt is displayed:



Delete Message File Prompt

3. Click Yes to delete the message file from disk, or No to preserve the message file.

IMPORTANT!

Selecting Yes permanently deletes the original message file. Before deleting the file from disk, make sure that it is not referenced by other Browser databases or Playlists! There is no Undo for this operation!

To delete a group of messages from the database:

- 1. In the **Browser**, use one of the following methods to select the messages to be deleted:
 - Selecting a Contiguous Range of Messages: Click the first or last message in the range, then press and hold the Shift key while clicking the last or first message in the range.
 - Selecting Non-Contiguous Messages: Press and hold the Ctrl key while clicking each message that is to be deleted.
- 2. Press **Delete**. The messages are deleted from the **Browser**. Note that they are not deleted from disk.

<u>Update</u>

The **Update** function applies the contents of the **Lyric Canvas** to a **Message Asset** in the **Browser**. To perform an update:

• Right-click the **Message Asset** to which the update should be applied, then select **Update**. The contents of the Lyric **Canvas** replaces the message that was right-clicked. All metadata (except for **Last Modified Date**) and path information remain unchanged.

CAUTION!

Make sure that the Message Asset Icon/Text listing that is right-clicked is the intended target for the update. For example, if Message Number 1003 is active (i.e. its listing has a red border in the Browser and it is displayed on the Canvas), then right-clicking Message 1008, then selecting Update, will replace the graphics in Message 1008 with the graphics displayed on the Canvas, i.e., Message 1003. Note that the Message Number displayed usually at the bottom of the Canvas does not increment after an Update is performed.

The Update procedure overwrites the original message specified in the filepath. There is no Undo for this operation!

Comments, Keywords

These items are informational only. To edit, select Edit in this menu.

Searching Message Assets

To narrow down the assets in a **Browser** database, **Message Assets** can be searched, based on a search strings (**Author**, **Title**, **Comments**, **Subject**, etc.), **Modification Date**, etc. *Refer to* **Searching the Browser** *for details on the* **Search** *tool.*

Browser Preferences

Config Menu > Preferences > Browser

The **Browser** is a database designed to catalog Lyric messages, fonts and graphics and assets available from remote systems. The database files that the **Browser** opens have the extension *.mdb*. Newly created or imported database files can be custom-named by the user. *Refer to* **Browsers** for an introduction to **Browser** use.

NOTE

It is important to remember that creating or deleting database entries that represent assets available to Lyric is not the same as saving or deleting the files themselves. Browser Preferences provides the option, however, of adding a font, graphic or message to the Browser database whenever one of these assets is saved as a file.

The **Browser** dialog box accessed from **Preferences** is similar in many ways to the **Select Data Source** dialog box accessed from the **Browser**. As such, the description for many of the operations performed in **Browser Preferences** are described in detail in **Selecting/Creating/Importing/Deleting a Database**.

The difference between setting Font/Message Sources in Browser Preferences and setting Font/Message Sources in the Select Data Source dialog box, is that Browser Preferences define default Font/Message Sources that are in place when Lyric is opened. The Font/Message Sources settings can then be changed in the Select Data Source dialog box as necessary, without disturbing the default settings set in Browser Preferences. Modifications to settings in the Select Data Source dialog box are not reflected in Browser Preferences, and vice versa.

It is important to remember that the path shown under **File Name** specifies the location of the *.mdb* database file itself. Assets such as messages, fonts and graphics including those from remote networked system such as the Aprisa 100, are stored separately. The **.mdb** file contains only information on asset locations, so that Lyric can retrieve and open the appropriate file. The **Set Font Source** and **Set Message Source** buttons allow fonts and messages to originate from different databases. **Message Source** databases also dictate where the **Browser** looks for graphics assets.

G Preferences Spelling	g Default Paths Animation Settings Browser Alignment Windows
Name	File Name
News_5pm Sports_5pm Weather_5pm	C:\Program Files\Chyron\Lyric\News_5pm.mdb C:\Program Files\Chyron\Lyric\Sports_5pm.mdb C:\Program Files\Chyron\Lyric\Weather_5pm.mdb
Set <u>F</u> ont Source	Browser
Set <u>F</u> ont Source Set <u>M</u> essage Source	Browser Browser
Set <u>F</u> ont Source Set <u>M</u> essage Source <u>C</u> reate New Im	Browser Browser File Save adds to browser Delete Advanced File Save TrueType Fonts On Load

Browser Preferences

Note that any change made to **Browser Preferences** is not applied to open **Browsers**. It is, however, applied to the next **Browser** that is opened.

Name, File Name

The Browser tab displays two pieces of information to identify the data source:

- Name: Displays the name which can be different from the File Name, of the data source.
- File Name: Displays the absolute path of the file.

Set Font Source

Set Font Source sets the default Browser Font Source. *Refer to Selecting/Creating/Importing/Deleting a Database for details on the Set Font Source procedure.* After selection, the default Font Source appears in the field to the right of the Set Font Source button. The thumbnails for the fonts from this source appear in the Browser whenever the Lyric Fonts icon is selected.

Set Message Source

Set Message Source sets the default Browser Message Source. Refer to Selecting/Creating/Importing/Deleting a Database for details on the Set Message Source procedure. After selection, the default Message Source appears in the field to the right of the Set Message Source button. The thumbnails for the messages from this source appear in the Browser whenever the Lyric Messages icon is selected.

Create New

The **Create New** function creates a new **Browser** data source, which can then be selected as a default data source. *Refer to* **Selecting/Creating/Importing/Deleting a Database** for details on the **Create New** *procedure.* Note that upon creation, the data source is automatically ODBC-registered in order to enable accessibility by other applications. *Refer to* **Registering an ODBC Data Source** for details.

Import

The **Import** function enables importation of a **Browser** data source, which can then be selected as a default data source. *Refer to* **Selecting/Creating/Importing/Deleting a Database** for details on the **Import** *procedure.* Note that upon importation, the data source is automatically ODBC-registered in order to enable accessibility by other applications. *Refer to* **Registering an ODBC Data Source** for details.

Delete

The **Delete** function enables deletion of a **Browser** data source. *Refer to* **Selecting/Creating/Importing/Deleting a Database** for details on the **Delete** procedure.

Advanced

When a Lyric **Browser** data source is created or imported, it is automatically registered as an **ODBC** (**Open Database Connectivity**) database. making it accessible to software that supports **ODBC**, including Chyron's **CAMIO and MOS Media Solutions** applications. Under normal circumstances, it is not necessary to reregister Lyric **Browser** data sources.

For advanced database configuration, the **Advanced** function accesses the **ODBC Data Source Administrator**. Note that data sources other than *.mdb* can be registered from the **Advanced** function in **Browser Preferences**. They just cannot be used as **Browser** databases. *Refer to* **Selecting/Creating/Importing/Deleting a Database** for details on ODBC registration.

File Save Adds to Browser

When enabled, **File Save Adds To Browser** directs Lyric to automatically add a **Browser** entry to the current **Browser** databases for every message, font or graphic created or imported, then saved.

Sync TrueType Fonts on Load

When a message containing **Indexed Fonts** is read, this feature causes Lyric to automatically update characters rendered in those fonts, if the **Browser** in which the **Indexed Fonts** was created has itself been updated. *Refer to* **Sync Fonts on Load** for details.

Creating/Selecting/Importing/Deleting/Repairing a Database

Browser >

Browser Menu > Select Database

About Data Sources

All assets displayed in the **Browser** are catalogued in various databases. A default **Browser** database file exists in the folder in which Lyric is installed. This file, identified by its *.mdb* extension, instructs Lyric where to find internal or external font, message, graphic and animation assets.

Users may create and configure custom databases. All user-created databases, as well as the default database, can reside in the same folder or in different directories, distinguished from each other by user-assigned names. Any database can contain any of the asset types available to the **Browser**. The **Browser** interface keeps the assets properly sorted, only showing one type at a time. More than one **Browser** can be opened at once, allowing the user to simultaneously view available fonts, messages, graphics and animations.

The **Title Bar** of the **Browser Window** displays the name of the data source from which the assets are displayed.

- When Font Assets are displayed, the Browser Title Bar displays the name of the data source set in the Set Font Source field in the Select Data Source dialog box or Browser Preferences tab.
- When **Message Assets** are displayed, the **Browser Title Bar** displays the name of the data source set in the **Set Message Source** field in the **Select Data Source** dialog box or **Browser Preferences** tab.
- When **Bitmap Assets** are displayed, the **Browser Title Bar** displays the name of the data source set in the **Set Message Source** field in the **Select Data Source** dialog box or **Browser Preferences** tab. **Bitmap Assets** are always drawn from the same active data source as the **Message Assets**.
- When Aprisa 100 (Still) Assets are displayed, the Browser Title Bar displays the name Aprisa Stills. There is only one Stills database on each Aprisa Still system. Note that if the system accommodates both Stills and Clips, the system has one Still database and one Clips database.
- When Aprisa 200 (Clip) Assets are displayed, the Browser Title Bar displays the name Aprisa Clips. There is only one Clips database on each Aprisa Clips system. Note that if the system accommodates both Stills and Clips, the system has one Stills database and one Clips database.
- When **iNFiNiT!** Font Assets are displayed, the **Browser Title Bar** displays the name **iNFiNiT!**. There is only one **Machine Font** database on each iNFiNiT! system.
- When Quantel Assets are displayed, the Browser Title Bar displays the name Quantel. The Quantel database is selected from within the Quantel Import dialog box, accessed from File Menu > Import from Quantel. Refer to Import from Quantel for additional information.

Creating a Data Source

The data sources that can be created in Lyric are the **Font** and **Message** databases. **Bitmap Assets** are also automatically accessed from the active **Message** database. **Aprisa Still**, **Aprisa Clips**, **iNFiNiT!® Fonts** and **Quantel®** graphics are accessed from databases that are resident on their respective systems. New databases cannot be created on these systems from Lyric, although depending on the external system, assets can be added, deleted and modified.

Upon creation in Lyric, the **Font** or **Message** data source is automatically **ODBC**-registered in order to enable accessibility by other applications. *Refer to Registering an ODBC Data Source for details.*

Databases can be created and tailored to productions, users, etc. To create a new database:

1. In the **Browser**, click the **Select Database** icon. The **Select Data Source** dialog box is displayed:

Name	File Name
Browser News_5pm Sports_5pm Weather_5pm	C:\Program Files\Chyron\Lyric\Browser.mdb C:\Program Files\Chyron\Lyric\News_5pm.mdb C:\Program Files\Chyron\Lyric\Sports_5pm.mdb C:\Program Files\Chyron\Lyric\Weather 5pm.mdb
Set <u>F</u> ont Source	Browser

Select Data Source Dialog Box

2. Next, click the Create New... button in the lower left corner of the window. The Create Data Source dialog box is displayed:

<u>N</u> ame:		
<u>P</u> ath:	C:\Program Files\Chyron\Lyric	

Create Data Source Dialog Box

3. Enter the name of the new database in the **Name** field, then click the **Browse** button. The **Select Root Directory** dialog box is displayed.

Select Root Directory		<u>?</u> ×
Root> 🔄 Lyric	- 🖬 📩 -	3
3D Objects Clip Files Effects Images License Messages		
	Ok Cano	el //

Select Root Directory Dialog Box

- 4. You may choose to store database files (*.mdb* format) at the root or create a new folder for them with the using the **New Folder** in the database, then click **OK**.
- 5. The Create Data Source dialog returns to confirm your settings. Click OK.

reate D	ata Source	×
<u>N</u> ame:	Weather_Graphics	
<u>P</u> ath:	C:\Program Files\Chyron\Lyric	
	OK Cancel	

Create Data Source Dialog Box

6. The path you have set appears in the Select Data Source dialog box. Click OK.

lect Data Source	and the second distance in the second distance in the second distance in the second distance in the second distance is the second distance in the second distance is the second distanc	?
Name	File Name	
Browser News_5pm Sports_5pm Weather_5pm	C:\Program Files\Chyron\Lyric\Browser.mdb C:\Program Files\Chyron\Lyric\News_5pm.mdb C:\Program Files\Chyron\Lyric\Sports_5pm.mdb C:\Program Files\Chyron\Lyric\Weather_5pm.mdb	
Weather Graphics	C:\Program Files\Chyron\Lyric\Weather Graphics.mdb	
Weather_Graphics	C:\Program Files\Chyron\Lyric\Weather_Graphics.mdb	
Weather_Graphics	C:\Program Files\Chyron\Lyric\Weather_Graphics.mdb	

Select Data Source Dialog Box with New Data Source Added

Selecting A Database

Now that more than one database exists, it is possible to demonstrate switching among them.

- 1. Click the **Select Database** button. The **Select Data Source** dialog box opens.
- 2. Highlight the name of the **Browser** to which you wish to switch and click <u>Set Font Source</u>. As shown in the figure below, the name of the selected **Browser** appears in the field to the right of the button.

1	
Name	File Name
Browser	C:\Program Files\Chyron\Lyric\Browser.mdb
News_5pm	C:\Program Files\Chyron\Lyric\News_5pm.mdb
Sports_5pm	C:\Program Files\Chyron\Lyric\Sports_5pm.mdb
Weather_5pm	C:\Program Files\Chyron\Lyric\Weather_5pm.mdb
Weather istantice	1.5. Les manuel de est factories (1.5. activités) (1.5. activités) (1.5. activités) a se alle
weather_uraphics	C: \Program Files\Chyron\Lyric\Weather_Graphics.mdb
weather_uraphics	C. \Program Files \Chyron \Lyric \Weather_draphics.mdb
weather_orgprics	C. \Program Files \Chyron \Lyric \Weather_Graphics.mdb
weather_oraphics	C. \Program Files \Chyron \Lyric \weather_draphics.mdb
weather_uraphics	C. \Program Files \Chyron \Lyric \weather_draphics.mdb
Set Foot Source	
Set Font Source	
Set Font Source	
Set Font Source	Browser
Set <u>Font Source</u>	Browser

Setting Font and Message Sources

3. Repeat for the Set Message Source button. The Font Source and Message Source can each access a different database. Note that the Message Source also serves as the Bitmap Source.

4. Click **OK**. Once a database is selected, the name of the database is displayed in the **Title Bar** of the **Browser** window, as shown in the following figure.

	Select Data Source	
	Name	File Name
orts_5pm 🔦	Browser News_5pm Sports_5pm Weather_5pm Weather_Graphics	C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric C:\Program Files\Chyron\Lyric
	Set <u>F</u> ont Source	Browser
Golf_Title B	(Set Message Sourc	e Sports_5pm
_		

Title Bar Showing Data Source Name

The Select Data Source dialog box is similar in many ways to the Browser Preferences tab, accessed from Config Menu > Preferences > Browser. The difference between setting Font/Message Sources in Browser Preferences and setting Font/Message Sources in the Select Data Source dialog box, is that Browser Preferences define default Font/Message Sources that are in place when Lyric is opened. The Font/Message Sources settings can then be changed in the Select Data Source dialog box as necessary, without disturbing the default settings set in Browser Preferences. Modifications to settings in the Select Data Source dialog box are not reflected in Browser Preferences, and vice versa.

Importing a Database

The **Import Database** function enables the user to add existing databases to the **Select Data Source** dialog box. Note that upon import, the data source is automatically ODBC-registered in order to enable accessibility by other applications. *Refer to Registering an ODBC Data Source* for details.

NOTE

Making a database available to the Browser is different from the files themselves being accessible. For example, an imported database may display thumbnails for assets on a network to which your computer does not have access. Make sure that the user and the system on which Lyric is operating have access to the necessary files.

To import a database:

- 1. Click the **Select Database** icon. The **Select Data Source** dialog box opens.
- 2. Click the button. The **Import Data Source** dialog box opens (see figure below).
- 3. Enter the filepath, if known, of the database you wish to import. If not, use the **Browse** button to find the location of the desired database (.mdb) file.

4. Enter a name in the **Name** field and click **OK**. The name and filepath of the imported database appear in the **Select Data Source** dialog box. This database can now be accessed by Lyric.

inport b		
<u>N</u> ame:	Feature Story	
<u>F</u> ile:		
<u>F</u> ile:	M:\Feature_Stories\Feature_Story_5pm.mdb	

Import Data Source Dialog Box

Advanced

When a Lyric **Browser** data source is created or imported, it is automatically registered as an **ODBC** (**Open Database Connectivity**) database. making it accessible to software that supports **ODBC**, including Chyron's **CAMIO and MOS Media Solutions** applications. Under normal circumstances, it is not necessary to reregister Lyric **Browser** data sources.

For advanced database configuration, the **Advanced** function accesses the **ODBC Data Source Administrator**. Note that data sources other than *.mdb* can be registered from the **Advanced** function in **Browser Preferences**. They just cannot be used as **Browser** databases. *Refer to* **Registering an ODBC Data Source** for details.

Deleting a Database

To delete a database as a **Browser** data source:

1. Select the data source in the **Select Data Source** list, then click _______. The **Confirm Delete** prompt is displayed.



Confirm Delete Prompt

2. Click Yes to delete; No or Cancel to cancel the Delete.

Repairing a Damaged Database

During Lyric launch or **Browser** operations, the following may be displayed:



Error Retrieving Record

Click **OK**, then the following is displayed:



File Saved But Not Added to Browser

This sequence of messages may indicate that the **Browser** database is corrupted and needs repair. To repair a database:

- 1. Make sure that the Browser(s) accessing the database are closed.
- 2. There is a **Repair** function in the **ODBC Data Source Administrator**. It is accessible from the following locations:
 - Windows Start Menu > Settings > Control Panel > Administrative Tools > Data Sources (ODBC)
 - Lyric Config Menu > Preferences > Browser > Click Advanced
 - Lyric Browser > 🔤 > Click Advanced
 - Lyric Browser Menu > Select Database > Click Advanced
- In the ODBC Data Source Administrator dialog box, there is a list of databases. Double-click on the name of the database that may be corrupted. The ODBC Microsoft Access Setup dialog box opens.
- 4. Click **Repair**. The **Repair Database** dialog box opens.
- 5. Make sure that the proper database is selected, then click **OK**. A message confirms that the database has been successfully repaired.

Searching the Browser

Browser > 🖳 : Browse

; Browser Menu > Search Browser

In a Lyric Browser, Font, Message, Bitmap, Aprisa and Quantel Assets can be searched using the Search tool. Search is not currently implemented for iNFiNiT! assets.

Searching Font, Message Bitmap and Aprisa Assets

To display the Search or Aprisa Search dialog box, display the Font A, Message , Bitmap

Aprisa Still for Aprisa Clip Asset database in the Browser, then click the Search Database icon select Search Browser from the Browser menu.

Font Asset Search Dialog Box

				Can Contain	Must Contair	Must No Contain
<u>S</u> tyle Name:	[œ	С	С
<u>T</u> ype Face:	[۰	C	С
<u>C</u> omments:			<u></u>	۲	C	C
			Y			
Keywords:				۲	0	0
<u>H</u> eight:				·	0	0
<u>E</u> dge Type:				œ	0	C
Last Modified:	• Before	C <u>A</u> fter	C Bet <u>w</u> eer	•	0	С

The following dialog box is displayed for a TrueType® or RGB Font Asset search:

Font Asset Search Dialog Box

A Font Asset can be searched by Style Name (corresponds to Name field in RGB Font Browser dialog box), Type Face, Comments, Keywords, Height (in scanlines) and Edge Type. Type Face, Height and Edge Type do not apply to RGB Font Asset searches. A condition, Can Contain, Must Contain or Must Not Contain, can be applied to each search field. The date Last Modified can also be searched. Setting the search field and Last Modified conditions are described in the following paragraphs.

				I	Can Contain	Must Contair	Must Not Contain
Author:					œ	0	C
<u>T</u> itle:					œ	0	C
<u>C</u> omments:					۲	0	0
				~			
Keywords:					ſ	С	С
<u>S</u> ubject:					œ	0	C
Last Modified:	Before	C After	C Bel	<u>w</u> een	۲	0	C

The following dialog box is displayed for a Lyric **Message** or **Bitmap Asset** search:

Message/Bitmap Asset Search Dialog Box

A Message or Bitmap Asset can be searched by Author, Title, Comments, Keywords, and Subject. A condition, Can Contain, Must Contain or Must Not Contain, can be applied to each search field. The date Last Modified can also be searched. Setting the search field and Last Modified conditions are described below.

Aprisa Still/Clip Asset Search Dialog Box

The following dialog box is displayed for an **Aprisa Still** or **Clip Asset** search. This figure shows parameters entered for a search of an **Aprisa Stills** database.

				?
	(Cc	Can Intain	Must Contain	Must Not Contain
Still ID: 0010-0090		С	œ	С
Description: Sports		C	œ	С
Field 1: Baseball		С	œ	С
Field 2:		œ	С	С
Field 3:		œ	С	С
Field 4:		œ	C	С
Field 5: Ryan		C	۲	0
Field 6: Catcher		С	œ	С
Field 7:	2	æ	С	С
Field 8:		œ	С	С
Last Modified: Before C After 9/22/2003	C Between	C	۰	0

Aprisa Search Dialog Box

Searching Stills: The Aprisa stills database can be searched by **Still ID**, **Description** and information contained in **Fields 1** through **8**. A condition, **Can Contain**, **Must Contain** or **Must Not Contain**, can be applied to each search field. The date **Last Modified** can also be searched. Setting the search field and **Last Modified** conditions are described below.

Searching Clips: The Aprisa clips database can be searched by **Description** only. A condition, **Can Contain**, **Must Contain** or **Must Not Contain**, can be applied to the search.

Last Modified Date Conditions

A search can retrieve assets **Last Modified** before or after a specified date, or between two specified dates. If **Between** is specified, a second date field is displayed.

Last Modified:	O <u>B</u> efore	○ <u>A</u> fter	Between
		And	

Searching Between Last Modified Dates

The entered date(s) is included in a search. The date(2) should be formatted as follows: mm/dd/yyyy

Can, Must, Must Not Contain Conditions

There are three conditions that can be applied individually to each search field (except Last Modified).

- Can Contain: Entering text or leaving it blank both produce all Font, Message or Bitmap Assets in the search results.
- **Must Contain:** This restricts the search results to only those **Font**, **Message** or **Bitmap Assets** that contain the specified search string in the specified field.
- **Must Not Contain:** This restricts the search results to only those **Font**, **Message** or **Bitmap Assets** that do not contain the specified search string in the specified field.

Performing a Search

To perform a search:

- 1. Use the procedure described above to display the **Search** dialog box.
- 2. Optional: Enter the search strings in the appropriate fields. Also optional: Apply a condition other than **Can Contain** to each field.
- 3. Optional: Set a Last Modified date(s).
- 4. Click **Search**. A search is performed, based on parameters entered in the **Search** dialog box. The search results are displayed in the **Browser**.

Refining a Search

If the search results produce too many assets, an additional search can be performed on the current search results.

- 1. Optional: Enter the search strings in the appropriate fields. Also optional: Apply a condition other than **Can Contain** to each field.
- 2. Optional Set a **Last Modified** date(s).
- 3. Click **Refine Search**. A search is performed on the current search results based on the new parameters entered in the **Search** dialog box. The search results, which is a subset of the previous search results, are displayed in the **Browser**.

This function can be performed as many times as necessary to narrow down the search results.

Resetting the Search Dialog Box

The parameters in the Search dialog box can be returned to the default state.

• Click **Reset Search**. Text and date fields are cleared; **Last Modified** is reset to **Before**; and conditions are all set to **Can Contain**. Note that this does not clear the existing search results from the **Browser**.

Resetting the Database

To undo all searches on the database and display the entire contents of the database:

• Click Reset Search, then click Search or Refine Search.

Searching Quantel Assets

The **Search** function for **Quantel assets** can be accessed from two locations. Use one of the following methods to display the **Search By** dialog box:

- Display the Quantel® Asset Q database in the Browser, then click the Search Database icon or select Search Browser from the Browser menu.
- From the Lyric File menu, select Import from Quantel. In the Quantel Import dialog box, connect to a system, then display a set of files. In the Options area, click Search.

Search By:		×							
Author:	Wolf								
<u>T</u> itle:	×								
Category:	Sports								
<u>D</u> ate:	Tuesday , September 30, 200: 💌		•	S	epte	mber,	200	3	
		1	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			31	1	2	3	4	5	6
			7	8	9	10	11	12	13
			14	15	16	17	18	19	20
			21	22	23	24	25	26	27
			28	29	SU .	1	2	3	4
			5	ь	1	8	э	10	11
2			0	lod	ay: S	1/30/	2003	<u>.</u>	
OK	Clear Cancel	L							

Search by Dialog Box

To execute a search:

- 1. A Quantel Asset can be searched by Author, Title, Category, and Date. Specify all or part of an Author, Title and or Category in their respective fields.
- 2. The **Date** field reflects the current date. A different date can be selected from the drop-down calendar as shown above. To disable the **Date** as a search condition, deselect (uncheck) the checkbox located within the **Date** field.
- 3. Click **OK**. The **Search By** dialog box closes. If in the **Browser**, the results of the search are displayed in the **Browser**. If in the **Quantel Import** dialog box, proceed to the next step.
- 4. Click List Next Set. The results of the search are displayed in the FID List.

To clear the search fields in the Search By dialog box:

• Click Clear.

To cancel the search:

• Click **Cancel** in the **Search By** dialog box.

11. Creating and Using Fonts in Lyric

Creating and Using Fonts in Lyric

Lyric provides maximum creative flexibility with its support of **TrueType**[®], **OpenType**[®] and **iNFiNiT!**[®] fonts, as well as Windows® 2000 **Unicode** (Chinese, Japanese, Cyrillic, etc.). Lyric does not support **PostScript**[®] fonts.

RGB Fonts, which are fonts composed from bitmap images, as opposed to standard font characters, can be created using the **Custom Font Editor**. **RGB Fonts** are useful for quickly typing frequently-used graphics such as sports team logos. Typing graphics is considerably faster than importing them.

The **Custom Font Editor** can also import and export iNFiNiT! fonts for use in Lyric or imported iNFiNiT! messages. *iNFiNiT! fonts and message operations are covered in depth in Browser: iNFiNiT! Font Assets, Import from iNFiNiT!, Export to iNFiNiT!, Custom Font Editor and FTP - Transferring Files to/from an <i>iNFiNiT! System.*

A wide variety of parameters can be applied to build customized fonts which can be saved and used in multiple Lyric compositions.

- Basic font parameters such as Font Face, Font Size (2D text only), Font Style and Face/Edge Color (2D text) and Face/Side Color (3D characters) can be set using Lyric's Font Tools. Setting color is covered in depth in the chapter on Setting and Applying Color, Transparency, Lighting and Texture.
- The same characteristics, as well as more advanced parameters such as **2D/3D Mode**, **Aspect Ratio**, **Kerning**, **Space Width**, **Leading**, **Shear**, **Rotation** and **Filters** can be set for 2D font characters in the **Font Properties** tab.
- Font Face and Font Style for characters used in 3D text composition can also be set in the Font Properties tab.
- **TrueType® Font Preview**, accessed from the **Font Properties** tab, enables the user to quickly review the available characters in a font, change the current font, or select a character (including **Unicode**) to add to the **Canvas** at the current cursor position. **TrueType Font Preview** can be used with both 2D and 3D characters.
- More advanced effects for 2D characters, including Edge Type, Edge Size, Face/Edge Color, Transparency, Softness and multiple Edge styles are set in the 2D Font FX Properties tab.
- 3D font effects, including Character Depth, Bevel Depth, Bevel Mode, Bevel Type and Smoothness. are set in the 3D Font FX Properties tab. 3D character Color, Transparency and Texture is applied from the Surface Properties tab. *Refer to the chapter on Setting and Applying Color, Transparency, Lighting and Texture for details.*

All fonts supported by or created in Lyric can be easily loaded into a **Browser Window**, making them instantly accessible use in a Lyric composition.

The following sections cover the use of Font Tools, Font Properties, 2D Font FX Properties, 3D Font FX Properties. and the Custom Font Editor.

Font Tools

View Menu > Toolbars > Font Tools



Font Tools

The **Font Toolbar** provides parameters that define the appearance of 2D and 3D characters. If these tools are not visible, select **Toolbars > Font Tools** from the **View Menu** to display them.

These settings are applied to either selected 2D text or 3D text or 2D or 3D characters typed after the parameters are set. Where noted, certain parameters cannot be applied to 3D text.

Parameter	Description
Face Color	Selects the color of a 2D or 3D character's face. The dropdown list offers the colors currently preset in Lyric's Palette , but the last selection in the dropdown Select dialog box, from which the Palette is set. Using the option allows quick selection of colors not currently set in the Palette . Note that ramped colors cannot be applied to 3D characters.
Edge Color	 Edge Color selection is performed in the same manner as Face Color selection. When multiple edges are present on a 2D character, the Edge Color is applied only the first Edge type, as determined by the settings in Properties > 2D Font FX. Color selection for additional edges must be applied from Properties > 2D Font FX. Components Edge Selection in Properties > 2D Font Effects When a Bevel is applied to a 3D character via Properties > 3D Font FX, the Edge Color is applied only to the Sides, and not to the Bevels. Color selection for the Bevels must be applied from Properties > Surface. Note that ramped colors cannot be applied to 3D characters.
Font Face Name	Sets the Font typeface for the 2D or 3D text.

Parameter	Description				
Font Size	Set the Font Size, in scanlines for 2D text.				
	Font Size cannot be applied to 3D characters. 3D character size is changed either by using the Transform Toolbar Edit Scale tool; or via Properties > XYZ > Scale or Z-Position settings.				
Bold	Bold , <i>italic</i> and <u>Underline</u> operate in the same manner as in				
Italic	applied to 3D text, but 3D text cannot be underlined.				
Underline					
Justification	Justification determines how the text aligns to the frame of the 2D Text Window.				
	 Left Justify: Justifies text to the left border of the 2D Text Window. 				
	 Center Justify: Centers text horizontally in the 2D Text Window. 				
	 Right Justify: Justifies text to the left border of the 2D Text Window. 				
	 Vertical Centering: Centers text vertically and horizontally in the 2D Text Window. Left and Right Justify can be subsequently applied without losing vertical centering. 				

Font Properties

Properties > Font

Font Properties

Click on the Font tab of the Properties window to view/change Font properties:

Properties	-O×
Font 2D Fon	FX 3D F
Arial	-
Regular	•
Mode © <u>2</u> D O	3D A
Size	50 +
Aspect 1.000 * Space Width 12 * H Shear 0.000 *	Kerning Q Leading Q V Shear Q.000 C
Botate	Filter Horizontal O Vertical
Aa	

Font Properties

Property	Description
Font Selection	This area displays the currently selected Font for 2D and 3D text, and lists all Fonts available to the system.
Font Variation	Use this area to select Font Variation from the available variations for the selected Font: Regular, Bold, Italic, etc.
	Please note that Font variations are specific to the fonts themselves. Thus, one font may be available in Regular, Bold, Italic and Underline, while another may offer only some of these options.
	Both TrueType® and OpenType® fonts are supported by Lyric. Lyric does not support PostScript® fonts.
Mode	These radio buttons reflect the position of the cursor on the Canvas .
	 If the cursor is inside of a 2D Text Window, the 2D radio button is active.
	 If the cursor is outside of a 2D Text Window, the 3D radio button is active.
	The radio buttons can also be selected (clicked) to change the focus within the Canvas :
	 If the 2D radio button is selected (clicked), the focus changes to the 2D Text Window (including Roll, Crawl and Type On) with the lowest priority on the Scene Graph, regardless of actual Z-position of the 2D Text Window.
	• If the 3D radio button is selected (clicked), the focus changes to the Global Light on the Scene Graph .
A	TrueType® Font Preview enables the user to quickly review the available characters in a font, change the current font, or select a character (including Unicode) to add to the Canvas at the current cursor position. <i>Refer to TrueType® Font Preview later in this section for details.</i>
Size	The Size slider sets the current Font Size (in Scanlines). Also, you may use the up/down arrows to change the Font Size, or enter a size directly. Size settings are reflected in real time in the Font Sample area.
Aspect	Adjusts Aspect Ratio (Width:Height) for the selected text. (Range: 0.001 to 10.00 units.) The Font Sample area reflects changes in Aspect Ratio in real time.
	d d CL
	Low (U.25) Normal (1.00) High (2.50)
	Sample Aspect Natios
Kerning	Adjusts the horizontal spacing of the selected characters in pixels. (Range: -25 to 25 pixels.)

Property	Description
Space Width	Adjusts the length of the selected Font's Space Character Width. (Range: 0 to 50 pixels).
Leading	Adjusts inter-line spacing (leading). (Range: -75 to +75 scanlines).
Shear	(Horizontal and Vertical) Adjust Shear along the Horizontal, Vertical, or both axes (range: -5.00 to +5.00). The Font Sample area reflects changes in Shear in real time. $\begin{array}{c} \hline & & & \\ \hline & & & \\ \hline & & & \\ 0.50 \\ H-Shear \\ \hline & & & \\ \hline \end{array} $
Rotate	Circular Slider (also known as Spin Control Box or Jog Wheel) that adjusts rotation of characters on the display. The Font Sample area reflects rotation in real time
Filter	(Horizontal and Vertical) These filters are provided to enhance the quality of text display during Roll animations in HD or PAL operation.

Property	Description
Font Sample Area	Displays sample characters for the selected Font , with Font and 2D Font FX Properties applied. The sample that is displayed in the Font Sample area does not reflect the actual size of the font. Rather, the two red lines to the left of the upper/lowercase characters span what represents a 50 -scanline height. The icons below show the positioning of the red lines for a 50 -scanline font, where they span the full height, and a 150 -scanline font, where they span one-third of the height.
	Font Sample - 50 Font Sample - 150 Scanlines Scanlines
	Note that if the TrueType [®] font on which a Lyric font is based is not available a red slash is displayed across the Font Sample .
	TrueType [®] Font Unavailable
Apply	Click Apply to apply the font settings/changes to the selected character(s).

TrueType Font Preview

TrueType® Font Preview enables the user to quickly review the available characters in a font, change the current font, or select a character (including **Unicode**) to add to the **Canvas** at the current cursor position. **TrueType Font Preview** can be used with both 2D and 3D characters.

To access TrueType® Font Preview:

• Click the button in the Font Properties tab. The TrueType® Font Preview dialog box is displayed.

	T	п	#	\$	%	82	1	()	EngrvrsOldEng Bd BT EngrvrsOldEng BT	
*	+	3	-	*	1	0	1	2	3	Exotc350 Bd BT Exotc350 DmPd PT	
4	5	6	7	8	9		;	<	=	Exotc350 Dillad BT Exotc350 Lt BT Flareserif821 BT	
>	3	@	A	В	С	D	Е	F	G	Flareserif821 Lt BT FlemishScript BT	
H	I	J	К	L	M	N	0	P	Q	Formal436 BT Fraktur BT	
R	S	Т	U	V	W	X	Y	Ż]	Freefrm710 BT Freefrm721 Blk BT Freefrm721 BT	
γ]	^	<u> </u>	2	a	b	с	d	е	Freehand471 BT Freehand521 BT	
f	g	h	i	j	k	1	m	n	0	Freehand575 BT Freehand591 BT	
in Ch	ar ID	32	-	-	Ma <u>x</u>	Char II	D 25	55	H	Garamond	

TrueType® Font Preview

In the **Sample Area**, the entire character set for the current font is displayed. Notice that the currently selected 2D or 3D character on the **Canvas** is highlighted in the **Sample Area**. To the right of the **Sample Area** is the **Font** list. The current font is highlighted.

About ASCII and Unicode Characters

There are two sets of characters that can be displayed in the Font Sample Area: ASCII and Unicode.

- The ASCII set of characters is the standard set of characters with which most are familiar. Visible characters in an ASCII font set are coded from 32 to 255. There are other specialized, non-visible characters coded from 0 to 31. The ASCII Code and the character name of the currently selected are displayed above the top right of the Sample Area of the TrueType® Font Preview dialog box.
- The Unicode set of characters is an extended set of characters that includes the ASCII set.

To display the ASCII set:

• Leave the **Unicode** checkbox unchecked.

To display the Unicode set:

• Select (check) the **Unicode** checkbox.

The **Min Char ID** and **Max Char ID** determine the range of codes from which a character can be selected for placement on the **Canvas**. The most common setting for **Min Char ID** is **32**; for **Max Char** it is **255**. Note that this setting does not have an affect on the availability of characters once the dialog box is exited.

If the **Max Char ID** is changed to a higher number, the following occurs depending on whether **ASCII** or **Unicode** is active:

- If ASCII is active (Unicode unchecked), duplicate ASCII sets appear in the Sample Area in intervals of 256. For example, if the Max Char ID is set to 1000, the character A would appear at 65, 321, 577and 833. Any one of the A characters can be placed on the Canvas.
- If Unicode is active (Unicode selected), the Unicode character set is displayed.

A number of the character slots display rectangles instead of characters. In the case of **Unicode** characters, there may be characters assigned to those slots which are not rendered to the **Sample Area**. If this appears to be the case, use the **Windows Character Map** to locate these characters and paste them to the **Canvas**. *Refer to Paste Unicode Text for details.*

Setting and/or Applying a Font

To set a new current font:

- Open the TrueType Font Preview dialog box, then select a font from the Font list.
- Click **Apply** to apply the selected font and remain in the dialog box, or **OK** to apply the selected font and exit the dialog box. The new font also becomes the new current font. Note that it retains the other font attributes (**Edge**, **Size**, color, etc.) set in the **Font Tools**, **Font Properties** and **2D Font FX Properties**.

Its **ASCII Code** or **Unicode**, followed by the character is displayed directly above the **Sample Area**.

To apply a new font to selected characters:

- 1. Select the 2D or 3D characters to which to apply the new font.
- 2. Open the TrueType Font Preview dialog box, then select a font from the Font list.
- Click Apply to apply the selected font to the selected characters and remain in the dialog box, or OK to apply the selected font and exit the dialog box. The new font also becomes the new current font. Note that it retains the other font attributes (Edge, Size, color, etc.) set in the Font Tools, Font Properties and 2D Font FX Properties.

Adding a Character to the Canvas

To add a 2D or 3D character to the **Canvas**:

- 1. Place the cursor at the point on the **Canvas** where the character is to be inserted.
 - If the cursor is inside of a **2D Text Window**, a 2D character will be inserted at the cursor location.
 - If the cursor is outside of a **2D Text Window**, a 3D character will be placed on the **Canvas** at the cursor location.
- 2. Open the **TrueType Font Preview** dialog box, then in the **Sample** area, select (click) the character that is to be placed on the **Canvas**.
- 3. Click Add. The selected character is placed at the cursor location with the current font applied.

2D Font FX Properties

Properties > 2D Font FX

Click on the 2D Font FX tab of the Properties window to view or change 2D Font FX Properties:

Properties						
Font 2D Fon	tFX 3D F 🔸 🕨					
Face Edge, Offset						
A <u>d</u> d <u>C</u> ut	Copy Paste					
Direction	Effects					
135 🚊	C Offset					
	C Shadow					
	C None					
Edge Size	Trans <u>p</u> .					
5						
Fill for Face	Filter					
	Blur					
 Color Bitmap 						
- Ac	APPLY					
Aa						

2D Font FX Properties
Property		Descript	tion	
Components	Determines the character Border effects. The Cut in the Components wine	er's face and or edge fo , Paste and Copy butte dow.	or the application of Offs ons remove, restore an	set, Shadow and d duplicate entries
Effects	Determines one or more	of four Edge Effect st	yles:	
	a	a	a	a
	Offset	Shadow	Border	None
	Lyric supports multiple e Components area). To select the desired Effect	dges on 2D text charac add a new (or addition t.	cters, via the Add butto al) edge style, click the	n (in the Add button, then
Direction	Selects Direction for the numerically, click the up/ Slider, also known as a s	⇒ selected Edge compo /down arrows to increa Spin Control Box, to dia	onent in degrees; you m se/decrease the value, al in the desired value.	nay enter a value or use the Circular
Edge Size	Selects the Edge Size for	or the selected Edge C	component.	
Transparency	Sets Transparency for t sets the Transparency 100 (transparent).	the selected Compone percentage with respec	ent (character Face or E ct to video, on a scale fr	Edges). This field om 0 (opaque) to
Softness	Softness is a variable refrom 0 (sharpest) to 15 (styles.	eduction in the sharpne softest). <i>Softness appl</i>	ess of the selected edge lies to Drop Shadow , O	e style, ranging hffset and Border
Fill Area	Sets/changes the Fill for or ramp color, or a textur	r the selected Compon re (bitmap).	nent (Face or Edges). F	fill may be a solid

Property	Description
Font Sample Area	Displays sample characters for the selected Font, with Font and 2D Font FX Properties applied. The sample that is displayed in the Font Sample area does not reflect the actual size of the font. Rather, the two red lines to the left of the upper/lowercase characters span what represents a 50-scanline height. The icons below show the positioning of the red lines for a 50-scanline font, where they span the full height, and a 150-scanline font, where they span one-third of the height. Font Sample - 50 Scanlines Font Sample - 150 Scanlines Note that if the TrueType [®] font on which a Lyric font is based is not available a red slash is displayed across the Font Sample. TrueType [®] Font Unavailable
Apply	Applies the current 2D Font FX settings to the selected 2D character(s) on the Canvas .

3D Font FX Properties

Properties > 3D Font FX

3D characters in Lyric are extruded from 2D characters. 3D characters have the expected characteristics of 3D objects. They can be rotated in 3D space to show all sides and textures can be applied to their surfaces. A 3D character is comprised of three types of **Surface** elements:

- Faces: The Front and Back faces represent the 2D character from which the 3D character is built.
- Sides: The sides determine the depth of the 3D character.
- Bevels: The Bevels determine the transition between the faces and the Sides.



3D Character

Depth and **Bevel** attributes are set in the **3D Properties** tab. *Refer to Properties: Surface for information on applying colors and textures.* To access **3D Font FX Properties**, select the **3D Font FX** tab in the **Properties** window.

Properties	
2D Font FX 3D Font FX XYZ	4+
Character Depth	
0.100	
Bevel	
Mode	
C Pack	
Both	
Bevel Depth	
0.030	
Types	
Curve Smoothness	

3D Font FX Properties

A change in any of the following parameters is immediately applied to all currently selected 3D characters.

Character Depth

Character Depth sets the depth of the selected 3D character(s).

E		
Character Depth	Character Depth	Character Depth
0.000	0.100	0.150

Character Depth

To set Character Depth:

• Adjust the Spin Control Box or the slider.

The **Character Depth** setting is not available when **Square Bevel Style** is selected. To create a Square Bevel character that has **Character Depth**:

- 1. Create a character with a **Bevel** other than **Square**.
- 2. Set a Character Depth.
- 3. Select the **Square Bevel Style**. The character converts to a **Square Bevel Style** while retaining the set **Character Depth**.

Bevel Mode

The **Bevel Mode** applies **Bevel** to the **Front**, **Back** or **Both** faces of a 3D character. The following figure shows the application of a **45-Degree Bevel** to the **Front**, **Back** and **Both Front and Back** faces respectively, of a 3D character.



Bevel Modes

To apply a **Bevel Mode**:

• Select the appropriate radio button.

Bevel Depth

Bevel Depth sets the depth of the Bevel effect.



Bevel Depth

Bevel Types

There are six **Bevel Types**. Examples of the different **Bevels** are shown below. Figure (below) and button (above) positions correspond to each other.



Inner Rounded

Step Down

Step Up

To apply a **Bevel Type**:

- 1. Select the 3D characters to which to apply the **Bevel**.
- 2. Click on the **Bevel** button. The **Bevel** is applied to the text.

Smoothness

The **Smoothness** setting adjusts the **Smoothness** of the selected **Bevel**. For best results, experiment with this setting, especially when using very large or very small 3D characters. The range of the settings is from **1** (least smooth) through **10** (smoothest).

Lyric Font Asset Overview

Browser > Click A; Browser Menu > Show Font Assets

Three types of fonts used in Lyric operations:

- **TrueType®-Based Fonts:** Fonts created in Lyric that are based on **TrueType** font sets. An introduction to *TrueType* font operations is covered in this section and continued in **TrueType® Font** Context Menu.
- **RGB Fonts:** Fonts created in Lyric that map bitmap graphics to keys, instead of **TrueType**® font characters. *RGB Font operations are covered in briefly in this section and in RGB Fonts.*
- **iNFiNiT!® Fonts:** Fonts created on a Chyron iNFiNiT! Family system. These fonts are accessed via

the icon or by selecting **Show iNFiNiT! Fonts** from the **Browser** menu. *iNFiNiT! Fonts* are covered in *iNFiNiT Assets*.

Indexed Fonts

Each Lyric Font Asset, i.e., TrueType® or RGB Font, can be assigned to a hotkey combination which can easily activate the font for use from a PC or Duet keyboard. Available hotkeys are as follows:

- Alt + 0 through Alt + 9
- Alt + Shift + 0 through Alt + Shift + 9

Except for Alt + 0, Alt + 9, Alt + Shift + 0 and Alt + Shift + 9, each hotkey assignment also corresponds to a Font Key on the Duet keyboard.

Hotkey	Alt + 0	Alt + 1	Alt + 2	Alt + 3	Alt + 4	Alt + 5	Alt + 6	Alt + 7	Alt + 8	Alt + 9
Duet Keyboard	None - Use Hotkey	1	2	3	4	5	6	7	8	None - Use Hotkey
Hotkey	Alt + Shift + 0	Alt + Shift + 1	Alt + Shift + 2	Alt + Shift + 3	Alt + Shift + 4	Alt + Shift + 5	Alt + Shift + 6	Alt + Shift + 7	Alt + Shift + 8	Alt + Shift + 9
Duet Keyboard	None - Use Hotkey	Shift + 1	Shift + 2	Shift + 3	Shift + 4	Shift + 5	Shift + 6	Shift + 7	Shift + 8	None - Use Hotkey

Refer to TrueType® Font Context Menu and RGB Fonts for information on setting font hotkeys.

The Font Asset Context Menus

Three context menus are available from within the **Font Assets Browser**, depending on the cursor position when accessed:

- Font Asset Context Menu: Accessed by right-clicking on a blank area of the Browser. Custom Font Editor and Create RGB Font are available from this menu. All other items are grayed out. Refer to Custom Font Editor for information on using this tool. Create RGB Font is covered later in his section, as well as in RGB Fonts.
- TrueType Font Context Menu: Accessed by right-clicking on a TrueType Font Asset in the Browser.
- RGB Font Context Menu: Accessed by clicking and RGB Font Asset in the Browser.

Sync Fonts on Load *TrueType® Fonts*

TrueType® fonts can be set in the Browser Preferences to update automatically when a message is read.

- If Sync TrueType® Fonts on Load is enabled in the Browser Preferences, any update to a Font Asset in the Browser is automatically reflected in a message when it is read.
- If Sync TrueType® Fonts on Load is not enabled in the Browser Preferences, any update to a Font Asset in the Browser is *not* reflected in a message when it is read.

Refer to Browser Preferences for details.

RGB Fonts

Any change to an **RGB Font** is *always* reflected in a message when it is read.

Creating a TrueType® Font and Adding It to the Database

Cataloging and recalling fonts are among the simplest types of **Browser** operations. In the following procedure, a **TrueType®**-based font will be created, and then added to the current database.

- 1. If the **Font Assets** are currently not displayed in the **Browser**, click the **A** icon or select **Show Font Assets** from the **Browser** menu.
- 2. In the **Properties** window, click the **Font** tab, then select a **Font**, or select a font from the **Font Toolbar**.

3. Set up the font as desired by setting parameters in the **Font** and **2D Font FX** tabs. Note that the changes appear in the **Font Sample** area in the lower left hand corner of the **Properties > Font** and **Properties > 2D Font FX** tabs.



Font and 2D Font FX Properties Showing Font Sample Area

NOTE

The Font Sample displayed in the Properties > Font and 2D Font FX tabs, as well as in the Browser Icon and Icon/Text Views represents the characters mapped to the Shift + A and "a" key combinations. If a character is not mapped to this keycap, then the character mapped to the next occupied key combination in the ASCII set is displayed (Shift + B and "b", then Shift + C and "c", etc.).

4. When the font is set, click the **Save to Database** icon in the **Browser**.



New Font Added to Browser

NOTE

The Browser examples above and following deal with Icon (Thumbnail) Views. Font Load operations work equally well when the display is Text View or Icon/Text View.

The resulting icon, or thumbnail, that is displayed in the **Browser**, does not reflect the actual size of the font. Rather, the two red lines to the left of the upper/lowercase characters span what represents a **50**-scanline height. The icons below show the positioning of the red lines for a **50**-scanline font, where they span the full height, and a **150**-scanline font, where they span one-third of the height.



50-Scanline Font

150-Scanline Font

Loading a TrueType or RGB Font

To use a font that is cataloged in the **Browser**:

- 1. Erase the Canvas.
- 2. Click the icon, or select **Text Window** from the **Tools** menu to open a **2D Text Window**.
- In the Font tab in the Properties window, or from the Font Toolbar, select a different font from the one added to the Browser in the previous operation. Click Apply after the font parameters are set. Type a few characters on the Canvas.
- 4. In the **Browser** window, double-click the font icon, or click the icon for the font that was created and added to the **Browser**, then click the **Load from Database** icon.
- 5. Continue typing. The new characters display the properties of the font selected from the **Browser**.

To apply a font using a bounding box:

• Draw a bounding box around a character(s) on the Canvas, then click the Load from Database icon.

To apply a font using drag-and-drop:

 Drag-and-drop a font icon from the Browser directly to the Font Sample area in the Properties window Font or 2D Font FX tab. Once the font is displayed in the Font Sample area, it is now loaded for use.



Drag-and-Drop Font from Browser to Properties

Searching Font Assets

To narrow down the assets in a **Browser** database, **Font Assets** can be searched, based on a search strings (Style Name, Comments, Subject, etc.), Modification Date, etc. *Refer to Searching the Browser* for *details on the Search tool.*

TrueType® Font Context Menu

Browser > Right-Click TrueType® Font Asset

A **TrueType**-based font in a **Browser** can be customized to suit the requirements of a production. A name and keywords can be assigned, and comments can be added. In addition, an **RGB Font** can be created or imported. To access these operations:

• Right-click on a font icon/text. The Font Asset context menu is displayed.



Browser Font Context Menu

The menu is divided into three sections: Editing; RGB Font operations and descriptive information.

NOTE

The context menu for an RGB Font is different than that of a TrueType® font (shown above). RGB Fonts are covered in detail in the section on RGB Fonts.

Edit

A **Font Asset** consists of the physical information describing the font itself (**Type Face**, **Height**, **Edge Type**) as well as accompanying metadata, which is information about the font, but which has no direct bearing on the appearance of the font. The user-defined metadata enables easier access to the font by providing the means to easily search as well as identify the function of the font.

<u>S</u> tyle Name:	
Type Face:	Palatino Linotype
<u>C</u> omments:	
<u>K</u> eywords:	, .
Height:	125
Edge Type:	Offset
Last Modified:	August 29,2003
Hotkeu:	

Font Information Dialog Box

There are both user-defined and non-editable parameters in the **Font Information** dialog box. The non-editable parameters are determined on creation/modification of the font.

Parameter	Description
Style Name	Can identify the function of the font, e.g., Weather Promo .
Type Face	Identifies Type Face , also known as Font Facename , Font Face , etc., of the selected font. Information field only - not editable from within this dialog box.
Comments	Comments that could further define use or provide other information. The Comments field can accommodate 255 characters. Pressing Enter performs the same function as clicking OK , so it cannot be used to start a new line. To insert a carriage return in the field: • Press Ctrl + Enter .
Keywords	Keywords that can be used for Browser Search purposes.
Height	Indicates height, in scanlines, of the selected font. Information field only - not editable from within this dialog box.
Edge Type	Indicates edge type(s) of selected font. Information field only - not editable from within this dialog box.

Parameter	Description
Last Modified	Indicates date that the font was last modified. Information field only - not editable from within this dialog box.
Hotkey	Defines the Hotkey combination that can be used to quickly load the font. Twenty hotkeys are available. The following Hotkeys can be set:
	 Alt + 0 through Alt + 9; Alt + Shift + 0 through Alt + Shift + 9.
	To set a Hotkey :
	 Just select from the drop-down list box.
	To load a font associated with a Hotkey :
	 Activate the Browser which is displaying the font, then make the Canvas active.
	 Press the Hotkey combination. Note that only the alphanumeric number keys, not the numeric keypad keys, can be used in a Hotkey combination.
OK or press Enter	Applies the parameter settings to the Font Asset .
Cancel	Cancels the application of the settings to the Font Asset .

The figure below shows an example of a **Font** Information dialog containing information, and how the icon/text would look in the **Browser** in an **Icon/Text View**.

Style Name:	Feature Title
	Palatina Linatura
Type race.	
<u>K</u> eywords:	Feature, Title
Height:	125
Edge Type:	Offset
Last Modified:	August 29,2003
<u>H</u> otkey:	Alt + 0
ОК	Cancel View Details
la	Typeface: Palatino Linotype Comments: Used for introducing feature Keywords: Feature, Title. Height: 125 Edge Type: Offset Last Modified: 09/02/2003

Font Information Edited

Deleting a Font from the Browser

A font can be deleted form a Browser as follows:

1. From the Font Asset context menu, select Delete.

OR

Select (click) the **Font Asset**, then press **Delete** on the PC keyboard or **Delete Character** on the Duet keyboard.

The following prompt asks for confirmation of the deletion of the specific font.



Font Delete Prompt

2. Click **Yes** to confirm deletion, or **No to Cancel**.

WARNING! There is no Undo for this operation!

Updating a Font

The physical attributes of a font can be modified and the update applied to the **Font Asset**:

- 1. While the font is active, modify attributes from the Font Toolbar and/or the Properties > Font/2D Font FX tabs.
- 2. From the **Font Asset** context menu, select **Update**. The information updates in the **Font Information** dialog box, as well as **Font Icon** and/or **Text View**. Not also that on the **Canvas**, characters created from the font are also updated to reflect the new characteristics.

WARNING! There is no Undo for this operation!

Create RGB Font

The **RGB Font** feature, familiar to iNFiNiT! operators, provides fast access to bitmap graphics in Lyric. An **RGB Font** is a set of characters that are based on bitmap graphics, instead of what is generally known as font characters. Each bitmap graphic in the font is mapped to a unique key or key combination, enabling quick typing of graphics onto the Canvas. A common use of **RGB Fonts** is for display of sports logos. Each logo is mapped to a key, and can easily be placed onto the Canvas by pressing a key or key combination, without the necessity of using the **Graphic Import** function. *Refer to RGB Fonts for details on creation and other RGB Font operations.*

Import RGB Font

Import RGB Font is not available from the context menu of a **TrueType**® font. The item is grayed out on this menu.

Style, Typeface, Comments and Keywords

These items are informational only. To edit, select Edit in this menu.

Sync TrueType® Fonts on Load

Config Menu > Preferences > Browser

When the attributes of a **TrueType**® font stored in the **Browser** are updated, all text written using the original font's attributes can be changed to a new font automatically. To enable this feature:

 In the Config Menu > Preferences > Browser tab, enable (check) Sync TrueType Fonts On Load checkbox.

	File Marco
Browser News_5pm Sports_5pm Weather_5pm	C:\Program Files\Chvron\Lyric\Browser.mdb C:\Program Files\Chyron\Lyric\News_5pm.mdb C:\Program Files\Chyron\Lyric\Sports_5pm.mdb C:\Program Files\Chyron\Lyric\Weather_5pm.mdb
	Browser
Set <u>Font</u> Source	NO 1
Set <u>H</u> ont Source	Browser

Preferences: Sync TrueType® Fonts on Load

To demonstrate how this works:

- 1. Create a new, customized font and save it to the **Browser**. Creating a new font is suggested here, as it will be overwritten during this procedure.
- 2. Right-click on the new asset in the **Browser**, select **Edit** to open the **Font Information** dialog box, then enter the name **Demo Font 3** in the **Style Name** field.

3. Create a multi-row 2D Text message, using the new font on one of the rows.



Message Using New Font

- 4. Save the message, take note of its **Message Number**, then erase the **Canvas**.
- Double-click the font that is to be changed, or drag-and-drop it to the Font Sample area in the Properties > Font or Properties 2D Font FX tab. The font becomes active in the Font and 2D Font FX tabs of the Properties menu. The illustration of the Properties > Font tab has been shortened for easier viewing in this example.



Activating a Font in the Browser -Reflected in Font and 2D Font FX Properties

6. In the Font and 2D Font FX tabs, modify this font, then click Apply. The Font Sample in the Properties Font and 2D Font FX tabs change accordingly.



Properties: Changing Font Characteristics

7. In the **Browser**, right-click on the font that is to be changed, i.e., **Demo Font 3**. Select **Update** in the context menu. For information about the **Update** function, refer to the section on the **TrueType**® Font Context Menu.



Browser Menu: Update

The **Thumbnail** of the font in the **Browser** is updated appropriately.

Browser - DIX	
	Properties _ 🗆 🗙
	Font 2D Font FX 3D
	Fill for Face Filter
Demo Font 4	

Browser Thumbnail Updated with New Font

8. Recall (read) the message created in Step 3.

- FBO Msg: 000	08504	
2D Text 1		
Demo	Font 1	
	- Dent O	1
Demi		
Demo	Font 3	
Demo	Font 4	

Recalling Message: Updated Font

The text composed using the font **Demo Font 3** has changed to reflect the update just performed on the font in the **Browser**.

Additionally, any other messages containing **Demo Font 3** will display the updated version of the font.

RGB Font Asset Operations

Browser >

Browser Menu > Show Font Assets

The **RGB Font** feature, familiar to iNFiNiT! operators, provides fast access to bitmap graphics in Lyric. An **RGB Font** is a set of characters that are based on bitmap graphics, instead of what is generally known as font characters. Each bitmap graphic in the font is mapped to a unique key or key combination, enabling quick typing of graphics onto the Canvas. A common use of **RGB Fonts** is for display of sports logos. Each logo is mapped to a key, and can easily be placed onto the Canvas by pressing a key or key combination, without the necessity of using the **Graphic Import** function.

Bitmap graphics from an **RGB Font** can be added to the **Canvas** as animatable bitmap objects or as 2D rowbased elements if typed in a **2D Text Window**.

Create RGB Font

To create an **RGB Font**:

- 1. If **Font Assets** are not already displayed in a **Browser**, open a **Browser** window, then click A or select **Show Font Assets** from the **Browser** menu.
- Right-click in the area of the Browser where the Font Assets are displayed, then select Create RGB Font from the Font Asset, TrueType or RGB Font context menu. Refer to Browser Font Operations for brief descriptions of each of these menus.

Create RGB Font	X
<u>N</u> ame:	
Hot Key:	•
ОК	Cancel

Create RGB Font Dialog Box

- 3. Enter a **Name** for the font (e.g. *Sports Logos*), then select a **Hotkey** from the **Hot Key** drop-down list box. As described above, the **Hotkey** choices are **Alt + 0** through **Alt + 9**; and **Alt + Shift + 0** through **Alt + Shift + 9**.
- 4. Click OK. The Create RGB Font dialog box closes. A new Font Asset now appears in the Browser. Lyric assigns a default bitmap graphic (shown below) to uppercase A (Shift + A). The graphic as well as the assigned Name and Hotkey is displayed as the icon. When a new bitmap is assigned to uppercase A, a representation of that graphic will take the place of the default RGB Font icon.



Default RGB Font Graphic

RGB Fonts can also be created using the **Custom Font Editor**, accessible from the context (right-click) menu of the blank area of the **Browser** or the context menu of an **RGB Font Asset**.

The **RGB Font** context menu accesses **RGB Font** operations. To display the menu, right-click on an **RGB Font** icon/text.



RGB Font Context Menu

The menu items, except for **Create RGB Font** (*already described above*), are described in the following paragraphs.

Font Browser

The **Font Browser** provides the ability to view the bitmaps in the **RGB Font**, as well as add, delete and modify **RGB Font** characters.

• To open the **Font Browser**, select **Font Browser** from the **RGB Font** context menu. The figures below show **Font Browser** displaying a new **RGB Font**, and a **Font Browser** displaying an **RGB Font** containing multiple characters.

ont Browser		×
Name:	Ho	t Key:
Sports Logos	Alt	:+1
Comments:		
		*
		-
Kev Words:		
Keu Assianments		
Noy Assignments		
K	y: Al Value: 65 	C. Sala has
RGBA FI	e: L: verogram Files ze: 150 x 150	NC Vrgba.omp

Font Browser - New Font

ont Browser		×
Name:	Hot Key:	
Business	Alt + 1	•
Comments:		
Business Gra	aphics	-
		-
Keu Words:		
Business, Sta	ocks, Graphics, Arrows	_
Keu Assianme	a to d	
	Key: A. Value: 65 File: C:\Program Fil\Arrow_Up.tga Size: 109 x 94	
BUSINESS	Key: B. Value: 66 File: C:\Program Fil\Business.tga Size: 163 x 82	
		1

Font Browser - Populated

To quickly select a character in the Font Browser:

• Press the key combination for that character. For example to select the **RGB Font** character that is assigned to **Shift + C**, press **Shift + C**.

The following parameters customize the font for easy recognition, as well as providing information aids when using the **Browser Search** function. Right-clicking the **Name**, **Comments** and **Keywords** displays a context menu that provides text editing functions **Undo**, **Cut**, **Copy**, **Paste**, **Delete** and **Select All**.

Parameter	Description
Name	Can identify the function of the font, e.g., Sports Logos .
Hot Key	Defines the Hotkey combination that can be used to quickly load the font. Twenty hotkeys are available. The following Hotkeys can be set:
	 Alt + 0 through Alt + 9; Alt + Shift + 0 through Alt + Shift + 9.
	To set a Hotkey :
	Just select from the drop-down list box.
	To load a font associated with a Hotkey :
	 Activate the Browser which is displaying the font, then make the Canvas active.
	2. Press the Hotkey combination. <i>Note that only the alphanumeric number keys, not the numeric keypad keys, can be used in a</i> Hotkey <i>combination.</i>
Comments	Comments that could further define use or provide other information. The Comments field can accommodate 255 characters. Pressing Enter performs the same function as clicking OK , so it cannot be used to start a new line. To insert a carriage return in the field:
	Press Ctrl + Enter.
Key Words	Keywords that can be used for Browser Search purposes.
Key Assignment	Displays each graphic that is mapped to the key or key combination. RGB Font characters can be added, deleted or modified from the Key Assignment window. These operations are described directly following this table.
OK or press Enter	Applies the parameter settings to the Font Asset .
Cancel	Cancels the application of the settings to the Font Asset .

The **Key Assignment** window has a context menu, accessible by right-clicking on a font character listing or a blank area in the window. the figure below shows the context menu as accessed by right-clicking on the font character mapped to uppercase **A**.



Key Assignment Context Menu

The menu items are described in reverse order.

Add Character

A bitmap graphic can be mapped to each key combination available to Lyric:

In the **Key Assignment** window, right-click on either an existing **RGB Font** character listing or the blank area. If a blank area is right-clicked, an unpopulated **Add/Modify RGB Character** dialog box is displayed.

Kev:	Value:		_
	J		
ath:		Browse	e

Add/Modify RGB Character Dialog Box - Blank Area Right-Clicked

If an existing **RGB Font** character listing is right-clicked, the dialog box is populated with the information about the character.

<u>K</u> ey:	A	⊻alue: 65	<u>A</u> LT	
1. d		<u>E1 101 11 1</u>		
rath:	L:\Program	n Files/Uhyron/Lyric	24.1 Vrgb 🛛 👔	(rowse)

Add/Modify RGB Character Dialog Box - Existing RGB Character Right-Clicked

Set the following parameters. Note that if an existing listing has been right-clicked, new **Key** information should be entered, or the existing key will be modified. The modification procedure is described below.

Parameter	Description
Кеу	Specifies the key to which the bitmap is to be mapped (assigned). The Key can correspond to any of the alphanumeric keys available on the PC or Duet keyboard, and includes Shift + key combinations. Alt + key combinations, described below, are also available.
Value	Corresponds to the ASCII Code for the key or key combination. The Value field automatically populates when Key or Alt is set. It is possible to enter a Value first, but only the Key field reflects the setting. Because the Alt field does not, it could becomes difficult to tell which key combination will produce the RGB character when out of the range of common alphanumeric characters.

Parameter	Description
ALT	Enables the assignment of RGB Font characters to Alt + or Alt + Shift + key combinations. For example, to assign an RGB Font character to Alt + D (which is Alt + Shift + D):
	 Enter Shift + D in the Alt field. Do not enter a setting into the Key field. It automatically displays a bar to indicate an Alt setting.
Path	Specifies the path to the graphic assigned as the RGB Font character.
Browse	Enables browsing for graphic assigned as the RGB Font character. Once a graphic is selected, the path automatically populates the Path field.
ОК	Adds the new RGB Font character to the RGB Font . The new character now appears on the Font Browser .
Cancel	Cancels the addition of the new RGB Font character.

After parameters are set:

• Click OK to add the new RGB Font character or Cancel to cancel.

Once a graphic is assigned to a key or key combination, pressing that key or key combination imports the graphic to the **Canvas**.

Modify Character

The **Modify Character** function enables the modification of any **RGB Font** character. This function is available to all **RGB Font** characters. It is not available when a blank area of the **Font Browser** is right-clicked.

If the **RGB Font** character assigned to uppercase **A** key is right-clicked, the following is displayed:

V	-			
Zeh:	JA	Value: 165	<u>A</u> L	.1
ath:	C:\Progr	ram Files\Chyron ^v	\Lyric\rgba.bm	Browse

Add/Modify RGB Character Dialog Box - Character A Right-Clicked

This is the same dialog box used for adding a new character. Refer to the parameter table above for information on the settings. Note that:

- When the character uppercase **A** is selected for modification, only the **Path**, i.e. the graphic assigned to the key. can be modified. The **Key** value itself cannot be modified.
- If an **RGB Font** character not assigned to uppercase **A** is right-clicked, the **Key**, **Value** and **ALT** fields become available for modification.

<u>Delete</u>

The **Delete** function enables the deletion of an **RGB Font** character from an **RGB Font**. The **Delete** function is available to any **RGB Font** character except that assigned to uppercase **A**. It is also not available when clicked on a blank area of the **Font Browser**.

1. From the **Key Assignment** context menu, select **Delete**. The following prompt asks for confirmation of the deletion of the specific font.



RGB Font Character Delete Prompt

2. Click **OK** to execute the **Delete**, or **Cancel** to cancel.

WARNING! There is no Undo for this operation!

Custom Font Editor

The **Custom Font Editor** provides the ability to create **RGB Fonts** which can then be imported into other **Browser** windows either locally or remotely. *Refer to Custom Font Editor for information on using this tool.*

Delete

The Delete function enables the deletion of an RGB Font from a Browser database.

1. From the RGB Font context menu, select Delete.

OR

Select (click) the **RGB Font Asset**, then press **Delete** on the PC keyboard or **Delete Character** on the Duet keyboard.

The following prompt asks for confirmation of the deletion of the specific font.



Font Delete Prompt

2. Click Yes to execute the Delete, or No to cancel.

WARNING! There is no Undo for this operation!

Update

This function replaces the selected font in the **Browser** with the currently active font. To perform an update:

- 1. Create a new font or activate an existing font. It can be either a **TrueType®** or **RGB Font** It is not necessary for the replacement font to be resident in the **Browser**.
- 2. In the **Browser**, right-click the font to be replaced, then select **Update** from the context menu. The following prompt is displayed:



Update Font Prompt

3. Click Yes to replace. The active font replaces the selected font.

WARNING! There is no Undo for this operation!

NOTE

When an RGB Font character is updated via sync-RGB-fonts, the new character assumes the size of the original.

Add/Modify Character

The **Add/Modify** function enables the addition or modification of an **RGB Font** character without the necessity of entering the **Font Browser**. To add or modify an **RGB Font** character:

1. In the **Browser**, right-click on the **RGB Font** listing, then select **Add/Modify Character** from the context menu. A blank **Add/Modify RGB Character** dialog box is displayed.

Add / Mod	lify RGB Character	×
<u>K</u> ey:	Value:	
Path:		Browse
	ОК Са	ncel

Add/Modify Dialog Box

- Set the Key assignment. Note that if the key already has a graphic assigned, the path is *not* shown in the Path field. Be cautious when working in this manner with RGB Fonts that already have graphics assigned to keys. It is recommended that in this instance, modifications and additions be performed from the Font Browser as previously described.
- 3. Click **OK**. The changes to the **RGB Font** are applied.

Import RGB Font

A set of graphics can be imported as an **RGB Font** to the **Browser**. The graphics must adhere to the following conditions:

- All graphics to be assigned to the font must reside in the same directory.
- All graphics assigned to the font must be in .tga format.
- The filenames must correspond to the **ASCII** code numbers. For example, the graphic that corresponds to **Shift + A** must be named **0065.tga**; the graphic that corresponds to **Shift + B** must be named **0065.tga**; etc.

To perform an **RGB Font** import:

- 1. Create a new **RGB Font**, but do not modify or add any characters.
- 2. Left-click on its icon/text in the **Browser**, then select **Import RGB Font** from the context menu. The **Browse for Folder** dialog box is displayed.

Browse for Folder	<u>? ×</u>
Select path to RGB font files	
My Documents My Computer 31/2 Floppy (A:) Compact Disk (C:) Compact Disk (D:) Compact Disc (E:) Lyric3pt5 on 'Emerald\Lyric' (I Lyric3pt5 on 'Emerald\Lyric' (I Lyric3pt5 on 'Emerald\Lyric' (I P 2 Lyric3pt5 on 'Emerald'(P:) P 2 Lyric on 'emerald' (P:) P 2 My Network Places	:)
OK	Cancel

Browse for Folder Dialog Box

- 3. Navigate to the folder that contains the graphics files.
- 4. Click OK. The graphics files are loaded into the new RGB Font in the Browser. Their Key Assignments are determined by their filenames.

Refer to Custom Font Editor for additional information regarding RGB Font creation.

Custom Font Editor

Browser > Select, then right-Click RGB Font or Right-Click Blank Area in Browser > Custom Font Editor

Tools Menu > Font Editor

Lyric Directory > Open CFE.exe

Before working with the **Custom Font Editor**, it is important to understand **RGB Fonts**. **RGB Fonts** are sets of bitmaps, wherein each bitmap is assigned a to unique key or key combination. When the key or key combination is typed, the assigned graphic is imported to the **Canvas**. *Refer to RGB Fonts for detailed information RGB Font characteristics and operations.*

Custom Font Editor features include:

- Conversion of Lyric **RGB Fonts** to iNFiNiT!![®] **RGB Fonts** and conversion of iNFiNiT!! **RGB Fonts** to Lyric **RGB Fonts**.
- Drag-and-drop character assignment within the **Custom Font Editor**, or from one open **Custom Font Editor** to another.
- Independent Logo Clipboard.

The **Custom Font Editor** also performs the same functions as Lyrics **Font Browser** while offering different methods of adding, modifying and cataloging characters in an **RGB Font**. *Refer to RGB Fonts for information on the Font Browser.*

Launching the Custom Font Editor

The **Custom Font Editor** can be launched from within Lyric or independently from outside of Lyric:

- From the Lyric **Browser**, display the **Font Assets**. Select, then right-click an **RGB Font**, or right-click a blank area in the **Browser**. From the context menu, select **Custom Font Editor**.
- From the Lyric Tools menu, select Font Editor.
- In the directory in which Lyric is installed, locate, and then double-click **CFE.exe**.



CFE.exe

Custom Font Editor Icon

Multiple instances of the Custom Font Editor can be open at the same time.

File Menu Overview

The File menu includes commands familiar to Windows® users, as well as those specific to the Custom Font Editor.



File Menu - Expanded

New

The **New Font Editor Window** C command opens a new **Font Editor**. Note that unlike creating an **RGB Font** from the Lyric **Browser**, there is no default graphic assigned to the uppercase **A** (**Shift + A**) key combination.

Eile Edit Tools Window I D 2 + 1 I - 1 I	
	(
1 2 3 4 Alt 1 5 Alt 2 7 Alt 2 8 Alt 3 9 Alt # 10 Alt 4	•
11 Alt \$ 12 Alt 5 13 Alt % 14 Alt 6 15 Alt ' 16 Alt 7 17 Alt & 18 Alt 8 19 Alt * 20 Alt 9 21 Alt (
22 Alt 0 23 Alt) 24 Alt - 25 Alt _ 26 Alt = 27 Alt + 28 Alt ` 29 Alt 30 Alt Q 31 Alt q 32	
33 ! 34 " 35 # 36 \$ 37 % 38 & 39 ' 40 (41) 42 * 43 +	
44 , 45 - 46 . 47 / 48 0 49 1 50 2 51 3 52 4 53 5 54 6	
55 7 56 8 57 9 58 : 59 ; 60 < 61 = 62 > 63 ? 64 @ 65 A	•

Custom Font Editor - Newly Opened

<u>Open</u>

The **Open s Font File** Command displays a dialog box for opening a font which has the same format (Lyric or iNFiNiT!) as the last font loaded in the **Custom Font Editor**. The procedure for opening each type of font is described in the following section.

Open iNFiNiT! Font

The **Open iNFiNiT! Font** command opens an iNFiNiT! font that is stored on the PC or Duets local drive or on a networked iNFiNiT! Family system or other drive. An iNFiNiT! font can also be opened from the drop-down menu accessed from the **Open** icon located on the **Custom Font Editor** toolbar.



Open iNFiNiT! Font

Lyric User Guide

When **Open iNFiNiT! Font** is selected, the **Open a Machine Font** dialog box opens. Navigation to a file is the same as in the Windows environment. iNFiNiT! fonts are all formatted **.xxxxxxx.fnt**, where the **x**'s are always numerals. Leading zeroes are not displayed in the file name. Note that **Machine Fonts** in this environment also refer to **RGB Fonts**. Additionally, **Machine Font** characters and **RGB Font** characters can be mixed within one font.



Open a Machine Font Dialog Box Showing RGB Font Characters



Open a Machine Font Dialog Box Showing Machine Font and RGB/Special Characters

The information area below the file selection area displays the **File Header Name**, the **Font Type**, the **File Size** and the **Status** of the font load.

The right area of the **Open a Machine Font** dialog box displays the **Font Preview** pane, in which the graphic assigned to the font are displayed on a grid representing the **Key** assignments. The top left cell of the grid represents **ASCII Code 0**. The cells are numbered from left-to-right, top-to-bottom. The character **A** is at **ASCII Code 65**, which in this grid, is located in the sixth row, at the sixth cell.

After navigating to the iNFiNiT! font file:

• Click Open. The Open a Machine Font dialog box closes, and the iNFiNiT! font is loaded into the Custom Font Editor.

Note that the **Open** operation is different from importing an iNFiNiT! file from the **File** menu in Lyric.

Open Lyric Font

The **Open Lyric Font** command opens a Lyric font that is stored on the PC or Duets local drive or on a networked drive. A Lyric font can also be opened from the drop-down accessed from the **Open** button located on the **Custom Font Editor** toolbar.



Open Lyric Font

When **Open Lyric Font** is selected, the **Open Lyric Font** dialog box opens:

	[[le i		-	
Reserved	StyleName	Height	Edge			
2	Graphic Elements	50	None	9/5/2003 10:3:17 PN		
3	Weather Graphics Image:	50	None	9/5/2003 10:28:05 A	200000000000000000000000000000000000000	
4	News Graphics and Images	223	None	5/4/2004 11:28:05 A	DIDITION OF	
5	5 Sports Logos	50	None	9/3/2003 4:23:17 PN		
				-		

Open Lyric Font Dialog Box

The **Open Lyric Font** dialog box is composed of the following elements:

Element	Description					
Available Fonts: Lists the available RGB Fonts in the selected data source (database). This window contains five fields for each listed font.						
Font Number (Reserved1)	Assigns a number to the RGB Font , in order of its creation in the database. Number 1 is reserved for use by the Custom Font Editor .					
StyleName	The name assigned to the font.					
Height	Default Height always at 50 for RGB Fonts . The Height setting has no effect on the size of each graphic in the font.					
Edge	Default Edge always at None for RGB Fonts . The Edge setting has no effect on the appearance of each graphic in the font.					
LastModified	Displays date and time of last modification to the RGB Font .					

Element	Description							
Preview: Determines which graphic is displayed as the identifying icon (thumbnail) in the Browser. The default is the graphic assigned to uppercase A, which is ASCII Code 65. The Preview Icon can be set to another graphic, as shown in the previous figure.								
Preview Icon Assignment	This field displays the ASCII Code for the Preview Icon. In the figure above, it is 137 , which corresponds to uppercase It can be changed by selecting a new ASCII Code from the drop-down list box.							
Preview Icon Graphic	Displays the graphic associated with the Preview Icon Assignment.							
Preview Icon Path	Displays the path to the Preview Icon graphic.							
Other Functions								
Delete Font	Deletes the font on which the cursor is positioned.							
Element	Description							
-----------------------	--	--	--	--	--	--	--	--
Select Data Source	Enables selection of new data source. When clicked, the following Data Link Properties dialog box opens:							
	🗒 Data Link Properties 🔀							
	Provider Connection Advanced All							
	Specify the following to connect to Access data:							
	1. Select or enter a <u>d</u> atabase name:							
	2. Entrainformation to be an to the data to							
	2. Enter information to log on to the database:							
	User name: Admin							
	Eassword:							
	<u>I</u> est Connection							
	OK Cancel Help							
	Data Link Properties Dialog Box							
	Navigate to the database, then click OK . For information on setting other parameters in this dialog box, refer to Microsoft® Windows® documentation.							
Open	Loads the selected font into the Custom Font Editor.							
Cancel	Cancels the font load and closes the Open Lyric Font dialog box.							

To load a Lyric font:

• Place the cursor on the row that lists the font, then double-click the row or click **Open**. The **Open** Lyric Font dialog box closes, and the Lyric font is loaded into the **Custom Font Editor**. The **Title Bar** of the **Custom Font Editor** displays the name of the data source, as well as the **Font Number** as displayed in the **Open Lyric Font** dialog box.

AC	uston	n For	nt Edit	or -	Lyric N	lews	s.mdb	- #	4													X
File	Edit	Too	ls <u>W</u> ii	ndov	V																	
	È	•	H •	ė	16	8	, b	ß	- 6		Color]	1		~	2	I -	₩ •					
		1		2		3		4	Alt 1	5	Alt !	6	Alt 2	7	Alt @	8	Alt 3	9	Alt #	10	Alt 4	•
11	Alt \$	12	Alt 5	13	Alt %	14	Alt 6	15	Alt '	16	Alt 7	17	Alt &	18	Alt 8	19	Alt *	20	Alt 9	21	Alt (
22	Alt 0	23	Alt)	24	Alt -	25	Alt _	26	Alt =	27	Alt +	28	Alt `	29	Alt	30	Alt Q	31	Alt q	32		
33	1	34	n	35	#	36	\$	37	%	38	&	39	1	40	(41)	42	*	43	+	
44		45	-	46		47	,	48	0	49	1	50	2	51	3	52	4	53	5	54	6	
55	7	56	8	57	9	58		59	*	60	X	61	<u> </u>	62	>	63	?	64	@	65	A	-
Empt	y Char	Tree .		ſ		٢,		r		ſ	N.	[ſ	78	г ,547	KB N	F BWS (Graphic	r s and	d Image	

Custom Font Editor - Lyric Font Loaded

Save

Save 🗎 saves the font in its current format, with the most recent changes.

Save As

Save As provides the operator the opportunity to specify a new name or a different format for the font being saved. A copy of the file may also be created and saved with these changes without affecting the original.



Save As iNFiNiT! or Lyric Font Icon and Drop-Down

<u>Print</u>

Print Print allows the contents of an **RGB Font** to be printed out as a keyboard map for reference. *Refer to* **Printing Font Sets** later in this section for details.

Print Setup

Accesses the **Print Setup** facility for the specific printer. *Refer to the printer documentation for information on setting up the printer.*

<u>Close</u>

Close Editor mexits the Custom Font Editor..

Close All Unmodified Editors

Close All Unmodified Editors only closes Custom Font Editors to which no changes have been made.

Close All Editors

Close All Editors closes all **Custom Font Editors**, whether or not they have been modified, but does request confirmation.



Confirm Save Changes to Browser

Selecting Characters

One or multiple characters can be selected. **Delete** and **Toggle Marker** operations affect all currently selected characters.

To select a character:

• Click on the character.

To select a range of characters:

- 1. Click the character in the range.
- 2. Hold the **Shift** key down while clicking the last character in the range.

To select non-contiguous characters:

• Hold the Ctrl key down while clicking the characters.

Logo Clipboard

The Logo Clipboard can store images which are available to any of the fonts that are currently displayed in open Custom Font Editors. Images may be added to the Logo Clipboard directly from directories accessible to the system. An image can then be drag-and-dropped from the Logo Clipboard to any font displayed in an open Custom Font Editor. An image on the Logo Clipboard may also be added to a font through the Add Picture function in the Custom Font Editor. To open the Logo Clipboard:

Click the View Logo Clipboard
 icon on the Custom Font Editor toolbar, or select View Logo Clipboard from the Window menu.



Logo Clipboard

Logo Clipboard functions are available from both **Logo Clipboard** toolbar, as shown in the previous figure, the **Logo Clipboard** context menu, as well as from shortcut keys. To display this menu:

• Right-click the Logo Clipboard. Note that certain functions require that a selected graphic is rightclicked.



Logo Clipboard Context Menu

To add a graphic to the Logo Clipboard:

1. Click the Add icon Add , press Insert or select Add Picture from the Logo Clipboard context menu. The Open a Picture File dialog box opens.

ook in: 🔂 Images	🗾 🕂 🖻 🚽	🔸 🔽 Track Alpha File 🔲 Invert Alp
OTS Circle Soft.tga OTS Circle.tga OTS Soft Drop.tga OTS Soft Mask side.tga OTS Soft Mask.tga OTS Title Bar.tga	OTS Title Mask.tga OTS Top Animation.tga RGB Tools Blue Bar.tga RGB Tools Blue Trans.tga RGB Tools Golf.tga RGB Tools Medical Fill.tga	R R R R R R C S C
ile <u>n</u> ame: OTS Title Bar.tga		

Open a Picture File

- 2. Navigate to the desired image file.
- 3. The following **Alpha** parameters can be set, depending on the type of image file:
 - Track Alpha File: Available to RGB Only image files.
 - Invert Alpha: Available to only RGB + Alpha image files.
 - Neither Track Alpha File nor Invert Alpha are available to RGB + Associated Alpha image files.
- 4. Click **Open**. The image is added to the **Logo Clipboard**.

To add **RGB** font characters from an iNFiNiT! Machine Font:

- 1. Select Add Pictures from Machine Font from the Logo Clipboard Context menu. The Open a Machine Font dialog box opens.
- 2. Select a **Machine Font**, then click **Open**. All **RGB** characters from the **Machine Font** are added to the **Logo Clipboard**, following any existing graphics on the **Logo Clipboard**.

To delete a graphic from the Logo Clipboard:

• Select the graphic that is to be removed, and then click the **Delete** icon ^{Delete}, press **Delete** or select **Remove Selected Picture** from the **Logo Clipboard** context menu.

To clear all graphics from the Logo Clipboard:

Click the Clear icon Clear or select Clear Clipboard from the Logo Clipboard context menu.

To save a **Logo Clipboard** graphic to an image file:

1. Click the Save icon Save , press Ctrl + S, or select Save Picture from the Logo Clipboard context menu. The Save As dialog box opens.

iave As			?)
Save in: 🔂 Nev	vs_Graphics	💌 🗢 🖻	☆
)049.tga 1050.tga	🔊 055.tga 🔊 056.tga	폐 061.tga 폐 065.tga	🔊 070.tga 🔊 071.tga
) 051.tga) 052.tga) 052.tga	폐 057.tga 폐 058.tga 페 050.təə	폐 066.tga 폐 067.tga 교 069.tag	🔊 072.tga 🔊 073.tga
■ 053.tga ■ 054.tga	🛥 059.cga 🛥 060.tga	📾 069.tga	i 074.tga i 075.tga
✓ Image: 104 File name: 104	8.tga		Save
Save as <u>t</u> ype: TG	A Files (*.tga)		Cancel
🔽 Track <u>A</u> lpha F	ile	Compression	Quality: 100

Save As Dialog Box

2. Navigate to the directory in which the file is to be saved, enter a name in the **File Name** field, select a file type in the **Save as Type** field, and then click **Save**.

Graphics can be cut and copied to the **Windows**[®] **Clipboard** and pasted from the **Windows**[®] **Clipboard**. Note that **Paste** operations do not overwrite graphics already on the **Logo Clipboard**. Pasted graphics are always added to the **Logo Clipboard**.

- To cut a graphic to the Windows Clipboard: Select the graphic, and then press Ctrl + X select Cut to Windows Clipboard from the Logo Clipboard context menu. The graphic is removed from the Logo Clipboard and pasted to the Windows Clipboard.
- To copy a graphic to the Windows Clipboard: Select the graphic, and then press Ctrl + C select Copy to Windows Clipboard from the Logo Clipboard context menu. The graphic is remains on the Logo Clipboard and is copied to the Windows Clipboard.
- To paste a graphic from the Windows Clipboard: Press Ctrl + V select Paste from Windows Clipboard from the Logo Clipboard context menu. The graphic is pasted from the Windows Clipboard to the Logo Clipboard. The graphic remains available on the Windows Clipboard until it is overwritten by another Cut or Copy operation. Note that a graphic pasted to the Windows Clipboard can originate from an external program such as Adobe[®] Photoshop[®].

The size of the Logo Clipboard thumbnails can be set to Small, Medium, Large or Extra Large.



Thumbnail Sizes: Small, Medium, Large, Extra Large

To change thumbnail size:

• Click the S, M, L or XL icon to display characters as Small, Medium, Large or Extra Large, respectively.

OR

• Press S for Small; M for Medium; L for Large; or X for Extra Large.

OR

• Select Picture Size from the Logo Clipboard context menu, then select Small, Medium, Large or Extra Large from the Picture Size menu.

Picture Size		Small
Arrange Pictures	•	<u>M</u> edium
S <u>t</u> ay On Top		Large

Picture Size Menu

To change the order in which the graphics are displayed:

1. Select Arrange Pictures from the Logo Clipboard context menu. The Arrange Pictures menu is displayed.



Arrange Pictures Menu

The menu is divided into two sections:

- Parameter: The specific parameters associated a graphic on which ordering can be based.
 - **TimeStamp:** The time at which the graphic was added to the **Logo Clipboard**.
 - **Description:** The **Description** as set in the **Logo Clipboard**.
 - Size: The area of the graphic as calculated by multiplying Width X Height.
 - Width: The Width of a graphic, in pixels.
 - **Height:** The **Height** of a graphic, in scanlines.
 - Aspect Ratio: The Aspect Ratio of the graphic, as calculated by dividing Width divided by Height.
- Order Direction: The direction of ordering.
 - **Reverse Order:** Reverse order of the currently set ordering.
- 2. Select one choice from the **Parameter** section. The menu closes. The **Logo Clipboard** reorders the graphics based on the specified **Parameter**.

3. Reopen the menu, and then select one or both orders from the **Order Direction** section. The **Logo Clipboard** reorders the graphics based on the specified **Order Direction(s)**.

The **Logo Clipboard** can be set to display on top of the open **Custom Font Editors** when they overlap, or to display behind the active **Custom Font Editor** when they overlap.

- To display the Logo Clipboard in front of all open Custom Font Editors when they overlap, select (check) Stay on Top from the Logo Clipboard context menu.
- To display the Logo Clipboard behind the active Custom Font Editor when they overlap, deselect (uncheck) Stay on Top from the Logo Clipboard context menu.

To edit the description of the graphic:

Edit Description: Each image in the Logo Clipboard can have a description. To set the Description:

1. Select Edit Description from the Logo Clipboard context menu. The Edit Description dialog box opens.

	×
Cancel	
	Cancel

Edit Description Dialog Box

2. Enter a description in the New Description field, and then click OK.

Assigning an Image to a Key Combination Add Picture From File



Add Picture From File

This button provides a quick method for adding images to the Font Editor from local or mapped network drives or the Logo Clipboard.

- Logo Clipboard allows the operator to paste a selected element on the clipboard directly to a selected cell on the Font Editor.
- File in Local Drive allows the operator to navigate directly to the location of a desired file and save the file into the Font Editor.

Open a Picture File	A REAL PROPERTY AND ADDRESS OF TAXABLE PARTY.		? >
Look in: 🔄 Images		🔽 Track Alpha File 🛛 🗖 Invert Alp	bha
OTS BG.tga OTS BG_Golf.tga OTS BG_Medicare.tga OTS BG_Money.tga OTS BG_NY Stock Exchange.tga OTS BG_Oil Well.tga	Image: Constraint of the systemImage: Constraint of the system<		
File name: OTS BG_Money.tga			
Files of type: All Graphic Files (chy, I	:ga,bmp,jpg,tiff) 💌 Cancel	RGB + Alpha 246 x 3	386

Open a Picture File

This function may also be invoked by pressing the **Insert** key with any thumbnail cell (empty or already assigned to another image) on the Font Editor selected.

An image already assigned to a character that is displayed in an open **Custom Font Editor**, can be draggedand-dropped to another position in the same or another open **Custom Font Editor**. Note that the original character assignment remains the same. The image is copied to the new position.

Character Attributes

To display basic character attributes, as well as change display parameters:

• Double-click a character. The Character Attributes and Display Parameter dialog box is displayed:

🔀 Letter = D	Size= 26 x 24				
		-			
Chess Bk	Show Alpha	< B	ack Ne>	d >	Close

Character Attributes and Display Parameter Dialog Box iNFiNiT! Machine Font Character



Character Attributes and Display Parameter Dialog Box -Lyric/iNFiNiT! RGB Font Character

The **Title Bar** displays the **Key** assignment for the character, as well as the size of the character. There are two display parameters which can be set. Note that they affect the display only within the **Character Attributes and Display Parameter** dialog box, not in the grid display in the **Font Editor**.

Chess: When **Chess** is enabled (selected), any transparent areas in the character display as a chessboard pattern similar to that used in Adobe[®] Photoshop[®]. In the previous two figures, **Chess** is enabled. When **Chess** is disabled (deselected), the chess pattern is not displayed. The default setting is **Enabled**. To enable/disable **Chess**:

• Click the Chess button.

The following figure shows **Chess** disabled.



Chess Disabled

Show Alpha: When **Show Alpha** is enabled (selected), the **Alpha** information for the character is displayed. When **Alpha** is disabled (deselected), the **Alpha** information is not displayed. In the previous three figures, **Alpha** is disabled. The default setting is **Disabled**. To enable/disable **Alpha**:

• Click the **Alpha** button.

The following figure shows Alpha enabled.

' <mark>ℝ</mark> Letter=: Size=246 x 386		
Cetter -: 512e - 240 x 300		
Chess Bk Show Alpha < Back Next >	> Close	

Alpha Enabled

To display the previous character in the font:

• Click the **< Back** button.

To display the next character in the font:

• Click the **Next >** button.

To close the Character Attributes and Display Parameter dialog box:

• Click the **Close** button.

Character Context Menu

A variety of operations can be applied to each character from its context menu. To display this menu:

Right-click the character.



Character Context Menu

Delete (Ctrl + Delete)

Delete removes the selected character or characters from the font. To execute a Delete:

• Select **Delete** from the **Character** context menu or press **Ctrl + Delete**. The character is removed from the font without confirmation. Note that the image file is not deleted from its original location. This operation is also available from the **Edit** menu.

Toggle Marker (Space Bar)

Toggle Marker applies a marker \checkmark to the currently selected characters. Multiple characters that are marked can be batch-processed for operations such as **Delete**. Unlike selecting characters by clicking, **Shift-clicking** or **Ctrl-clicking**, this type of marker applied to characters is not lost when characters outside of the selection are clicked. To mark a character or characters:

• Select the character or characters to be marked, then select **Toggle Marker** from the **Character** context menu or press the **Space Bar**. This operation is also available from the **Edit** menu.

To remove the marker from a character or characters:

• Select the marked character or characters from which to remove the mark, then select **Toggle Marker** from the **Character** context menu or press the **Space Bar**. This operation is also available from the **Edit** menu.

Toggle Mix Mode (iNFiNiT! Fonts Only)

An **RGB** character within an iNFiNiT! font can be designated as an **iNFiNiT! Mask Character** by enabling **Mix Mode** for that character. When a character has **Mix Mode** enabled, a small red **H** icon is displayed in the upper right corner of the character in the **Custom Font Editor**. Note that **iNFiNiT! Mask Characters** are *not* supported by Lyric!



iNFiNiT! RGB Character - Mix Mode Enabled

To enable/disable Mix Mode:

 Select the RGB character or characters for which to enable/disable Mix Mode, then select Toggle Mix Mode from the Character context menu. This operation is also available from the Current Character context menu, as described in the following paragraphs.

Current Character

Current Character accesses additional functions that apply to only the currently selected character. To access these functions:

• Select Current Char from the Character context menu. The Current Char(acter) context menu is displayed.



Current Character Context Menu

Delete removes the selected character or characters from the font. To execute a Delete:

• Select **Delete** from the **Current Char** context menu or press **Ctrl + Delete**. The character is removed from the font without confirmation. Note that the image file is not deleted from its original location. This operation is also available from the **Edit** menu.

Edit Marker enables a marker to be applied, toggled or removed. To edit a marker:

• Select Edit Marker from the Current Char context menu. The Edit Marker context menu is displayed:

	Current Char	•		Delete		
a	Selected Chars	Þ	7	Edit Marker	•	Set
	Marked Chars	•	H	Edit Mix Mode	•	Clear
	Select All	Ctrl+A	0.0	Add Picture from	•_	Toggle
	Invert Selection			Send Picture to		
	Select Special Chars			Save Picture to	+	
E .	and the second se		-			

Edit Marker

- Select **Set** or press **S** to set a character as marked.
- \circ Select Clear or press C to clear the marker from the character.
- o Select Toggle or press T to toggle from marked to unmarked, or unmarked to marked.

Edit Mix Mode (iNFiNiT! fonts only) enables an iNFiNiT! RGB character to be designated an iNFiNiT! Mask Character. This feature is covered earlier in the section on Toggle Mix Mode. To enable/disable/toggle Mix Mode:

• Select Edit Mix Mode from the Current Char context menu. The Edit ix Mode context menu is displayed:

Current Char Selected Chars	۲ ۲		Delete Edit Marker	•	
🖊 Marked Chars	•	H	Edit Mix Mode	Þ	Enable Mix
Select All Invert Selection	Ctrl+A	Add Picture from		*	Disable Mix Toggle Mix Mode
Select Special Chars		*	Save Picture to	·	

Edit Mix Mode

- Select Enable Mix or press E to set the character as an iNFiNiT! Mask Character.
- Select **Disable Mix** or press **D** to revert the character to normal.
- Select Toggle or press T to toggle from iNFiNiT! Mask Character to normal character or from normal character to iNFiNiT! Mask Character.

An image can be assigned as a font character using the **Add Picture From** function.

Current Char	Delete Edit Marker Edit Mix Mode	*
Select All Ctrl+A	Add Picture from	Logo Clipboard Ctrl+
Invert Selection	Send Picture to	File in Local Drive In
Select Special Chars	Save Picture to	•

Add Picture From

Edit Menu

The **Edit** menu provides editing tools that make it easy to move, cut-and-paste and copy graphics among **Key** assignments.

Edit	:	
Ж	Cut	Ctrl+X
Đ	Сору	Ctrl+C
Ē	Paste	Ctrl+V
Ē	Paste Link	
	Delete	Ctrl+Del
(a)	Select All	Ctrl+A
	Toggle Marker	Space

Edit Menu

Cut

• The **Cut** & command deletes the image associated with the highlighted thumbnail and places it on the Windows **Clipboard**.

<u>Copy</u>

• The **Copy** command copies the image associated with the highlighted thumbnail and places it on the Windows **Clipboard**.

Paste

• The **Paste** Command pastes the image from the Windows **Clipboard** into the thumbnail cell that is selected on the **Font Editor** interface.

Delete (Ctrl + Delete)

Delete removes the selected character or characters from the font. To execute a Delete:

• Select **Delete** from the **Edit** menu or press **Ctrl + Delete**. Note that the image file is not deleted from its original location. The character is removed from the font without confirmation. This operation is also available from the **Character** context menu.

Select All

• Select All @highlights all thumbnails for use with the other editing functions.

Toggle Marker (Space Bar)

Toggle Marker applies a marker \checkmark to one or more characters. Multiple characters that are marked can be batch-processed for operations such as **Delete**. Unlike selecting characters by clicking, **Shift-clicking** or **Ctrl-clicking**, this type of marker applied to characters is not lost when characters outside of the selection are clicked. To mark a character or characters:

• Select the character or characters to be marked, then select **Toggle Marker** from the **Edit** menu or press the **Space Bar**. This operation is also available from the **Character** context menu.

To remove the marker from a character or characters:

• Select the marked character or characters from which to remove the mark, then select **Toggle Marker** from the **Edit** menu or press the **Space Bar**. This operation is also available from the **Character** context menu.

Tools	
 ☆ Edit Font Name ☆ Edit Lyric Settings ☆ Edit Palette 	
Initialize Font 🔸	Initialize to only RGB Chars Initialize to only Marked Chars Initialize to only Special Chars Initialize to Blank Font

Tools Menu

Different menu items are available depending on which type of font is loaded, and whether or not characters in a font a marked **/**.

- All menu items are available when an iNFiNiT! font is loaded.
- Edit Font Name, Edit Palette, Initialize to Only RGB Characters and Initialize to Only Special Characters are not available when a Lyric font is loaded.

Edit Font Name (iNFiNiT! Font Only)

An iNFiNiT! Font can be assigned a name to make identification easier when selecting a font to open.

1. From the **Tools** menu, select **Edit Font Name**. The **Edit Font Name** dialog box is displayed.

<u>File Header Name:</u>	News Graphics	1
Effect Name:	RGBA	
o <u>n</u> t Header Name:	News Graphics	

Edit Font Name

- The File Header Name appears in the Open a Machine Font dialog box information area. It also appears in the Name 1 field of the Browse for iNFiNiT! Fonts dialog box, accessed from the Lyric Browser iNFiNiT! Assets context menu.
- The Effect Name appears in the Open a Machine Font dialog box information area. It also appears in the Name 2 field of the Browse for iNFiNiT! Fonts dialog box, accessed from the Lyric Browser iNFiNiT! Assets context menu.
- The Font Header Name is displayed in the Title Bar of the loaded font in the Font Editor.
- Enter a name in the File Header Name field. Note that if the Link icon at the right of the data fields is active, the same name is reflected in the Font Header Name field. If the Link icon is not active, a different name can be entered in the Font Header Name field.



Link Icon Active Link Icon Inactive

- 3. If desired, enter an Effect Name.
- 4. Click **OK** to apply.

Edit Lyric Settings

The **Edit Lyric Settings** command allows the operator to set the destination to which embedded RGBA graphics from within an iNFiNiT!! font will be exported as discrete graphics files when an iNFiNiT!! font is saved as a Lyric font. The images degree of compression in storage may also be set. **Get Default** in all instances sets the default value for that field.

Eolder Format String:	Browse	Get Default	Get Defaul
G:\Pic\%.4d			Load
Pictures Format			Save
TGA Files (*.tga)	<u> </u>	Get Default	
Picture Quality:	t Default		

Lyric Settings Dialog Box

Folder Format String: The default string specifies the default location to which new Lyric fonts are saved. The string **%.4d** specifies that the directory name that is generated is a four-digit numeric name. Each time a new font is saved to the default location, the directory name increments by **1**. For example, the font created after the font saved in *G:\Pic\0003* would be *G\Pic\0004*.

Note that the files that are saved in this directory are named based on the **Key Number** to which they are assigned. For example, the graphic assigned to **Key Number 65**, which is **Shift + A**, is named **.065.tga** when saved to the directory.

Pictures Format: There are a variety of formats in which the images can be saved.

Picture Quality: Range is **0** to **100**.where **0** specifies no compression and **100** specifies maximum compression.

Save Only RGB Characters: When selected (checked), saves only RGB characters. When not selected (unchecked), saves all characters.

Edit Palette (iNFiNiT! Fonts Only)

Refer to Palette Designer later in this section for details.

Initialize Font

The Initialize Font command clears the loaded font of certain types of files, or clears the font completely.

- Initialize to Only RGB Characters (iNFiNiT! Fonts Only): Clears all but RGB Font characters. Note that all RGB Font characters are also Special characters.
- Initialize to Only Marked Characters: Clears all but marked **/** characters.
- Initialize to Only Special Characters (iNFiNiT! Fonts Only): Clears all but Special characters. A Special character a character that has been added to a Machine Font, but that is not based on a Master Font. For example, a logo can be assigned to a Key combination in a Machine Font. The logo would be both a Special character as well as an RGB Font character. Note that all RGB Font characters are Special characters, even when part of an RGB Font.
- Initialize to Blank Font: Clears entire font.

Window Me

Window	
😂 About	
😽 View Logo Clipboard	
✓ 0 Browser.mdb	43-

Window Menu: View Logo Clipboard

• The View Logo Clipboard command allows the operator to see the all of the images that have been placed on the Font Editors clipboard, which exists separately of the systems Windows clipboard. To add a graphic file to the Logo Clipboard or to any selected character cell in the Font Editor, press the Ins key or use the appropriate menu.

🔀 Logo Cli	pboard				
🔁 Add	🔁 Delete	🔀 Clear	Save Save	<u>5</u>	M L XL
	° 🥿 Î				
120~79	400.70				
1:14937.0.1	120x78	82X54			
SrcFile: G:\Sa	ales Demo\Im	ages\Soccer_Ai	row Green.tga		11.

Logo Clipboard

Images may be added to the clipboard directly from other directories in the system. Individual items may be deleted or the entire clipboard may be cleared at once. The size of the thumbnails may be varied with the S, M, L and XL controls.

• The lower half of the Window menu allows the operator to switch among all open Font Editors.

Other Buttons On The Toolbar

• Merge Graphics from is a means for quickly adding an existing RGB Font, in its entirety, to the Font Editor.

NOTE: This action may overwrite the contents of an existing RGB font!

It is possible that key assignments in your existing font leave may leave "spaces" in the keyboard map that match the key assignments in the iNFiNiT! RGB font being imported. If this is the case, nothing in your existing RGB font will be overwritten by this Merge command. The safest course of action is opening a new file on the Custom Font Editor before using the "Merge Graphics from" command.

1. Make the menu selections shown here.

C		
Picture at cursor from	→ -	
Merge Graphics from		Machine Font in Local Drive

Merge Graphics From

2. The **Open a Machine Font** window opens, as shown in the following figure. Navigate to, and select an iNFiNiT! Machine Font that has been **previously imported onto a local or networked Windows drive**. Simply single-clicking a source loads the preview pane at the right side of the window as seen below.

Open a Machine Font												?	×
Look in: 🔁 Machine 💽 🖛 🛅 🕶													-
■ .0005	-									1			
a .000													
.2002					a	~~~		8		-		-	
	-	-	-		-	-	-			-			
		-	-	-	•	-	4	-	-	-	5	•	
File name: .2001 Open					-	-			-	-	-	-	
Files of type: iNFiNiT! Machine Font Files (*.fnt;.*) Cancel						_			_		0		
	-		3		•					3	ş	-	
MINN VIKING5 - AWAY TEAM 11/6 RGB and alpha image					-		-		5	•			
FileSize: 9,530 KB Status: Loading (63%)		-	4	?	?	?	?	?	?		?	?	
					-							-	-

Open a Machine Font

3. Once the preview is fully loaded, click the **Open** button. The thumbnail positions in the new RGB Font are populated as seen below, and the system displays a dialog confirming that the operation was successful.

A Custom Font Editor - Untitled	
File Edit Tools Window	
🗅 😂 • 🔛 • 🖆 🚭 👗 🗈 🛍 • 🎇 Color 1 ==== 💽 🏡 • 🖓 •	
	98
99 c 100 d Information I 108 I	109
	120
121 y 122 z 123 { 124 125 } 126 ~ 127 Att W 128 Att w 129 Att E 130 Att e 1	131 Alt
GoTo: C:\Pic\-0001\028.tga, 390 × 71 9,530 KB Blank Font, RGE	BA //.

Thumbnails Populate Custom Font Editor

4. Click OK.

Save Picture or File, Save Font as File or Suite of Pictures

There are a number of methods for saving images from the Font Editor to local or mapped network drives.

• (Save) Picture at cursor as File in Local Drive allows the operator to save a copy of the highlighted image in the Font Editor as a standard file type (.bmp, .jpg, .tif, .tga, .psd) anywhere in the system or network. A green border surrounding the image indicates that is selected.



Save As File in Local Drive

• (Save) Font as File in Local Drive saves a copy of the current font with a new number in the database.

*		
Picture at cursor as	►	
Font as	≯	File in Local Drive
		Suite of Picture Files in Local Drive k

Save Picture to File: Font as File in Local Drive

 (Save) Font as Suite of Picture Files in Local Drive saves a copy of each image in a font to your system or a network. The options for saving these images are shown below.

Base Folder:	C:\Pic		Browse
lew Folder Name:	Create a New Fold March2002	er into the Base Folder	
iles		Picture Format	
Root File Name:	dexter		_
	Create a Benort Fil	C RGBA	🔲 Save Alpha Files
Report File Name:	files.bbs	C JPeg	Quality: 100

Save Font as Pictures

You may browse for the folder where the new images will be stored, and create a new folder within that location. The **Root File Name** option allows the operator to create a prefix contained in the name of each image file created.

Address 🔂 March2002				
	Name 🛆	Size	Туре	Modified
	述 dexter065.tga	62 KB	TGA Image	2/8/2002 3:50 PM
	🕺 dexter066.tga	581 KB	TGA Image	2/8/2002 3:50 PM
March2002	🕺 dexter067.tga	572 KB	TGA Image	2/8/2002 3:50 PM
	🕺 dexter068.tga	1,622 KB	TGA Image	2/8/2002 3:50 PM
Select an item to view its description.	🕺 dexter069.tga	1,642 KB	TGA Image	2/8/2002 3:50 PM
See alco:	🕺 dexter070.tga	1,646 KB	TGA Image	2/8/2002 3:50 PM
My Documents	🕺 dexter071.tga	1,402 KB	TGA Image	2/8/2002 3:50 PM
My Network Places	🛒 dexter072.tga	922 KB	TGA Image	2/8/2002 3:50 PM
My Computer	🛋 dexter073.tga	3,958 KB	TGA Image	2/8/2002 3:50 PM

Root File Name Option

Creating an iNFiNiT! Machine Font from a Lyric RGB Font

 If not already present either on the system running Lyric or on a network, create a Windows-formatted directory for storing iNFiNiT! messages, and another Windows-formatted directory for storing Machine Fonts. The following example shows directories created in C:\iNFiNiT on the system on which Lyric is running.

	Name 🔺	Size	Туре
iNFINIT!	Machine		File Folder File Folder
Select an item to view its description. See also:			

Creating Directories for Storing iNFiNiT! Messages and Machine Fonts

- 2. From the **Custom Font Editor**, open the Lyric **RGB Font** to be used on the iNFiNiT! Family system.
- 3. From the Custom Font Editor File menu, select Save As > Save as iNFiNiT! Font.... The Save Machine Font As dialog box opens.

iave Machine Fo	nt As		? ×
Save in: 🔂 Ma	chine	📩 🖬 🕈 💽	
폐.0001 폐.0002 폐.0003 폐.0004).0100).0101).2001).2002	폐 .2005 폐 .2006 폐 .4000 폐 .4003	
폐 .0005 폐 .0006	폐 .2003 폐 .2004		
File <u>n</u> ame:			<u>S</u> ave
5ave as <u>t</u> ype: M	achine Font Files (*.fn	;,*)	Cancel

Save Machine Font As Dialog Box

- Enter a File Name in the format .xxxxxxx, where x represents any numeral. Not that any leading zeroes can be omitted from the File Name. iNFiNiT! Machine Font File Names always begin with a decimal, are always numeric, and are never more than eight digits. Examples: .0001, .12345678, .86940.
- 5. Click **Save**. The Lyric **RGB Font** has now been saved as an iNFiNiT! **Machine Font**.

The Machine Font can then be sent via FTP to an iNFiNiT! Family system. Refer to FTP - Transferring Files to/from an iNFiNiT! System for information.

Using an iNFiNiT! RGB Font in Lyric

An iNFiNiT! **RGB Machine Font** can be used in Lyric. First, it must be transferred via **FTP** from the iNFiNiT! system to a local or networked Windows-formatted directory. *For information on this procedure, refer to FTP - Transferring Files to/from an iNFiNiT! System.*

Palette Designer

The palette for iNFiNiT! **Machine Font** characters can be set by the user. Note that any application of a **Color** set is applied to all of the **Machine Font** characters in the font. **RGB Font** and **Special** characters are not affected by **Palette** changes or application of **Color**.

👬 Palette Designer		-	×
Palette Copy	Paste Drag Colors	🗖 Drag 🔽 Drag	<u>S</u> ubpalette
Name Body Edg	Edit Body	Name Color Bkond 4 5	Edit
2 - Magenta	Edit Bkgnd	5 7 8	Edit first sel
3 - Blue	Copy Body	9 10 11 12	Edit last sel
	Copy Edge	13 14 15	
4-Cyan	Copy Bkgnd	16 17	Gradate
5 - Yellow	Paste Body	19 20	Copy Color
6 - Green	Paste Edge	21 22 23	Paste Color
7 - White		24 25 26 27	
8 - Black		28 29 30 31	
Load default palette	Load palette	Color Clipboard	
Get palette msg	Send as palette msg		
Revert palette	Save palette		
	Ok Cancel		

Palette Designer

There are eight color sets for **Body**, **Edge** and **Background** of the font. To edit a color for the **Body**, **Edge** or **Background** of a font:

1. Double-click the color chip, or highlight the row, then click the **Edit Body**, **Edit Edge** or **Edit Bkgnd** button. The **Color** dialog box opens.

Color	? ×	1
Basic colors:		
	•	
<u>C</u> ustom colors:		
	Hue: 1 Red: 255	
	Sat: 24C Green: 8	
Define Custom Colors >>	Color Solid Lum: 120 Blue: 0	
OK Cancel	Add to Custom Colors	100

Color Dialog Box

- 2. Set color as described in the section on Color Selection for Light Sources and 3D Characters Objects.
- 3. When color is set, click **OK** to apply the color. The **Color** dialog box closes.

Activating **Drag Colors** allows a color to be dragged-and-dropped from one color chip to another. To activate/deactivate **Drag Colors**:

• Select (check)/deselect (uncheck) the Drag Colors checkbox.

A color can also be copy-and-pasted from a **Body**, **Edge** or **Bkgnd** to another **Body**, **Edge** or **B**kgnd:

- 1. Highlight the row which displays the Body, Edge or Bkgnd color that is to be copied.
- 2. Click the Copy Body, Copy Edge or Copy Bkgnd button.
- 3. Highlight the row that contains the **Body**, **Edge** or **Bkgnd** color that is to be replaced.
- 4. Click the **Paste Body**, **Paste Edge** or **Paste Bkgnd** button. The copied color is pasted to the selected color chip.

The **Subpalette** corresponds to the iNFiNiT! **Subpalette**, and can also be edited. The **Subpalette** is composed of 29 separate segments, each which can have its color individually set. The default setting is a gradation that coordinates with the currently selected **Palette**. The **Subpalette** segments are identified as follows: **Bkgnd**, **Name 4 - 31**. When editing a **Subpalette** segment, they is further identified as follows: **Name: Bkgnd** corresponds to **Sub(palette): Bkgnd**; **Names: 4 - 31** correspond to **Sub(palettes): 2 - 29**.

To edit the color of a segment:

- 1. Double-click the color chip, or highlight the segment, then click the **Edit** button. The **Color** dialog box opens.
- 2. Set color as described in the section on Color Selection for Light Sources and 3D Characters Objects.
- 3. When color is set, click **OK** to apply the color. The **Color** dialog box closes.

Activating **Drag** in the **Name** or the **Color** column allows a color to be dragged-and-dropped from one segment to another. When **Drag** is inactive, dragging through the **Subpalette** selects a range of segments. To activate/deactivate **Drag**:

• Select (check)/deselect (uncheck) the **Drag** checkbox.

A range of segments can also be selected as follows:

- 1. Click the first segment in the range.
- 2. Hold the **Shift** key down while clicking the last segment in the range.

In the following figure, the **Subpalette** on the left shows the color at **Name 10**, which is **Sub(palette) Position 8**, dragged to **Name 29**, which is **Sub(palette) 27**. The **Subpalette** on the right shows the range selected from **Name 10** through **Name 29**, which corresponds to **Sub 8** through **Sub 27**.



Dragging Color vs. Dragging to Select Range

To select the entire range of segments in the **Subpalette**:

• Click the Select All button.

To select non-contiguous segments in the Subpalette:

• Hold the Ctrl key down while clicking the segments.

A color can also be copy-and-pasted from one segment to another segment, selected segments or a range of segments:

- 1. Highlight the segment which displays the color that is to be copied.
- 2. Click the Copy Color button.
- 3. Highlight the segment, select non-contiguous segments or select the range of segments in which the color is to be replaced.
- 4. Click the **Paste Color** button. The copied color is pasted to the selected segments.

A gradation can be applied to a range of contiguous or non-contiguous segments. The gradation is applied from the topmost selected segment color to the bottom-most selected segment color.

1. Apply a color to the top segment of the gradation, and then apply a color to the bottom segment of the gradation.



Top and Bottom Colors Applied

2. To apply the gradation to a range of segments, select the range so that it starts with the top color that was just set, and ends with the bottom color that was just set. To apply the gradation to non-contiguous segments, select the segments, making sure that the top and bottom segments to which the colors were applied are selected.



Setting Up a Contiguous and a Non-Contiguous Gradation

3. Click the **Gradate** button. The gradation is applied to the selected segments. Note that in the instance of non-contiguous segments, the gradation is *not* applied to segments positioned between selected segments.



Gradation Applied to Contiguous and Non-Contiguous Segments

Printing Font Sets

Browser (Font Assets) > Click RGB Font > Custom Font Editor

Tools Menu > Font Editor

Print allows the contents of an **RGB Font** to be printed out as a keyboard map for reference as seen below.



Print Browser

The viewing area can be zoomed To Page Height Zoom to show keys of particular interest. Use the Zoom control in the lower-right corner of the interface and the scroll bars.



Zooming In on the Print Browser

The printout can include user-created text headers and footers and can include filepath information on the source images assigned to each key. The keyboard map can be laid out in various ways with the controls at the right side of this options interface.

12. 2D Text

Overview

About 2D Text

2D Text is composed of 2D characters created from **Font Faces**, also known as **Font Styles**, to which a set of characteristics such as **Font Size**, **Font Color**, etc. can be applied. **2D Text** is introduced to the **Canvas** simply by typing into one of the following types of **2D Windows**. *Refer to Getting Started in Lyric* for details on introducing these windows to the Canvas. Each type of **2D Window** exhibits a characteristic behavior when an animation is executed:

- 2D Text Window: Text remains static.
- 2D Roll Window: Text rolls in a vertical direction. Refer to Roll for details on setup and execution.
- **2D Crawl Window:** Text crawls in a horizontal direction. *Refer to Crawl for details on setup and execution.*
- 2D Type On Window: Text appears on the screen as if it is being typed live. Type On is also known as Slow Reveal. Refer to Type On/Slow Reveal for details on setup and execution.

Text in these windows can be edited in a similar manner and can be updated in real time from a variety of sources.

There also a special type of 2D text font, known as an **RGB Font**, which can be typed into all types of **2D Windows**, but which is not created from a **Font Face**. It is, instead, created from bitmap graphics mapped to keys, so that typing produces images instead of characters. This is an especially versatile tool for quickly displaying sports logos and other frequently used graphics. Unlike **Font Face**-based fonts, however, attributes such as size and color are not adjustable in the same manner. Changes to the image must be made using other techniques. *Refer to RGB Fonts for more comprehensive information on creation and modification.*

Unicode text entry is supported. 2D text entry (including the **Spline Window**) and **Template Update** is also supported for Chinese, Japanese and Korean. **Unicode Only** must selected in **CG Preferences** in order to accommodate Asian language text entry. *Refer to the section on CG Preferences for information regarding the Unicode Only* setting.

2D Text is also used in three other types of 2D Windows:

- Spline Window: 2D Text animates along a preset baseline, allowing it to travel across the Canvas in ellipses, curlicues, spirals, etc. RGB Font characters can also be used in Spline Windows. Refer to Spline Window for details on setup and execution.
- Clock and Timer Windows: A running Clock(s) and or Timer(s), populated with 2D Text or RGB Font characters, can be displayed.

2D Text already in a 2D Text Window can be converted into animated or image states:

- Animate Elements enables the individual animation of 2D Text and RGB Font characters.
- Advanced Text Effects is a special case of Animate Elements, where prescripted animations are applied to the 2D Text and RGB Font characters.
- Advanced Image Effects enables the contents of an entire 2D Window to be converted into a bitmap, to which an effect such an Explosion, Matrix or Wipe can be applied.

While in one of these states, the **2D Text** and **RGB Font** characters cannot be edited. Lyric does provide the ability to switch out of the state to allow editing of **2D Text** and **RGB Font** characters that originated from a **2D Text Window**.

Initial Edit Mode, Placing a 2D Text Window on the Canvas

The default setting of Lyric's **Initial Edit Mode**, accessed from **Config Menu > Preferences > CG Preferences**, determines if a full-screen **2D Text** window is created with each new **Canvas**. If a full screen **2D Text** window is present, it is indicated by a blue border just inside the perimeter of the **Canvas** (and by a "**2D Text**" entry in the **Scene Graph**). To create a smaller, "windowed" **2D Text** window:

• Click the **2D Text** toolbar button on the **Chyron Toolbar** or select **Text Window** from the **Tools** menu.



2D Text Tool

A **2D Text** window appears on the display:

2D Text	
L	

2D Text Window

Setting Text Attributes: Before typing, you may quickly set Font, Font Size, Face and Edge Color via the Font Toolbar (below), or via the Font and 2D Font FX tabs on the Properties menu.



Font Tools

Entering Text: Left-click in the **2D Text** window to establish the position of the first character to be typed. When the first character is typed, a green **baseline** appears. Once typed, text may be selected for further editing, and changes to font style, size, and other attributes may be applied. **Insert/Overwrite Mode** can be set to either append new text to existing text, or to overwrite existing text with new text. **Insert/Overwrite Mode** is covered later in this chapter.

Pasting Text from Other Applications: Lyric supports the Windows® Clipboard, so that text from any Windows application can be cut or copied and then pasted into **2D Text** windows.

Editing Text: 2D text editing functions are available from the **Edit Menu**, as well as from the **2D Text Context Menu**. Editing 2D text is covered later in this chapter.

Resizing/Repositioning the Window: To resize a **2D Text** window, click/drag the window corners to achieve the desired size. To reposition the **2D Text** window, drag the window's Title Bar or any of its corners (a cross-hair cursor will appear when your mouse is properly positioned on the title bar or in the window to perform the move).

Preferences: The **Preferences** item on the **Config** menu enables customization of the behavior of **2D Text** windows.

Setting 2D Font Attributes

Font Face/Style

Font Face or Font Style can be selected from either the Font Tools > Font Facename drop-down list box or the Properties > Font > Font Facename drop-down list box. *Refer to the chapter on Creating and Using Fonts in Lyric.*

<u>Style</u>

Style can be set from can be selected by clicking the Font Tools > Bold, Italic and/or Underline icons, or by selecting the Style (unlabeled) drop-down list box in Properties > Font setting. *Refer to the chapter on Creating and Using Fonts in Lyric.*

Size, Aspect Ratio, Scale, Kerning and Other Characteristics

Size can be set in the Font Tools > Font Size field or via the Properties > Font > Size setting. Size and other characteristics such as Rotation, Aspect Ratio and Kerning can be set as well. *Refer to the chapter on Creating and Using Fonts in Lyric.*

<u>Edges</u>

2D characters can be given depth by adding one or more **Edges**. **Edge** characteristics can be set in the **Properties > 2D Font FX** tab. *Refer to the chapter on Creating and Using Fonts in Lyric for in-depth information.*

Color, Texture and Surface Properties

Solid or ramped color can be applied to the Face and Edges of 2D characters via Font Tools and Properties > 2D Font FX. Solid color and Transparency can be applied to Face and Edges of 2D characters via Properties > Surface. Bitmaps can be applied to the Face and Edges of 2D characters via Font Tools and Properties > 2D Font FX. *Refer to the chapter on Creating and Using Fonts in Lyric.*

TrueType[®] Font Preview

TrueType® Font Preview enables the user to quickly review the available characters in a font, change the current font, or select a character (including **Unicode**) to add to the **Canvas** at the current cursor position. **TrueType Font Preview** can be used with both 2D and 3D characters. TrueType® Font Preview is accessed from the **Font Properties** tab. *Refer to the chapter on Creating and Using Fonts in Lyric for in-depth information.*

Enable Word Wrap

Edit Menu > Enable Word Wrap

When text is typed past the end of a row in a **2D Text Window**, it can be set either to continue past the border of the **2D Text Window** (e.g. for setting up a **Crawl**), or to wrap to the next line so that all text displays within the borders of the **2D Text Window** (e.g. for setting up a **Roll**).

- The default setting for **Enable Word Wrap** is disabled.
- The Enable Word Wrap setting is applied to all 2D Text Windows (including 2D Roll, 2D Crawl and 2D Type On Windows) on the Canvas.
- Changing the Enable Word Wrap setting affects only text that is typed after the change; it does not
 affect previously typed text. This allows one 2D Text Window to be set up while the Enable Word
 Wrap setting is enabled, and another to be set up while it is disabled.
- The **Enable Word Wrap** setting is not affected by and has no bearing on the **Word Wrap** setting applied to a **2D Text Template**. They are independent of each other. *Refer to Templates 2D Text* for additional information.

When Word Wrap is disabled, text types beyond the border of the 2D Text Window.



Word Wrap Disabled

When Word Wrap is enabled, text wraps to the next line when typing reaches the end of the row.

2D Text 1
Word Wrap
Enabled

Word Wrap Enabled

To enable/disable Word Wrap:

• Pull down the Edit menu, then select/ deselect Enable Word Wrap. When Enable Word Wrap is enabled, a checkmark appears next to the Enable Word Wrap menu item. When Word Wrap is disabled, there is no checkmark.

Insert/Overwrite Mode for 2D Text

Insert Key

The **Insert/Overwrite** setting determines whether newly typed characters are inserted into an existing line of 2D text, or if the existing characters are replaced by newly-typed characters.

To enable/disable Insert/Overwrite:

• Press the **Insert** key on the keyboard. Each keypress inserts a new character at the cursor position, moving the following characters one character to the right.

Current mode is indicated on the far right end of the Status Bar, as shown in the figure below.



Insert/Overwrite Mode Status Bar Indicator - OVR Active

- When Insert is selected, newly-typed characters are inserted into 2D text, changing the position of the existing text. The Status Bar shows that OVR is grayed out.
- When **Overwrite** is selected, each newly-typed character overwrites the existing character at the same cursor position. The **Status Bar** shows that **OVR** is active (*see figure above*).
Row Shift Locked/Unlocked

Edit Menu > Row Shift Locked; Ctrl + L

When a row of text is shifted using the keyboard (Alt + $\uparrow \Psi$ or Shift + Alt + $\uparrow \Psi$), only the row selected shifts. This is known as **Unlocked Mode**. The rows beneath the shifted row are not affected.

Locked Mode allows the shifted row to shift the rows below, so that the rows shift as a block. To activate **Locked** mode:

 Select Row Shift Lock from the Edit Menu, or press Ctrl + L. All Row Shift operations now shift the selected row, as well as the rows beneath it. Note that the Edit menu now displays a checkmark next to Row Shift Locked, and the Status Bar now shows that Lyric is in Locked Mode.

NS	COL	LOCK	CAR	NUM	OVR	
----	-----	------	-----	-----	-----	--

Status Bar Showing Row Shift Locked

To return to Unlocked Mode:

• Select **Row Shift Lock** from the **Edit Menu**, or press **Ctrl + L**. All **Row Shift** operations now shift the selected row, as well as the rows beneath it. Note that the **Edit** menu no longer displays a checkmark next to **Row Shift Locked**, and the **Status Bar** now shows that Lyric is in **Unlocked Mode** (LOCK is grayed out).



Status Bar Showing Row Shift Unlocked

Normal/Modified Space

Normal Space: 2D Text/Template Context (Right-Click) Menu > Normal Space

Modified Space: 2D Text/Template Context (Right-Click) Menu > Modified Space

A 2D Text window has two possible display modes: Normal Space or Modified Space. In Normal Space, text inside the 2D Text Window can be added or edited. In Modified Space, the contents of the 2D Text Window are subject to manipulation in scale and rotation, via the XYZ pane of the Properties menu.

While switching between **Normal Space** and **Modified Space** is mainly transparent to the operator, the active mode is also displayed in the **2D Text/Template** context (right-click) menu.

Normal Space

When set to **Normal Space**, the text appears without rotation, scaling, and applied positioning attributes. You may edit 2D text while in **Normal Mode**.

Modified Space

When set to **Modified Space**, the text in the **2D Text** window can be rotated on the **X**, **Y**, and **Z** axes, plus the window itself may be scaled using the settings on the **XYZ** tab of the **Properties** window. You may only edit text in **Modified Space** if the text is not rotated; Lyric cannot edit rotated text!

Title Bar Color and Normal/Modified Mode

The selected **2D Text** window's **Title Bar** appears in one of three colors, depending on the active **Normal/Modified Mode**, and whether or not any transformation (rotation, scaling, etc.) has been applied.

ZD TEX	t 1	
Mo nc	dified s rotatio	pace, n.
20 Теж	t2	
MC	dified spar with rotation	\$ }
2D Tex	t 3	
No	rmal spa otation	ace,

Normal/Modified Space Title Bar Colors

Title Bar Color	Description
Gray	Modified Space, with no rotation. Text can be edited.
Red	Modified Space , with rotation. To edit text, reset the 2D Text window to Normal Space using one of the following methods:
	 Right-click inside the 2D Text window, then select Normal Space.
	 Start typing in the 2D Text window. The 2D Text window automatically converts back to Normal Space.
	Important! To return the display to Modified Space (and to preserve the former Rotation/Scale settings), right-click within the 2D Text window, then select Modified Space .
Yellow	Normal Space, with no rotation. Text can be edited.

Use Scene Camera

2D Text/Template Context (Right-Click) Menu > Use Scene Camera

Lyric's Scene Camera can be applied to a 2D Text Window (including 2D Roll, 2D Crawl and 2D Type On Windows) in order to provide a perspective view. Use Scene Camera can be enabled or disabled for individual 2D Text Windows. The Camera setting in Camera Properties has no bearing on the settings of individual 2D Text Windows although it can affect the juxtaposition of 2D Text Windows in relation to the entire composition.

To enable or disable Use Scene Camera:

• Right-click on the 2D Text Window or 2D Text Template, then select Use Scene Camera from the context menu.

An unrotated 2D Text Window appears as follows:

	U	Inrota	ated 7	Fext	
					<
-					

Unrotated 2D Text

When 2D text is rotated and Use Scene Camera is disabled:

- The **Scene Camera** is in **Orthographic Mode**, and a rotated **2D Text Window** does not show perspective. The 2D characters that are "further away" from the viewer appear to be the same size as the 2D characters that are "closer" to the viewer.
- When 2D text is rotated, scaled, etc., the text changes orientation within the **2D Text Window**, but the **2D Text Window** itself does not change orientation.

• The **Title Bar** of the **2D Text Window** turns red, indicating that the window is in **Modified Space** mode. When the user types into the **2D Text Window**, it returns to **Normal Space**. The **Title Bar** turns yellow until **Modified Space** is selected from the **2D Text/Template** context menu.



Rotated 2D Text - Use Scene Camera Disabled

When 2D text is rotated and Use Scene Camera is enabled:

- The **Scene Camera** is switched to **Perspective Mode**, and a rotated **2D Text Window** shows perspective. The 2D characters that are "further away" from the viewer appear to be more in the distance compared to the 2D characters that are "closer" to the viewer.
- The **Title Bar** of the **2D Text Window** turns red, indicating that the window is in **Modified Space** mode. The user can type into the **2D Text Window** without it switching to **Normal Space** mode.

Camera mera erspective

Rotated 2D Text - Use Scene Camera Enabled

Updating 2D Text - 2D Text Templates and Pop-On Messages

Lyric provides a number of methods for quickly updating text.

- 2D text can be placed in user-formatted 2D Text Templates, which can be updated via Lyric's DB Link, Intelligent Interface® or Template Update functions. Refer to the section on DB Link, the chapter in Intelligent Interface and the section on Template Update for in-depth information on these functions.
- A 2D Text Only message, also known as a **Pop-On** message, can be recorded, and then read back into a 2D Text Window to replace existing text. *Refer to the section on Pop-On Messages for additional information.*

Selecting and Editing 2D Text

Lyric provides a wide variety of text manipulation and editing tools, enhanced by the ability to perform many of these functions using keyboard shortcuts.

Selecting Text

There are two ways to select text:

Move the cursor to just outside the upper-left corner of the 2D Text to be selected. Click/hold the *left* mouse button, dragging the cursor down and to the right. A dotted box appears around the text; keep dragging until the 2D character(s) are entirely inside this box. Release the mouse button. A Bounding Box appears surrounding the item.

OR

Place the cursor at the left or right end of the text that is to be selected. Hold the Shift key while using the ← or → keys to extend the Bounding Box around the text.



Selecting 2D Text

The **Bounding Box** is the area around the highlighted 2D Text. When text is selected (in a **Bounding Box**), you can quickly apply changes in font style, attributes, etc. via the Font and 2D Font FX tabs on the Properties menu. You can also make fast changes to selected 2D Text by using the tool bar.

To select all 2D Text in a window:

• Select the Select All item in the Edit menu, or press Ctrl + A.

Resizing Selected Text

The corner handles of a **Bounding Box** resize the selected text proportionately; the top, bottom, and side handles resize along their respective axes only. To adjust the size of any selected object(s). Left-click/drag a handle in the desired direction. Release the mouse button when you're done

- When a character or word is selected for resizing and the *top* handle is dragged, the characters enlarge above the baseline of the row, leaving the baseline of the row unchanged. If the *bottom* handle is dragged, the text grows and moves the baseline of the row down to accommodate the text's new size, moving the rest of the text on the row with it.
- When **Template** (**Row-Based**) text is selected, no handles appear. Use the Toolbar and the Font and 2D Font FX tabs on the Properties menu to change the attributes of the selected text.

Resizing Text via Keyboard Shortcuts

Keyboard shortcuts are available as an alternative to using the mouse. Refer to **Keyboard/Mouse Shortcuts** - 2D/3D Text, Text Templates and Row Tabs for a comprehensive list of 2D text-related keyboard shortcuts.

Function	Description
Change Width	The \rightarrow key is the equivalent of dragging the right Bounding Box handle towards the right (increases width); The \leftarrow key drags the right Bounding Box handle to the left, decreasing width.
Change Height	The \uparrow key is the equivalent of dragging the top Bounding Box handle upwards, increasing the height of the selected text. \checkmark key is the equivalent of dragging the top Bounding Box handle downwards, decreasing the height of the selected text.
Increase Size	Pressing B increases the size of the selected text or template by dragging the upper-right Bounding Box handle (size increases proportionately). Pressing Shift + B increases the size by increments of 5 units instead of increments of 1 (default).
Decrease Size	Pressing S decreases the size of the selected text or template (proportionately) by dragging the upper-right Bounding Box handle down and to the left. Pressing Shift + S makes the change by increments of 5 instead of increments of 1 (default).
Change Resize Incremen t	To change the increment by which text is resized: 1. Press Ctrl + Alt + I. The following is displayed: Enter Scaling Increment I CK Cancel Enter Scaling Increment Dialog Box 2. Enter a new value or use the spin box to set a new value for the increment, and click OK. For example, if the Scaling Increment is changed to 10, the increments by which text will be resized will be 10, instead of the default value of 1. Additionally, pressing Shift + S or Shift + B would resize the text in increments of 10 + 5 = 15.
End	Removes the Bounding Box from the selected text, and leaves the cursor in place.

Using Tab Spaces within 2D Text

To insert a **Tab** space between 2D Text characters, press **Ctrl + Tab**. The width of the **Tab** space, in pixels, may be set through Lyric's **CG Preferences**:

- 1. From the Config menu, select Preferences, and then the CG Preferences tab.
- 2. Enter a value in the Tab Width field.

Refer to the chapter on **Preferences** for in-depth information on **CG Preferences** settings.

Repositioning Selected Text

To reposition selected text, place the cursor inside the **Bounding Box**, and then click/hold the left mouse button. While holding the left mouse button, move the text to a new location. Release the mouse button when the text is in the correct position.

The text "snaps" to the baseline of the row nearest the point where the mouse is released. Hold down the **Control (Ctrl)** key while moving selected text to allow it to be positioned between row baselines.

Shift Character

Click on a character, then press **Ctrl** plus the $\leftarrow \rightarrow \uparrow \checkmark$ keys as desired to shift the selected character horizontally one pixel at a time, or vertically one scanline at a time. *If shifting characters horizontally, the characters to the right of the selected character are also shifted.*

Shift Row

Click on a character within the desired row, then use **Alt** plus the $\leftarrow \rightarrow \uparrow \checkmark$ keys as desired to shift the selected row horizontally one pixel at a time, or vertically (along with all lower rows) one scanline at a time. Note that to move just one row, select it using a **Bounding Box**, and then drag the **Bounding Box** to the desired location.

Super Shift

Hold the **Shift** key while performing a character or row shift to move the item(s) **10** pixels/scanlines at a time instead of by single pixels/scanlines.

2D Text Editing Tips

- Remember that typing the first character in a 2D text window establishes the first **row** and its **baseline**.
- When pressing the Enter key on the keyboard from an existing row the text cursor will move to the beginning of the next row. If no next row exists one will be created and the Properties and Tabs from the current row will be copied to the new row created.
- Holding the Shift key while pressing Enter will cause a row split, all characters to the right of the cursor will be moved to the beginning of the next row (but only if the next row has been previously established).
- Row Swap is available for rows of pre-existing 2D text. Right-click anywhere in the text area and select Swap Row Up or Swap Row Down in the contextual menu. Equivalent keyboard commands are Ctrl + B to swap up and Ctrl + F to swap down.
- Rows may be shifted via the keyboard (Alt + Up/Down and Shift + Alt + Up/Down see 2D Text Keyboard/Mouse Shortcuts) in Locked mode or Unlocked Mode. When a row is being shifted, all the rows beneath it may be Locked to shift at the same time. In the Unlocked mode, only the selected row is shifted. Ctrl + L toggles Locked/Unlocked mode. This setting can also be made from the Edit menu. The word LOCK will appear on the status line when the Lock feature is activated.
- When text is selected on a row it may be moved by dragging. Lyric will try to snap the text to the baseline of the row nearest destination defined by release of the cross-hair "move" cursor. If no baseline snap is desired hold down the **Ctrl** key before releasing the mouse button and the text will be positioned where the mouse button is released; the text will still be attached to the same row.
- As in a conventional word processor, rows can be selected by holding down the Shift key and pressing the Down/Up arrow keys. Text can be selected from the Cursor position to the End or Beginning of the row by pressing Shift followed by the End or Home key. Press the **End** key to clear the selection rectangle.

- The Shift/Delete combination will cut rows that have been selected in a bounding box. The rows below will move up to occupy the position of the deleted row(s). Rows can be then pasted by pressing Ctrl + V. Pasted rows will be inserted before the current row.
- Importing text via Paste from Word or similar documents will preserve tabs from the original text, aligning them with Lyric's Row Tabs.
- The text cursor will try to position itself at the baseline of the nearest row when the mouse is clicked at a blank area on the screen. If no rows are found the cursor will remain at the mouse position and text can be typed there. The criterion is the height of the font currently selected.
- Row Priorities can be changed by selecting text on two free form rows . Then enter **Alt + P** or select Swap Row Priorities from the Edit menu. The Priorities of the two rows will be swapped. If text is selected on more than two rows the first two rows in the selection will be used.
- The text cursor can be moved from Row Tab to Row Tab by pressing ALT + > to move to the next Row Tab and ALT + < to move to the previous Row Tab. To use the mouse, click on the Row Tab Marker. The selected Row Tab will turn RED when selected.
- When more than one row with Row Tabs is present on the Canvas, Tab Column Mode may be activated by pressing **Alt + M** on the keyboard.
- Note that in Tab Column Mode, deleting a Row Tab will also delete all row tabs below.

Additional Editing Functions

Refer to **Keyboard/Mouse Shortcuts - 2D/3D Text, Text Templates and Row Tabs** for information on additional 2D text editing functions.

Squeeze/Expand

2D Text Window Right-Click Menu > Squeeze/Expand

Squeeze Word: Ctrl + 4 on Numeric Keypad Expand Word: Ctrl + 6 on Numeric Keypad

Squeeze Row: Ctrl + 8 on Numeric Keypad

Expand Row: Ctrl + 2 on Numeric Kevpad

Squeeze/Expand provides a quick method of adjusting space between 2D characters or rows in a **2D Text** window or **2D Text Template**. The scale of the characters does not change when **Squeeze/Expand** is performed.

NOTE

A Squeeze/Expand operation can be executed using the numeric keypad number keys 2, 4, 6 and 8, as described below. In order for this to work properly, Num Lock must be active, or the text will just be moved in the direction of the arrow printed on the number key, instead of being squeezed or expanded. To activate/deactivate Num Lock:

• Press the Num Lock key located at the top left of the numeric keypad. When active, the Num Lock light on the keyboard is lit.

Num Lock should be active for most Lyric operations, and must be active for numeric message Reads.

To squeeze/expand the space between characters:

- 1. Make sure that **Num Lock** is active.
- In a 2D Text window, highlight the text that is to be squeezed/expanded. The text can be on multiple rows. If no text is selected, the word on which the cursor is positioned is squeezed or expanded. In this instance, the cursor must be positioned in the word, not before the first character.

For a **Template**, place the cursor in the **Template** on the appropriate row. Note that in a **Template**, spaces between characters can be squeezed/expanded only one row at a time. Additionally, *all* characters on the selected row of the **Template** are squeezed/expanded.

The leftmost character stays in position as the text squeezes/expands from the right/to the right.

- 3. Use one of the two following methods to squeeze/expand the space between the characters in the highlighted text or **Template**.
 - a. Right-click the **2D Text** window, then select **Squeeze/Expand**. The **Squeeze/Expand** dialog box is displayed.

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W	'ord	R	ow	
 Squeeze	• Expand	•	Sque Expa	eze nd

Squeeze/Expand Dialog Box

Click the Word left or right arrow to squeeze/expand the text.

b. Press **Ctrl + 4** on the numeric keypad to squeeze the text; or **Ctrl + 6** on the numeric keypad to expand the text.

To squeeze/expand the space between rows:

- 1. Make sure that **Num Lock** is active.
- 2. In a **2D Text** window, highlight the rows that are to be squeezed/expanded. If the space between all rows is to be expanded, place the cursor anywhere in the **2D Text** window.

For a **Template**, place the cursor in the **Template**. Note that *all* rows in the **Template** are squeezed/expanded.

The topmost row stays in position as the rows squeeze/expand up/down.

- 3. Use one of the two following methods to squeeze/expand the space between the characters in the highlighted text or **Template**.
 - a. Right-click the **Template**, then select **Squeeze/Expand**. The **Squeeze/Expand** dialog box is displayed.

🐮 Squeeze/ Ex	kpand 🔀
Word	Row
Squeeze Expand	▲ Squeeze ▼ Expand

Squeeze/Expand Dialog Box

Click the **Row** up or down arrow to squeeze/expand spaces between the rows.

b. Press **Ctrl + 8** on the numeric keypad to squeeze the rows; or **Ctrl + 2** on the numeric keypad to expand the rows.

Paste Unicode Text

Edit Menu > Paste Unicode Text; Ctrl + Alt + V;

Windows Character Map > Select, then Copy, then Lyric Edit Menu > Paste or Ctrl + V

Occasionally, a Lyric composition will require non-standard characters or characters not commonly occurring in the user's native language. Lyrics **Paste Unicode Text** option may be used to copy these characters from other applications, such as word processors. Note that **Paste Unicode Text** can be applied only to 2D text, not 3D characters. Lyric supports double-byte characters if the Windows[®] operating system supports double-byte characters. Examples include Chinese, Japanese and Korean Windows.

NOTE

It is possible that the Unicode character from the source document is not available in the font set selected in Lyric. Although the most widely used font sets contain a standard set of Unicode characters, it is recommended that the font used in Lyric either matches the font from the source document or that it is confirmed that the Lyric font contains the Unicode characters. This is especially important when a Template is updated with Unicode characters. The Template must also have the correct font assigned in order to correctly display the Unicode characters. The font can be set either from the Font Toolbar, or the Properties > Font tab.

To copy a **Unicode** character to a Lyric composition:

1. Open the document containing the **Unicode** text.

A Lucida Console character inserted here ß in a document

Source Containing Unicode Character to Copy to Lyric

2. Highlight the **Unicode** character in the document, then copy the character from the application.

e 🛛 i

Highlighting the Unicode Character

 In the Lyric composition, place the cursor at the point where the Unicode character is to be inserted, then select Paste Unicode Text from the Edit menu or press Ctrl + Alt + V. The character is pasted at the cursor location.



Unicode Character Pasted into Lyric Composition

You may also copy and paste special characters directly from the Windows Character Map.

1. Access the Windows Character Map. It can oftentimes be found in Start > Programs > Accessories, but may be located elsewhere on the system.

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	5	6	7	8	9	:	;	<	=	>	?	@	А	в	С	D	Ε	F	G	Н									
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Copying a Unicode Character from the Windows Character Map

- 2. Click on the character, then click Select. The character appears in the Characters to Copy field.
- 3. Click Copy.
- In the Lyric composition, place the cursor at the point where the Unicode character is to be inserted, then select Paste from the Edit menu or press Ctrl + V. The character is pasted at the cursor location.

Find/Replace

Edit Menu > Find/Replace; Ctrl + H

- 1. **Find/Replace** is used to locate a text string in a 2D Text window (including **Roll**, **Crawl**, etc.), and if desired, replace it with another text string. To set up the **Find/Replace** operation:
- 2. Select Find/Replace from the Edit menu or press Ctrl + H. The Find/Replace dialog box is displayed (see figure below).
- 3. Enter the text string for which you will search (the "search string") into the **Find what** field. There are two parameters which can narrow the search:
 - If activated (checked), **Match Whole Word Only** searches only for the string as a whole word, not as part of another string. For example, a search for the string "some" will find the string "some" but not the string "something".
 - If activated (checked), Match Case searches only for matching strings which also match upper/lower case spelling. For example, a search for the string "Cat" will find the string "Cat" but not the string "cat".
- 4. If only the **Find** is to be executed, skip to the next step. Otherwise, enter the text string that is to replace the search string in the **Replace with** field.
- 5. In the 2D Text window on the Lyric Canvas, place the cursor at the point at which the search should begin. Click Find Next to find the next occurrence of the search string. There are three execution options:
 - Find: Click Find Next to find the next occurrence of the search string. Repeat as many times as necessary to find additional occurrences.
 - Find/Replace: Click Find Next to find the next occurrence of the search string. If you want to replace the found search string with the text string entered in the Replace with field, click Replace. If you don't want to replace a particular occurrence but would like to continue searching, don't press Replace; press Find Next. Repeat Find/Next/Replace as necessary.
 - Find/Replace All: Click Replace All to replace all occurrences of the search string with the replacement string. Before executing a Replace All, make absolutely sure that you want to have all occurrences replaced.

••• FB0 Msg: Untitled	
2D Roll 1	
The Galaxy overall is	
absurdly large and nobody	
would miss 100 stars	
in the second line line line line line line line line	
Find what: stars	
Replace with: suns	
Match whole word only	

Find/Replace Operation

Insert Row/Delete Row

Edit Menu > Insert Row; Alt + Insert; 2D Text Window Right-Click Menu > Insert Row

Insert Row creates a new row at the cursor location, or inserts a row into the current **Template** at the cursor location (2D text only).

Edit Menu > Delete Row; Alt + Delete; 2D Text Window Right-Click Menu > Delete Row Deletes the row at the current cursor location. (2D text only). If in a **Template**, this function deletes a **Template** row.

Swap Row Up/Down

2D Text/Template Context Menu > Swap Row Up/Down

The row on which the cursor currently is situated is made to change places with the row above (**Swap Row Up**) or below (**Swap Row Down**) it respectively. If **Swap Row Up** is attempted on the top row in a window, there is no effect. Likewise, if **Swap Row Down** is attempted on the bottom row in a window, there is no effect.

Swap Row Priorities Up/Down

Swap Row Priorities Up: Edit Menu > Swap Row Priorities Up; 2D Text Window/Template Right-Click Menu > Swap Row Priorities Up; Alt + P

Swap Row Priorities Down: Edit Menu > Swap Row Priorities Down; 2D Text Window/Template Right-Click Menu > Swap Row Priorities Down; Alt + N

The display priority of 2D text rows on the **Z**-axis may be adjusted in compositions where rows overlap. The **Swap Priority Up/Down** operations are similar to **Bring Forward** and **Send to Back** operations found in graphics programs such as Adobe® Photoshop®.



Swap Row Priority Examples

Refer to the illustration above. Both Swap Priority operations are applied to the top set of three rows.

- The top set of three rows shows normal priority when rows are typed in Lyric. Each new row displays behind the previously-typed row. Row 1 displays on top of Row 2, which displays on top of Row 3.
- In the second set of rows, **Swap Row Priority Up** has been applied to Row 3. Row 3 now displays in front of Row 2, and behind Row 1.
- In the third set of rows, **Swap Row Priority Down** has been applied to Row 1. Row 1 displays behind Row 2, and in front of Row 3.

To apply a priority change:

1. Click on the left or right handle of one of the two rows that are to be swapped.



Row Handle

- 2. If the row is to be moved forward, i.e. "closer" to the viewer, use one of the following methods to execute the swap:
 - Select Swap Priority Up from the Edit menu.
 - Press Alt + P.
 - Right-click on the 2D Text window or its entry in the Scene Graph, then select Swap Up.

If the row is to be moved back, i.e. "further away" from the viewer, use one of the following methods to execute the swap:

- Select Swap Priority Down from the Edit menu.
- Press Alt + N.
- Right-click on the 2D Text window or its entry in the Scene Graph, then select Swap Down.

Color/Font Functions

Pick Up Color/Font: 2D Text Right-Click Menu > Pick Up Color/Font; Alt + F12 Set Current Color/Font: 2D Text Right-Click Menu > Set Current Color/Font; After pressing Alt + F12, type text in new Color/Font

Font characteristics from 2D text can be easily "picked up" and applied to other 2D text. **Pick Up Color/Font** and **Set Current Color/Font** work similarly to the **Color/Font** key, familiar to iNFiNiT!® operators.

1. Type a few rows of text, using a variety of colors and fonts. Note that the last style, color, edge styles and other attributes used are reflected in the sample characters displayed in the **Font Sample Area** of both the **Font Properties** tab and **2D Font FX Properties** tabs.

Msg: Untitled Dir: G:\Lyric\Messages FB0	
2D Text 1 Red Arial Yellow Comic Sans Gray Times New Roman White Impact	Filter Horizontal O : Vertical O : APPLY

Typing 2D Text

- 2. Place the cursor in the text whose attributes you wish to apply to other text.
- 3. Right-click on the 2D Text window to display the 2D Text/Template Context menu.
- 4. Select **Pick Up Color/Font** from the **2D Text/Template Context** menu. Note that the attributes of the text at the cursor position appear in the **Font Sample Area**.

Msg: Untitled Dir: G:\Lyric\Messages	FBO		
2D Text 1 Red Arial Yellow Comic Sons		Rotate	Filter Horizontal O Vertical
Gray Times New R White Impact	Show Effect Progress Pick up Color/Font Set Current Color/Font Mask Character	Aa	
	Template Properties Row/Tab Properties		

Picking Up Color/Font

 Next, draw a bounding box around the text to which you wish to apply the properties you just transferred to the Properties > Font tab. Be careful not to place the cursor in the new text; click outside of the target text to begin drawing the bounding box.

■■Msg: Untitled Dir: G:\Lyric\Messages	FBO		
2D Text 1 Red Arial Yellow Comic Sans		Botate	Filter Horizontal O + Vertical O +
Gray Times New R White Impact	Show <u>E</u> ffect Progress Pic <u>k</u> up Color/Font Set Current Color/Font Mask C <u>h</u> aracter	Aa	
	<u>T</u> emplate Properties Row/Tab Properties	1.	

Selecting Text to Be Changed

 Right-click inside the bounding box, then, as shown in the figure above, select Set Current Color/Font from the 2D Text/Template context menu. The attributes of the "picked-up" font is applied to the text in the bounding box.

2D Text 1 Red Arial Yellow Comic Sans Gray Times New Roman White Impact

"Picked-Up" Color/Font Attributes Applied to Selected Text

"Picked-up" color/font attributes can be applied to text that is about to be typed by skipping the text selection step. Simply place the cursor at the position at which the new text is to be typed, then select **Set Current Color/Font** from the **2D Text/Template Context** menu. **Color/Font** characteristics can also be quickly "picked up" and applied to text about to be typed as follows:

- 1. Place the cursor in the text from which the **Color/Font** is to be picked up.
- 2. Press Alt + F12.
- 3. Place the cursor at the position at which the new text is to be typed. Type new text. New text reflects the attributes of the "picked-up" color/font.

Spell Check

Tools Menu > Spell Check; F7

Lyric 2D Text provides a **Spell Check** feature, which examines all 2D text on the **Canvas** (including text in **Roll**, **Crawl** and **Type On** windows and in **Templates**), and compares them to words in a standard dictionary, as well as those in a **User Dictionary**. The **User Dictionary**, as well as other spelling parameters, can be set in **Spelling Preferences**. To initiate **Spell Check**:

• Select Spell Check from the Tools menu, or press the function key F7.

When activated, **Spell Check** opens a window (shown below) and begins checking spelling of the first **2D Text** window. Other 2D Text boxes on the Canvas are checked in order. Any words not appearing in the current **Dictionary** are flagged as shown:

Correction for> hae heavy heave hatsy hairy hairy halve	VY Ignore All Change All	Ignore Change
2D Crawl 1	Add to User Dict	Exit
and tonight, a	a haev	vy mid-
		E

Spell Check - Correcting a Word

The **Spell Check** dialog box provides the following functions:

Button	Description
lgnore	Ignores the flagged word, continues checking.
Change	Changes the flagged word to the version appearing in the Word List . Please note that you may type a new word into the top of the Word List , then change the flagged word to the new spelling.
Ignore All	Ignores all subsequent instances of words with this spelling.
Change All	Changes all subsequent instances of words to the spelling you've selected or entered.
Add to User Dict	Adds the word to the User Dictionary.
Exit	Exits from Spell Check.

2D Text/Template Context Menu

Right-clicking on 2D text either inside or outside of a **Template** displays a **Context** menu, also known as a right-click menu, which makes available a variety of functions related to 2D text operations. Note that all items in the menu are displayed as active. During Lyric operation, various items may be grayed out depending on active function, whether or not the cursor is positioned inside or outside of a **Template**, and the system on which Lyric is installed.

2D Text 1				
Row 1 Row 2	2D Text 1 (Text Window) Color-code Object Normal Space ✔ Modified Space Use Scene Camera	~	None Assemble	
Dow 2	Make Full Screen 2D Frames On Squeeze/Expand		Bulge Crumble Curtain Detonate	
	Insert Row Delete Row Swap Row Up Swap Row Down Swap Row Priorities Up Swap Row Priorities Down		Explosion Flag Flipboard Focus Globe Leaf	······ • •
	Delete Pause Pause Properties		Matrix PageRoll PageTurn	
	Show Effect Progress Pick up Color/Font Set Current Color/Font Mask Character	-	Ripple Slide Venetian Wipe Zoom	
	Template Properties Row/Tab Properties		Î	
	Animate Elements Advanced Text Effects Modify Spline Advanced Image Effects		200	4
	Position Lock On Copy Animation State Paste Animation State		1 2 3 4	
	Mask-To Layer Mask Inside		5 6 7	

2D Text Context Menu

• Object Name and Type: The first item in an object's context menu displays the object's name and type. Refer to Navigating and Entering Information in Lyric: Object Name and Type for details on renaming objects.

- Normal Space/Modified Space: A 2D Text window has two possible display modes Normal Space or Modified Space. In Normal Space, you may add, or edit the text content inside the window. In Modified Space, the contents of the 2D Text Window are subject to manipulation in scale and rotation, via the XYZ pane of the Properties menu.
- Use Scene Camera: Lyric's Scene Camera can be applied to a 2D Text Window (including 2D Roll, 2D Crawl and 2D Type On Windows) in order to provide a perspective view. Use Scene Camera can be enabled or disabled for individual 2D Text Windows. The Camera setting in Camera Properties has no bearing on the settings of individual 2D Text Windows although it can affect the juxtaposition of 2D Text Windows in relation to the entire composition. Use Scene Camera is covered in depth in this chapter.
- Make Full Screen: Make Full Screen enlarges the active 2D Text window to the dimensions of the Canvas. The Title Bar is no longer visible when in Full Screen. To grab a border of a full-screen 2D Text window, use the Canvas scroll bars to bring the border into view. Don't forget to reset the Canvas scroll bar when finished.
 - Click Make Full Screen to enable (check) or disable (uncheck).
- 2D Frames On: 2D Frame On turns on/of the display of all 2D Text Window and 2D Text Template frame on the Canvas, facilitating preview of the composition.
 - o Click 2D Frames On to enable (check) or disable (uncheck).

Note that this function is also available by clicking the **Turn On/Off/Text Window frames** icons **Implied Text Window frames** icons available from the **Chyron Toolbar**.

- Squeeze/Expand: Squeeze/Expand provides a quick method of adjusting space between 2D characters or rows in a 2D Text window or 2D Text Template. The scale of the characters does not change when Squeeze/Expand is performed.
- Insert Row/Delete Row: Insert Row creates a new row at the cursor location, or inserts a row into the current **Template** at the cursor location (2D text only). Delete Row deletes the row at the current cursor location. (2D text only). If in a **Template**, this function deletes a **Template** row. Both are also available from the Edit menu.
- Swap Row Up/Swap Row Down: The row on which the cursor currently is situated is made to change places with the row above (Swap Row Up) or below (Swap Row Down) it respectively. If Swap Row Up is attempted on the top row in a window, there is no effect. Likewise, if Swap Row Down is attempted on the bottom row in a window, there is no effect.
- Swap Row Priorities Up/Down: The display priority of 2D text rows on the Z-axis may be adjusted in compositions where rows overlap. The Swap Priority Up/Down operations are similar to Bring Forward and Send to Back operations found in graphics programs such as Adobe® Photoshop®.
- Delete Pause: Delete Pause as accessed from this menu is not implemented at this time. A Pause, however, can be deleted directly from the **Timeline**, and all **Pauses** in an animation can be deleted as a group from the **Scene Graph**.
- Pause Properties: Pause Properties as accessed from this menu is not implemented at this time. Pause properties can be set or modified directly from the Properties > Loops/Pauses tab.
- Show Effect Progress: Show Effect Progress is not implemented at this time.
- Pick Up Color/Font, Set Current Color/Font: Font characteristics from 2D text can be easily "picked up" and applied to other 2D text. Pick Up Color/Font and Set Current Color/Font work similarly to the Color/Font key, familiar to iNFiNiT!® operators.

- Mask Character: An RGB font character typed in a 2D Text Window can act as a Mask Character on a Duet SD/HD/Offline system, masking any elements, including the background, that are rendered below it. Note that a 2D bitmap that is placed in a 2D Text Window using a method other than typing cannot act as a Mask Character. Mask Characters are not supported on Duet LE/LEX/PCI/PCI+. Mask Characters are covered in depth in the chapter on Masks: Mask Characters.
- Template Properties: Template Properties accesses the 2D Text Template dialog box, in which 2D Text Template properties are set. 2D Text Templates are covered in depth in the chapter on 2D Text Templates.
- **Row/Tab Properties:** The properties of rows and **Row Tabs**, also known as **Tab Stops** or just **Tabs**, can be specified. This function is also available from the **Edit** menu.
- Animate Elements: Individual 2D text characters can be converted into independently animatable objects that can be repositioned, rotated, scaled, etc. Animating 2D characters is covered in depth in the chapter on 2D Text Animation: Animating 2D Characters.
- Advanced Text Effects: Advanced Text Effects provides a fast and convenient way to apply prescripted, keyframe-based animations to rows and/or 2D Text Templates in a 2D Text Window. Advanced Text Effects is an extension of the Animated Elements feature, which enables the conversion of 2D text into individually animatable objects. Effects include Horizontal/Vertical Blur, Drop Down, Push Up, Slide Left/Right, and Kern Left/Right. Custom effects can also be designed using the Advanced Text Effects Custom parameter settings. Advanced Text Effects can be saved and recalled for playback. Advanced Text Effects are covered in depth in the chapter on 2D Text Animation: Animating 2D Characters.
- **Modify Spline:** The **Spline Window** tool enables text to be typed and animated on a curved baseline. Once a **Spline** curve has been set up, it can then be modified. *Spline Window* setup, execution and modification are covered in depth in the chapter on **2D Text Animation: Spline** *Window*.
- Advanced Image Effects: Lyric's Advanced Image Effects capability allows sophisticated effects to be applied to imported bitmaps or entire 2D Text windows. Advanced Image Effects include Curtain, Explosion, Focus, Leaf, Matrix, PageRoll, PageTurn, Ripple, Slide, Venetian, Zoom and Wipe and more. Note that on Duet SD systems, Advanced Image Effects, which apply an effect to an entire page, are available via Multi FX. *Refer to the chapter on Advanced Image Effects for additional information.*
- Position Lock On: The Position Lock On setting specifies whether or not an object (2D Text Window, 2D or 3D object, etc.) can be moved on its X, Y or Z axes, as well as rotated, scaled or have its center of rotation changed. *Refer to the chapter on Position, Rotation, Scale and Orientation* for additional information.
- Copy/Paste Animation State: Copy/Paste Animation State enables animation attributes such as Position, Rotation, Scaling, etc., to be copied from one object and pasted to another. *Refer to the chapter on Animation for additional information.*
- Mask-To Layer, Mask Inside Duet LE/LEX/PCI/PCI+ Only: Mask-To Layer and Mask Inside are advanced Mask functions available to Duet LE/LEX/PCI/PCI+ systems. *Refer to the chapter on Masks: Mask Objects - Duet LE/LEX/PCI/PCI+ for additional information.*
- Harvester Properties: The Harvester Lite plugin enables a Lyric 2D Text Template to be linked to a text field at a remote URL for dynamic update via the Internet. Harvester Lite is covered in depth in the chapter on Plugins.
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. The Internal Properties accessed from this menu are applied to the selected object. They include Depth Test, Depth Write and Lighting.

Row Tab Functions

Insert Tab: Edit Menu > Insert Tab; Ctrl + T Tab Column Mode: Edit Menu > Tab Column Mode; Alt + M Select Next Tab: Edit Menu > Select Next Tab; Alt + J, Alt > or Alt < Row/Tab Properties: Edit Menu > Row/Tab Properties; 2D Text Window Right-Click Menu > Row/Tab Properties

Setting up a Row Tab

Row Tabs are used to produce columns in 2D Text windows and Roll, Crawl and Type On (Slow Reveal) windows, and are similar to ordinary tabs in a traditional word processor. The term Row Tabs is used to distinguish this function from Template Fields (in the context of Intelligent Interface and External Update) and the use of Tab keys in keyboard shortcuts.

Row Tabs may be used simply for convenience when inputting text, same as when using tab stops in a word processor. Each **Row Tab**'s attributes may be individually set. To set attributes, a **Row Tab** must be established in a **2D Text** window on the Canvas.

- For this example, open a full-screen 2D Text window. If you are not in Full Screen mode, right-click on the text window's Title Bar or within the window itself. In the menu that appears, select Make Full Screen. Note that 2D Text windows can be either full- or not full-screen when using Row Tabs.
- 2. Pull down Lyric's **Edit** menu or right-click on the **2D Text** window context menu, then select **Insert Row** to create the Canvas's first row without typing text.
- Click anywhere on the baseline of the first row and press Ctrl + T to set a tab stop. A red Row Tab Marker appears (see figure below). Note that you may click and drag Row Tabs to adjust their locations on the row's baseline. Whenever a Row Tab is selected, it turns red. When it is not selected, it is green. When its properties are being set, it turns purple (see next step).



Row Tab Added to Canvas

4. Right-click on the marker to display the context menu, then select **Row Tab Properties**. The **Row Tabs Properties** dialog box is displayed. The **Row Tab** marker now turns purple.

Row Tabs Properties	×
Justification NDNE C Center C Left Right Numeric C Decimal	
Auto Erase × Position: 101 Tab Column: 0	
OK Cancel	

Row Tabs Properties Dialog Box

5. Select the Justification Properties:

None: Text appears where typed.

Center: Text centered on Row Tab marker.

Left: Left end of text stays at Row Tab marker.

Right: Right end of text stays at Row Tab marker.

Numeric: Right end of number stays at **Row Tab** marker. Use with whole (non-decimal) numbers. Two examples are shown below.

Decimal: Decimal point stays at marker.

	None
	Center
	Left
	Right
Numeric	10.
Numeric	100
Decimal	10.53

Justification Examples

Auto Erase: When Auto Erase is enabled, text is automatically erased when new text is typed. You must use one of the following methods to access the **Row Tab** in order for this to work. Just typing in the column does not erase the existing text.

- Press Alt + J, Alt > or Alt <.
- Select Select Next Tab from the Edit Menu.
- o Click the Row Tab marker with the mouse before typing

X Position: Reflects **X Position** of the **Row Tab** relative to the left border of the **2D Text** window. This value can be changed in this field.

Tab Column: Reflects the column number. The **Row Tab** columns are automatically numbered in order of their creation, starting at **0**. This value cannot be changed.

6. Click **OK**.

Note the following about **Row Tabs**:

- Each **Row Tab**'s properties may be set individually, but may affect other **Row Tabs** if working in **Tab Column Mode** (see "Working with Tab Columns," below).
- Note that Templates attached to a Row Tab have their own justification for text within the Template borders, but their placement on the row is set by Row/Tab Properties.

In the preceding example, a **Row Tab** was created without first inputting text. To create a **Row Tab** in existing text:

• Position the cursor where the **Row Tab** is to be inserted, then click the **Ctrl + T** key combination or the pull down the **Edit** menu and select **Insert Tab**.

NOTE

When a Row Tab is established, text is "attached" to it. All text attached to a Row Tab remains so until the text or Row Tab is deleted, or the text is selected and repositioned using the mouse.

Tab Columns

Row Tabs can be used to create columns in Lyric, making alignment of text columns easy.

- 1. Select **Tab Column Mode** from the **Edit Menu** or press **Alt + M**. This puts Lyric into **Tab Column Mode**. The **Edit Menu** displays a checkmark next to **Tab Column Mode**.
- 2. Open a full-screen **2D Text** window. Next, pull down the **Edit** menu and select **Insert Row** to create the a row on the Canvas.
- 3. Click at a second location on the baseline of the row, then and press **Ctrl + T** to set a second tab stop. A second **Row Tab** marker appears.



Adding a Second Row Tab

- Press Enter, and a second row is created, containing the same tab stops. Optional: Press Enter to create additional rows containing the same Row Tabs. The columns are numbered in the order of their creation. Tab column numbers cannot be changed.
- Click at the Row Tab marker for the first column on the first row and begin inputting text. If you press Enter, the cursor will move to the beginning of the same column on the next row. Remember that pressing Enter when the cursor is in the last row on the Canvas adds a new row(s).

Note the following about adjusting **Row Tabs Properties** while in **Tab Column Mode**:

- Setting the **Row Tab Properties** of one **Row Tab** in any row affects the properties of *all* **Row Tabs** in the same column.
- Selecting a **Row Tab** and repositioning it moves all **Row Tabs** in the same column in the following rows.
- Selecting a **Row Tab** and sliding it past another previously repositioned **Row Tab**(s) in the same column and below it "picks up" the repositioned **Row Tab** and brings it into alignment with the moving **Row Tab** above.

To exit Tab Column Mode:

• Select **Tab Column Mode** from the **Edit Menu** or press **Alt + M**. **Tab Column Mode** is now disabled, and the **Edit Menu** no longer displays a checkmark next to **Tab Column Mode**.

Row Tab Navigation, Selection and Deletion

Select Next Tab

To move among the tab stops on a single row:

• Select Select Next Tab from the Edit menu, or press Alt + J, Alt > or Alt <.

Navigating Among Row Tabs

To move left-to-right/top-to-bottom or vice-versa among **Row Tabs** on different rows:

• Press **Alt** plus the < or > keys.

Selecting Row Tabs

The **Row Tab** can be selected from the keyboard by entering Alt + T. Alt + T only selects to the right, but wraps around on the row. Use the \uparrow or \checkmark to select a **Row Tab** on another row.

Moving Row Tabs

To move all the **Row Tabs** to the right of a **Row Tab**:

• Press the **Alt** key while clicking and dragging a **Row Tab**.

Deleting a Row Tab

To delete a Row Tab:

• Select the **Row Tab** marker, then press the **Delete** key; or left-click on the **Row Tab** marker, then hold down the left mouse button and press **Delete**.

Row/Tab Properties

Edit Menu > Row/Tab Properties; 2D Text Window Right-Click Menu > Row/Tab Properties

The properties of rows and Row Tabs, also known as Tab Stops or just Tabs, can be specified.

Setting Row Properties

The justification of a row can be set as follows:

1. Select the left or right row handle of a row, then select **Row/Tab Properties** from the **Edit** menu or from the **2D Text** window right-click menu. The **Row Properties** dialog box is displayed.

		Row Properties	×
	NONE	Justification	18
IOff		C N <u>O</u> NE	
Lon		C Left	
(Center	• Center	
	Diate	C <u>R</u> ight	
	Rign		. 1
		UK Cano	

Setting Row Properties

2. Select the Justification Properties:

NONE: Text appears where typed.

Center: Text is centered on row.

Left: Text is typed from left end of row.

Right: Text is typed from right end of row.

3. Click OK.

In the above example, the last row shows a cursor at the center, indicating that the row justification is set to **Center**.

Note that **Templates** on a row can each have their own justification setting for text within the **Template**'s borders, but the **Template**' placement on the row is set by **Row/Tab Properties**.

Setting Tab Properties

Refer to Row Tab Functions for information on setting the **Row Tab** properties. As noted above, **Templates** on a row can each have their own justification setting for text within the **Template**'s borders, but the **Templates**' placement on the row is set by **Row/Tab Properties**.

Pop-On Messages - Recording 2D Text-Only Messages

All Text: Ctrl + Record > Select All Text; Ctrl + Record T Cursor to End of Text: Ctrl + Record > Cursor to End; Ctrl + Record E Current Row of Text: Ctrl + Record > Current Row; Ctrl + Record + R

Rows of text in a **2D Text Window** can be updated by replacing them with text that has been recorded as a **Pop-On** message. By doing this, only the row(s) that changes must be recorded. When read back, the **Pop-On** message replaces the new text at the current cursor position in the **2D Text Window**. Note that if a **Pop-On** message is read into a **2D Text Template**, the **Pop-On** text overwrites the **2D Text Template**.

1. Create a simple three-line message. Place the cursor in the second line. Record the message, then erase the **Canvas**.

2D Text 1				
Text I	lessage Lin	le 1		e
Text N	lessage Lin	e 2	6	
Text N	lessage Lin	e 3		
	icoouge En			

Creating and Recording a Text Message

2. Create a one-line message.



Creating a Pop-On Message

3. Press Ctrl + Record. The Record Only dialog box is displayed.

Ext All Text In Window Cursor to End Current Bow	Timeline C <u>S</u> cene (.efx) C <u>O</u> bject (.kyf)	 C Message, <u>W</u>ith Options ✓ Preview Frame ✓ End Frame ○ Specific Frame
C Template Data Message	Panel	00,00,00
Plugin <u>1</u> C Harvester Lite <u>2</u> C Backup Restore	C Cloc <u>k</u> s/Timers C <u>M</u> acros C Multi <u>F</u> X	Embedded Macro Save Name Only
40 50 60	 <u>P</u>laylist (.ply) Sgueezeback Video Mixer 	

Record Only Dialog Box

- 4. The **Record Only** dialog box the following recording choices which can be used as **Pop-On** messages:
 - All Text in Window: Records all text in selected 2D Text Window. Empty lines on a Pop-On message are ignored. For example, if a three-line Pop-On is recorded, and the middle line is empty, the Pop-On is read back as a two-line Pop-On, and replaces (or adds) two consecutive rows of text.
 - **Cursor to End:** Records all text from the beginning of the row on which the cursor is positioned, to the end of the text in the window. As described above, empty lines on a **Pop-On** message are ignored.
 - Current Row: Records only the text on the current row.

Note that although **Template Data Message** is in the **Text** area of the **Record Only** dialog box, it is not a **Pop-On** format. For this example, select the **All Text in Window** radio button, then click **Record**. All of the text in this window is recorded.

- 5. Recall (read) the original message recorded in Step 1.
- 6. While the original message is displayed, recall the message that was recorded in Step 3. The oneline text from the second message replaces the second row of text from the first message.

2D Text 1	
Text Message Line 1	
Text Message Line 3	

Text Message after Reading a Pop-On Message

Note the following regarding the location of the **Pop-On** message and multi-line **Pop-On** messages.

- The location of the **Pop-On** text that is read into another message is determined by the current cursor location on the Canvas. Cursor location within the row has no bearing on the location of the replacement text, as it replaces the entire row.
- A Pop-On message containing multiple lines adds the lines to a shorter message.
- A Pop-On message can be read only into a 2D Text Window (including Roll, Crawl and Type-On (Slow Reveal)).
- A **Pop-On** message is row-based, resulting in the replacement of the entire row, regardless of whether or not there are **2D Text Templates** in the text message or the **Pop-On** message.

Try this example of a multi-line **Pop-On** message.

1. Record a three-line message with the third line empty. Position the cursor in the fourth line, then record the message. Erase the **Canvas**.

2D Text 1	
Text Message Line 1	
Text Message Line 2	
Iext Message Line 3	
	E

Text Message with Cursor on Fourth Line

2. Clear the image and record four lines of text in a new **Pop-On** message. Erase the **Canvas**.



Multi-Line Pop-On Message

3. Read the three-line message again, then read the **Pop-On** message over it. The **Pop-On** text is placed starting at the line on which the cursor was positioned when the text message was recorded, resulting in six lines of text. In this example, the window is too small to display all of the lines. Ensure that the window is large enough to display all lines when reading back a multi-line **Pop-On** message.

2D Text 1	
Text Message Line 1 Text Message Line 2 Text Message Line 3	
POP-ON MESSAGE LINE 1 POP-ON MESSAGE LINE 2	
	•

Multi-Line Text with Multi-Line Pop-On

A **Pop-On** message can also be used to replace specific consecutive lines in another message. For example, **Lines 2** and **3** can be replaced by a two-line **Pop-On** message. Just make sure that the cursor is on the first of the lines to be replaced when the message is recorded.

13. 2D Text Templates

2D Text Templates

Tools Menu > Template; Lyric Toolbar

Select Text, then: Tools Menu > Template; or Chyron Toolbar >

Refer to the chapter on 3D Characters and Objects for information on 3D Character Templates.

Refer to the chapter on 2D Objects for information on 2D Object Templates.

Overview

2D Text Templates are rectangular regions, created within **2D Text Windows**, that can be formatted for default font, color, alignment, update and other attributes. **2D Text Templates** also provide a means for fast text updates on-screen with the use of **Intelligent Interface**, **DBLink** and **Template Update**. Updated information is displayed using the attributes set for the Template.

In addition to the above update methods, Lyric provides quick 2D text update capability, regardless of whether or not the text is in a **2D Text Template**. *Refer to Pop-On Messages for details.*

Creating a Template

Select Text, then: Tools Menu > Template; or Chyron Toolbar >

A 2D Text Template can be created empty, or can enclose existing text.

To create an empty 2D Text Template:

- 1. Place the cursor at the position in a **2D Text Window** where a **2D Text Template** should be placed.
- 2. Click the **Template** icon on the **Chyron Toolbar**, or select **Template** from the **Tools** menu. A **2D Text Template** appears in the **2D Text Window**:

2D Text

2D Text Template

Text can then be typed in the **Template** using the currently selected font. The **Template** can be expanded to a multi-line **Template** by pressing the **Enter** key.

To create a **2D Text Window** that encloses existing 2D text:

- 1. In the 2D Text Window, select the desired 2D text.
- Click the Template icon icon on the Chyron Toolbar, or select Template from the Tools menu. Important: To ensure proper Template height, be sure to include a space character in the selected text. Multiple lines can be selected to create a multi-line Template. A 2D Text Template encloses the selected 2D text.

Inter-row spacing is maintained, but any deviation in inter-character spacing is not. The **Default Template Font** (see **Template Properties** following this section) is taken from the leftmost character in the selection rectangle (usually the first character on the line).

Lyric User Guide

Once the cursor is inside a **2D Text Template**, all subsequently typed text is typed until the cursor is moved outside of the **Template**. To move the cursor out of a **2D Text Template**:

• Click outside of the **Template** or press the **Esc** key. When the **Esc** key is pressed, the cursor is moved to a position directly outside of the **Template**.

To navigate among 2D Text Templates:

• Press **Tab** to move forward in numerical order, or press **Shift + Tab** to move in reverse numerical order.

Template numbering is covered later in this section.

Editing Templates

About Keyboard/Mouse Shortcuts

Lyric provides numerous text and **Template** editing functions. *Refer to the chapter on* **Keyboard/Mouse Shortcuts: 2D/3D Text/Text Templates/Row Tabs** for in-depth information.

Delete Templates/Leave Text

Edit Menu > Delete Template/Leave Text

The Templates in a **2D Text Window** (including **Roll**, **Crawl** and **Type On**) can be deleted, leaving the text intact:

• Select **Delete Templates/Leave Text** from the **Edit** menu. All **Templates** are deleted from the currently active **2D Text Window**.

Setting Template Properties

Once a **2D Text Template** is created, the attributes of the **Template** can be set. Each **Template** in a Lyric composition can have a distinct set of attributes that are different from other **Templates** in the same composition, as well as from other, non-**Template** text. To access the **2D Text Template** dialog box:

• Right-click inside the **Template**, then select **Template Properties** from the context menu. The **2D Text Properties** dialog box is displayed.

Prev/Next Name	DB Link
	DB Link
Number Priority Text Lines	Content Add
Reset to Default Copy Paste	Del

2D Text Template Dialog Box - Left Side

Optional Auto Erase Word Wrap Size To Fit I Update Ext. Update All Caps	Justification NONE C Center C Left C Page Center C Right	Font Aa Set Pickup	Background Set <u>B</u> kg Clear

2D Text Template Dialog Box - Right Side

The **2D Text Template** dialog box displays the attributes of the current **2D Text Template**. To display the attributes of other **2D Text Templates** in the composition, scroll through the **2D Text Templates** by clicking the **Prev/Next** icons. The following **Template** attributes can be set:

Name

Name enables a 2D Text Template to be named for easy recognition.

• Enter a name in the **Name** field.

DB Link

DB Link allows a **2D Text Template** or **2D Object Template** to be automatically populated and updated from a database. To enable/disable **DB Link**:

 Click the DB Link checkbox to select/deselect. When the DB Link checkbox is selected (checked), the DB Link dialog box opens. Refer to DB Link for setup procedure.

DB Link parameters can be set or modified whether or not DB Link is enabled. To do so:

• Click the DB Link button. The DB Link dialog box opens. Refer to DB Link for setup procedure.

NOTE

Be careful about enabling DB Link fields in Template Data messages in which Intelligent Interface Updates are to be executed. See II Update later in this section for additional information.

Update DB Link Fields

Edit Menu > Update DB Link Fields

To update all **DBLink** fields with the latest data from the data source without having to save and re-read the message:

• Select Update DBLink Fields from the Edit menu.

Disable DB Link Fields

Edit Menu > Disable DB Link Fields

When **DBLink Update** capability has been set up in a Lyric message, selecting **Disable DBLink Fields** turns off the **DBLink** attribute for all **Templates** in the message, although the database links remain as set. **Templates** do not update from a database when the message is read or **Update DBLink Fields** is selected. To execute:

1. Select **Disable DBLinks** from the **Edit** menu. The following prompt is displayed.



Disable DB Link Popup

2. Select Yes to Disable DB Link for the message, or No to cancel.

To re-enable **DB Link**:

- Select a Template in the message, then right-click on the Template. The 2D Text Template dialog box is displayed. Note that the DB Link Checkbox is not enabled (checked) for the selected Template.
- Click the DB Link checkbox to re-enable DB Link capability. Use the Prev/Next buttons to cycle through the other Templates in the message, and for each, click the DB Link checkbox to reactivate DB Link capability.

Number

Templates are numbered in the order in which they are created, regardless of the **2D Text Window** in which they are placed. Numbering starts at **0**. Note that a **Template Number** must be unique within a Lyric composition, as accurate update of **Template** text requires that the correct **Template** be addressed.

- When the **Tab** key is pressed, the focus moves from **Template** to **Template** in ascending **Number** order.
- When **Shift + Tab** is pressed, the focus moves from **Template** to **Template** in descending **Number** order.

The **Template Number** can be changed to make a more convenient or logical order:

• Enter a number or click the arrows to set the **Number**. Remember not to set more than one **Template** to the same **Number**, as updates may not be performed properly.

To skip a **Template** when tabbing through **Templates**:

• Set the Number to -1. Note that when set to -1, the Template cannot be updated via DB Link or Intelligent Interface. It can still be updated using the Template Update function.

Renumbering Templates

Edit Menu > Renumber Templates

If **Templates** are created in a haphazard order, it may be advantageous to renumber the **Templates** so that content management and navigation among **Templates** is easier. To renumber all **Templates** in a **2D Text Window** in ascending order, starting from **0**:

• Select Renumber Templates.

Starting with the bottom-most **2D Text Window** as listed on the **Scene Graph**, **Templates** are renumbered from left-to-right; top-to bottom. Numbering continues with **Templates** in next highest **2D Text Windows** in the same manner.

Priority

Priority sets the layering of **2D Text Templates**. **Priority 1** is front-most in **Z-space**. Higher-numbered **Templates** are displayed behind lower-numbered **Templates**. To set **Priority** for the **Template**:

• Enter a number or click the arrows.

Text Lines

Text Lines determines the number of **Text Lines** in the 2D Text Template. A new line can also be added to the **2D Text Template** by placing the cursor at the end of a line, then pressing **Enter**. To set **Text Lines**:

• Enter a number or click the arrows.

Default Content

Default Content sets a **2D Text Template** to display fixed text. When the message is read, the **Default Content** is displayed in the **2D Text Template**. Setting **Default Content** in a **Template** is a two-part procedure.

- 1. Define the **Default Content**.
- 2. Assign a **Default Content** item to a row in the **2D Text Template**.

To define Default Content:

• Enter the content into the **Default Content** field, then click **Add**. The content is added to the **Default Content** list, located directly below the **Default Content** field.

This process can be repeated to add multiple **Default Content** items to the **Default Content** list. The order in which they are entered has no bearing on assignment to a **2D Text Template** row.

To assign Default Content to a 2D Text Template row:

- 1. Place the cursor on the desired row in the **2D Text Template**.
- 2. Double-click on the desired item in the **Default Content** list. The **Default Content** item now appears in the **2D Text Template**, positioned from the start of the row.

This process can be repeated to add text to other rows of the **2D Text Template** or to modify existing **Default Content**.

Note the following:

- Existing text in the row is overwritten by Default Content.
- Default Content is overwritten if the Template is updated via DB Link, Intelligent Interface or Template Update.
- If Size to Fit is disabled (unchecked), display of Default Content that extends beyond the bounds of the 2D Text Template is truncated after the last character that is at the edge of the 2D Text
 Template. If Size to Fit is enabled (checked), Default Content that extends beyond the bounds of the 2D Text Template is squeezed to fit within the 2D Text Template. As this my produce undesirable results, it is recommended that 2D Text Template be extended to accommodate the Default Content. Refer to Keyboard/Mouse Shortcuts 2D/3D Text/Text Templates/Row Tabs for details on resizing a 2D Text Template.

To delete **Default Content** choices from the list of **Default Content** text:

• Click on the text in the **Default Content** list, then click the **Del** button. The text is removed from the list.

To remove **Default Content** from a **Template**:

• Delete the text directly from the Template.

Auto Erase

When enabled, **Auto Erase** sets the **2D Text Template** to automatically erase its contents when new text is typed in the **Template**. To enable/disable **Auto Erase**:

• Select (check)/deselect (uncheck) the Auto Erase checkbox.

Note that when a **Template** is updated via **DB Link**, **Intelligent Interface** or **Template Update**, the contents of the **Template** are always completely replaced by the new contents, regardless of the **Auto Erase** setting.

Word Wrap

When text is typed or entered via update past the end of a row in a **2D Text Template**, it can be set either to continue past the border of the **2D Text Template**, or to wrap to the next line so that all text displays within the borders of the **2D Text Template**.

Note that the **Word Wrap** setting is not affected by and has no bearing on the **Enable Word Wrap** setting applied to a **2D Text Window**. They are independent of each other. *Refer to 2D Text Overview for additional information.*

- When Word Wrap is disabled, text types beyond the border of the 2D Text Template.
- When Word Wrap is enabled, text wraps to the next line when typing reaches the end of the row.

To enable/disable Word Wrap:

• Select (check)/deselect (uncheck) the Word Wrap checkbox.

Numeric

The Numeric setting determines how numbers are justified in a Template.

- When **Numeric** is not enabled, numbers are not monospaced, so they do not properly align if the numbers are of different widths.
- Numeric is best used when Right Justification is selected, although it can also be used when Center or Page Center Justification is selected. If Numeric is enabled, only numbers typed on the alphanumeric keyboard, the dollar sign (\$), the comma (,), and the period (.) characters can be typed in the Template. Numbers are monospaced instead of kerned so that multi-row numbers vertically align. Note that while only certain characters can be typed when Numeric is enabled, a Template in which Numeric is enabled can be updated with any type of text.
 - When **Right Justification** is set, the numbers justify to the right. To ensure vertical alignment of the numbers, make sure that each number in the **Template** contains the same number of digits following the decimal point.
 - When Center or Center Page Justification is set, the numbers justify horizontally to the center. In addition, with Center Page Justification, the rows vertically to the center. To ensure vertical alignment, use this setting only if all of the numbers in the Template contain the same number of digits preceding and following the decimal point.

To enable/disable Numeric:

• Select (check)/deselect (uncheck) the **Numeric** checkbox.

Size to Fit

The **Size to Fit** setting determines whether or not text that is too long to fit on one row of the **Template** is squeezed to fit on the row.

- If Size to Fit is disabled, text that is too long to fit on a row types beyond the border of the **Template**, or, if **Word Wrap** is enabled, wraps to the next line.
- If **Size to Fit** is enabled, text that is too long to fit on a row is squeezed to fit on the row of the **Template**. This can sometimes result in an unsatisfactory appearance. If so, extend the length of the **Template**.

To enable/disable Size to Fit:

• Select (check)/deselect (uncheck) the Size to Fit checkbox.

II Update

The **II Update** setting does not affect **Intelligent Interface** update of **2D Text Templates**. It can, therefore, be selected (checked) or deselected (unchecked). It does, however, enable/disable **Intelligent Interface** update of **2D Object Templates**. *Refer to the chapter on 2D Objects for additional information.*

NOTES

When receiving W commands to update Templates, be careful about mixing Template fields enabled for DB Link with Template fields marked for Intelligent Interface Update. If DB Link is enabled for a particular Template(s) when the Template Data message is read, the Template(s) will update as per the Intelligent Interface command, but then immediately update again using data from the linked database. This occurs even if the Template is marked for Intelligent Interface Update, i.e., the DB Link data overrides the Intelligent Interface data.

This is also the case for the U command that updates the data in a single Template in a Template Data Message. The DB Link Enable setting, however, does not affect the execution of the U* command which updates a specified Template without reloading the Template Data Message.

Refer to Intelligent Interface for in-depth information on these commands.
Ext. Update

When a Lyric message is containing a **Template(s)** marked for **External Update** is read, the system running Lyric sends an **X** command requesting **Intelligent Interface Update** to the host system. Additionally, the following prompt is displayed:



Waiting for Update Prompt

The host computer then sends an R command to update the marked Template(s).

To enable/disable Ext. Update:

• Select (check)/deselect (uncheck) the Ext. Update checkbox.

Note that when Ext. Update is enabled, II Update is automatically enabled as well.

Refer to the section on Intelligent Interface for additional details.

Disable Interface Fields

Edit Menu > Disable Interface Fields; Alt + U

Disable Interface Fields disables Intelligent Interface® External Update of all 2D Text Templates and 2D Object Templates in the entire Lyric composition. When a Lyric message is containing a Template(s) marked for External Update is read, the system running Lyric does not send an X command requesting Intelligent Interface Update to the host system. Disabling Interface Fields does not affect, however, the ability of 2D Text Templates to be updated via other Intelligent Interface commands. It does, however, disable the ability of 2D Object Templates to be updated via other Intelligent Interface commands.

To execute:

1. Select **Disable Interface Fields** from the **Edit** menu, or press **Alt + U**. The following prompt is displayed.



Disable Intelligent Interface Fields Prompt

2. Click Yes to disable or No to cancel.

All Caps

The **All Caps** enables typing of all characters to be in upper case, regardless of whether or not **Caps Lock** is enabled or the **Shift** key is pressed. To enable or disable **All Caps**:

• Select (check)/deselect (uncheck) the All Caps checkbox.

Lyric User Guide

Justification

Justification determines how the text aligns in the **Template**. To set **Justification**, select (click) one of the following radio buttons:

- NONE: The text is does not justify, and is positioned as typed.
- Center: The text justifies horizontally to the center. Vertical position is as typed.
- Left: The text justifies horizontally to the left. Vertical position is as typed.
- Page Center: The text justifies horizontally and vertically to the center.
- **Right:** The text justifies horizontally to the right. Vertical position is as typed.

To set justification to center vertically, but also to the left or right horizontally:

- 1. Type all of the text that is to be placed in the **Template**.
- 2. Set Justification to Page Center. The text centers both horizontally and vertically.
- 3. Now set **Justification** to **Left** or **Right**. The text centers horizontally to the left or the right, leaving the vertical centering intact.

Font

A **2D Text Template** can have only one **Default Font** set, although more than one font can be used in a particular **Template**. Note, however, that any update to the **Template** results in all of the text in the **Template** changing to the **Default Font**.

The Font Sample Area shows a sample of the current Default Font for the Template.



Font Sample

To change the **Default Font** for the **Template**:

- 1. Modify the font using Font Tools, Font Properties and/or 2D Font FX Properties.
- 2. After the font is modified, click the **Set** button in the **2D Text Template** dialog box. All existing text and subsequently typed text in the **Template** has the attributes of the newly set font.

When a cursor is first placed in a 2D Text Template in a 2D Text Window, Font Tools, Font Properties and 2D Font FX Properties display the attributes of that 2D Text Template even if the cursor is moved to other Templates within the 2D Text Window. To display the font attributes of another Template within the same 2D Text Window:

• Place the cursor within the **Template**, then click **Pickup**. The picked-up font attributes are now displayed.

These attributes can also be applied to another **Template** within the same **2D Text Window** using the **Set** procedure just described.

Note that if the TrueType[®] font on which a Lyric font is based is not available a red slash is displayed across the **Font Sample**.



TrueType[®] Font Unavailable

Background

A solid color, ramped color or graphic **Background** can be applied to a **2D Text Template**. A sample of the currently set **Background** is displayed in the **Background Sample Area**.

To set a Background:

- 1. Click the **Set Bkg** button, then select **Solid/Ramp Color** or **Graphic File** from the displayed menu.
- 2. Set a color or ramped color or select a file to use as the **Background**.

Refer to the chapter on **Color, Transparency, Background Lighting and Texture** for in-depth information on applying a **Background** to a **Template**.

To delete a **Background** from a **Template**, use one of the following methods:

- Click the **Clear** button.
- Click the **Set Bkg** button, and then select **Delete** from the displayed menu.

Alignment Toolbar

View Menu > Toolbars > Alignment Toolbar



Alignment Tools

The Alignment Tools are used both for aligning 2D Text Templates and Timeline elements. For information on aligning Timeline elements, refer to Adjusting and Aligning a Timeline.

The following figures show how the **Alignment Tools** are used to align **2D Text Templates**. There are five alignment tools, as shown in the following figure:

Align Align Make Left Top Same Widt	h: Window Help
DEPENDER D	
	Arial
2D Text 1 Align Align Right Bottom	Template 1 Template 2 Template 3

Alignment Tools on the Lyric Interface

Use Ctrl + Click to select multiple 2D Text Templates, which places the 2D Text Templates in a Bounding Box. Do not click and drag to enclose the 2D Text Templates in a Bounding Box.



Templates Selected in a Bounding Box

The last **2D Text Template** selected using **Ctrl + Click**, becomes the **Anchor 2D Text Template**. When an **Align** is performed, the other **2D Text Templates** align to the **Anchor 2D Text Template**.

[ext 2 Alian	
Template	1
Templ	ate 2
	Template 3
xt 2	Tomploto 1
xt 2	Template 1
:xt 2	Template 1 Template 2
xt 2	Template 1 Template 2 Template 3

Right Alignment

Lyric does not automatically prohibit the **Align** function from doing something awkward, as shown below, so be aware of the potential results of an alignment.

	Alignment Tools B+ +리 무 ㅎㅎ ·
2D Text 2	Align Bottom
	Template 3

Bottom Alignment

Make Same Width resizes the selected 2D Text Templates to match the width of the selected Anchor 2D Text Template.

2D Text 2
Iemplate 1
Template 2
Template 3
Alignment Tools □+ +□ +□ +□ +□ H Make Same Width
2D Text 2
Template 1
Template 2
Template 3

Make Same Width

Template Update

Tools Menu > Template Update; Alt + T

All **2D Text Templates** and **3D Text Templates** in your composition may not be visible on the **Canvas** simultaneously, and tabbing to each **2D Text Template** or selecting each **3D Text Template** that you wish to modify can be time-consuming. The **Template Update** feature offers a convenient way to view and update or edit text within templates. The example below shows a set of **2D Text Templates**. There can, however, be a mix of **2D Text Templates** and **3D Text Templates** on a **Canvas**.

1. Press **Alt + T** or pull down the **Tools** menu and select **Template Update**. The dialog box pictured below right appears:

2D Text 1	🔲 Template Upda	ate 💶 🗙
Kerensky	Pitcher Kerensky	0
Prendergast	Catcher Prendergast	1
Yoshida	First Base Yoshida	2
Gavdon	Second Base Fanelli	3
Pardo	Third Base Gaydon	4
	Short stop	5
		UK
	_	Cancel

Canvas and Template Update

When the dialog box is first opened, up to six template fields are displayed, sorted by template number and showing the text content of each template. If there are more than six templates in your composition, the dialog box will include a scroll bar for access to the rest of the fields displaying template text.

- Pressing the Page Up, Page Down and Tab keys moves the cursor through the fields
- Pressing **Shift + Tab** moves the cursor back to the previous template.

- 2. Delete the current text in the **Template** field (if necessary), and then enter updated text in any field or fields.
- 3. Click on one of the following buttons:
 - **Apply:** Applies the change and keeps the **Template Update** dialog box open. Any changes you have made will be reflected in the text template(s) on the Canvas.
 - OK: Applies the change and closes the **Template Update** dialog box. Any changes to **Template** text are reflected in the **Text Template(s)** on the **Canvas**.
 - Cancel: Cancels any changes and closes the Template Update dialog box.

If a **2D Text Template** or **3D Text Template** contains more than one line, then the separate lines can be updated from the **Template Update** dialog box.

- 1. In the **Template Update** dialog box, select a **2D Text Template** or **3D Text Template** as previously described.
- 2. Delete the current text in the **Template** field (if necessary), and then enter the text for the first line of the **Template**, and then press **Shift + Enter**.
- 3. Enter the text for the second line of the **Template**, and then press **Shift + Enter**. Note that no special character or space indicates where **Shift + Enter** was typed. The text will appear to run together in the field.
- 4. Repeat the text entry Shift + Enter sequence for each subsequent row.
- 5. Press Apply or OK to apply the change.

The following occurs if an attempt is made to add a new line to a **Template**:

- Pressing Shift + Enter does not add an extra line to a 2D Text Template on the Canvas. If there is
 no new line available in the 2D Text Template, text typed after a Shift + Enter is appended to the
 text already on the 2D Text Template line.
- Pressing Shift + Enter does add an extra line to a 3D Text Template on the Canvas. If, however, the first row does not begin at the left edge of the Canvas, the rows will be out of alignment. It is recommended that each row of 3D characters be typed in its own 3D Text Template to make row alignment easier.

Database Link (DB Link)

2D Text Template: Create Template > Select, then Right-Click Template > Select Template Properties 2D Object Template: Right-Click 2D Object or Scene Graph Listing > Select Show 2D Object Properties

2D Text Templates and **2D Object Templates** can draw text and 2D objects (bitmap graphics), respectively, from any ODBC-accessible database that is available to the system on which Lyric is running. Each time a message (including a **Pop-On** message) containing linked **Templates** is read, Lyric checks the database, so that any changes in the linked **2D Text Templates** or linked **2D Object Templates** update the Canvas. Text and graphic updates can be performed from the same database in real time for up-to-the-minute news, election, sports and other live coverage.

In addition to **DB Link**, Lyric provides a wide variety of methods to update information displayed in a Lyric message. *For an overview, refer to Updating Messages in Lyric.*

Using DB Link to Replace Text

To try out this feature, you will need access to a database established by an application such as Microsoft Access. The database's fields should correspond to Lyric's own **Browser** fields, such as **Comment**, **Keyword** and **Subject**.

- 1. Compose a Lyric message with a **2D Text Window** containing both conventional text and a **2D Text Template**.
- 2. Select (click on) a **Template**; right-click the **Template**; then select **Template Properties** to display the **2D Text Template** dialog box.

3. In the **2D Text Template** dialog box, click in the **DB Link** checkbox, and then click the **DB Link** button. The **DB Link** dialog box opens.

2D Text 1			
Projected	l winner,	Kepler City mayo	ral race:
🕶 2D Text Template			
Prev/Next Name Template	e O Text Lines 1 W Paste	DB Link Pefault Content Add Del	Optional Auto Erase <u>W</u> ord Wrap <u>N</u> umeric <u>Size To Fit</u> <u>I</u> Update <u>Ext. Update</u> All Caps
	DB Link	/ ?/×	
4	<u>D</u> ata Source	Local	
	<u>T</u> able	Messages 💌	700
	<u>F</u> ield	Comments	
	<u>R</u> ecord	1 <u>E</u> nable	
	Deci <u>m</u> al O Places	Template Number	
		OK Cancel	

Accessing the DB Link Dialog Box

4. In the **Data Source** field, enter the name that has been given to the database you will be accessing. Note that this dropdown menu can be used to select any registered database.

5. Designate the database **Table** and **Field** from which you wish **DB Link** to draw its text (*see figure below*). You may designate any field of the database's records with the drop-down menu.

DB Link		<u>? ×</u>
Data Source	Browser	•
Table	Messages	•
Field	Comments	•
Record	AssetType Author	
	Comments HomeVersion ID	
Decimal D Places	Keywords	
Apply	ОК	Cancel

DB Link Database Setup

- Designate the number of the **Record** in the database that you wish to access. Database programs can vary in the ways they determine the numbering scheme for their entries, so some experimentation may be needed.
- 7. Be sure to check the **Enable** checkbox, and then click **OK**. Note that a **Disable** command is available on the **Edit** menu, as seen below left.



Disable DB Link Fields

Selecting this command causes the system to request confirmation before completing the action, above right.

8. The **DB link** information has become part of the Lyric message, so now enter a **Message ID Number**, and then record the message, even though nothing has yet changed on the Canvas.

OR

If the message has been previously stored in Lyric's Browser, right-click on the message's thumbnail and select **Update**.

9. In the database program, change the text of the **Comments** field in **Record #1**. Press **Shift + Enter** to save this change to the database. Remember that the database program you use on-air may work differently than the one pictured in this exercise. In a real-world situation, the database fields will be updated automatically through an external application, such as a newsroom automation program.

-	MICIOSOIL A	ccess - [Messag	es : Tablej							
	🔢 Eile Edit	<u>V</u> iew <u>I</u> nsert F <u>o</u> ri	mat <u>R</u> ecords <u>T</u> ools	<u>W</u> indow <u>H</u> elp						
1	🖌 - 🔛 é	🗟 🗘 💞 🕺	ħ 🖬 ダ 🗠	🍓 ኛ 🛃	1 y F	7 4	🕨 🕅 👘 🦑	. .		19
	Access ID	Lyric Msg #	Lg TN Bitmap	Sm TN Bitma	p Author	Title	Comments	Keywords	Subject	LastMod
	1	7000		1	LY	00007000	\\Ted Smith			March 06, 2000
	2	7001			L Y	00007001	WZne Jones			March 06, 2000

Microsoft® Access® Database

10. Next, return to Lyric and call up the same message by entering its **Message ID Number**, then pressing **Read**.

Projected winner, Kepler City mayo	ral race.
Zoe Jones	

Reading a Message Updated by DBLink

The text in the Template has changed along with the text in the updated database "Comments" field. Also note that an **Update** command is available on Lyric's **Edit** menu, as seen below. This facility allows the operator to update **DB Link**-displayed information without having to save and re-read the message.



Update DB Link Fields

Using the Database Link Feature with a Microsoft® Excel Document

Create a spreadsheet in Excel (these procedures are documented for use with Excel 97); add a heading and define a name for each column to be linked. The name and corresponding heading should be different.

XM	licrosoft E	xcel - Ya	nke	es2002a	.xls [!	Share	d]		
8	<u>File E</u> dit	View Ins	sert	Format	Tools	Data	Windo	w <u>H</u> elp	
	i 🖻 🔒	60		C <u>e</u> lls			-	α - (. 😤
Ari	al PlaverCol	-		<u>R</u> ows Columns					₩ 8
	A	E	15	worksnee Chart	90			E	F
1 2 3	Player Clemens Mussina	Aver: C	f _×	Page Brea	ak.				
4 5	Pettitte Williams		<u>.</u>	<u>N</u> ame Co <u>m</u> ment	0	-		<u>D</u> efine <u>P</u> aste	43
6 7 8	Giambi Soriano Jeter	с С		Picture Map			•	<u>C</u> reate Apply	
9 10	Widger Posada	C C		Object Hyperlink	Ch	·l+K		Label	
11 12 13									
14 15									

DBLink: Microsoft® Excel Spread Sheet Setup

Each name defines an ODBC table and the column heading defines an ODBC field.

Note: Mixing alphabetical and numeric data in the same column may cause problems in the Lyric display, so in a situation similar to this example, you might wish to title the "Player" and "Average" columns as Lyric text in the finished display, as opposed to taking the displayed column heading from the Excel spreadsheet. The Lyric text templates pictured in the Template Setup figure further below reflect this.

1	AverageCol	-	= Avera	ge					
	A	В	С	D	E	F	G	Н	
1	Player	Average							
2	Clemens	0.667	Define Nar	ne				?	×I
3	Mussina	0.6	Names in u	orkbook				-	
4	Pettitte	0.333	Names in w	UTKDOUK:				OK	
5	Williams	0.333	AverageCo	ol				Chara	1
6	Giambi	0.314	Average(Iol				Close	
7	Soriano	0.3	FlayerCol	10				Add	
8	Jeter	0.297							
9	Widger	0.297						<u>D</u> elete	
10	Posada	0.268						-	
11									
12							-		
13									
14			Refers to:						_
15			=Sheet1!\$	\$B:\$B				3	1
16]								_

Defining Column Names

Once the spreadsheet is complete, register it as a **Data Source** through your Duet or PC's **ODBC Data Sources** Windows control panel. [**Note**: Depending on the Excel <u>driver</u> in your system, this control panel may appear with the name **Data Sources (ODBC)**]

Linking with the Spreadsheet from Lyric

After completing the steps outlined above, your spreadsheet should appear as a Data Source in the Database Link dialog box, along with the tables (names) and fields (columns) that have been defined.

ame	Driver	•	Add
ocal	Driver do Microsoft Access (*.mdb) Microsoft Access Driver (*.mdb)		Remove
arch2001Assets S Access 97 Database ock Indices RK_dBase_TK7 RK_SS_TK7 RK_Sybase_ASE_TK7 ankees2002a	Microsoft Access Driver (*.mdb) Microsoft Access Driver (*.mdb) Microsoft Access Driver (*.mdb) PVCS Tracker 3.60 dBase PVCS Tracker 3.60 SQL Server PVCS Tracker 3.60 Sybase ASE Microsoft Excel Driver (*.xls)		Configure
📰 🛛 An ODBC Use	r data source stores information about I	now to	connect to

ODBC Data Source Administrator - New Database Added

Note: If the spreadsheet is still open in Excel, you may need to **share** the workbook (use Excel's **Tools** menu) so that Lyric can access the spreadsheet.

Next, open a Lyric canvas containing a 2D text window large enough to accommodate all of the cells in your table. Create an individual template for each piece of information you wish to display. You might try it this way:

- 1. Create a text row for every row in your table (with the text window open, press **Alt + Insert** for each row you wish to create).
- 2. Place the cursor on the first row and open a template with the Template button on the Chyron Toolbar.
- 3. Keep the cursor on or near the first row, and position it where you wish to begin a second column. Press the Template button again (Lyric should "snap" the template vertically to the first row).
- 4. Click and drag around the two templates to select them in a bounding box.



Selecting Two Templates

5. Copy (**Ctrl + C**) the templates.

 Place the cursor on the next row and use the Paste In Place command (Ctrl + I). The Paste In Place function will place the new templates directly beneath the original ones, correctly aligned. <u>Repeat</u> this procedure for each row of the table, until you have created a template corresponding to each cell in the original spreadsheet.



Template Setup

Note that the templates only accommodate the players' names and averages; the column headings "Player" and "Average" will be created as non-template text or in a different graphic element.

- 7. Next, each template must be associated with a cell in the spreadsheet. Click in the first Lyric template, and press the **DB Link** button on the Template Dialog Box. Use the dropdown boxes to select:
 - **Data Source** (the user-assigned name in the 'Data Source Name' field in the 'ODBC Microsoft Excel Setup' dialog box)
 - **Table** (the column name in the Excel spreadsheet)
 - Record (the number of which is one less than the row number in the Excel spreadsheet)

8. Don't forget to check the **Enable** box.

	emens	0.667
Pe	ettitte	0.333
M	DB Link	<u>?×</u>
5	Data Source	Yankees2002a
Je	Table	PlayerCol
N	Field	Player 💽
P	Record	3 Enable 🔽
	Decimal 3 Places	Template Number
	Apply	OK Cancel

DBLink Dialog Box Setup

- 9. Repeat this procedure for each Lyric template. Note that there will be no visible change in the Canvas for the moment; all you will see is the empty templates.
- 10. When you are finished, record the Canvas as a Lyric message with a numerical name. Next, recall the same message, and the contents of the Excel spreadsheet are displayed in Lyric's templates. If the spreadsheet is altered and saved under the same name, the Lyric display will update each time the message is read.

Controlling the number of decimal places shown in a display driven by Microsoft Excel

The display of decimal places may be controlled to force the display of trailing zeroes that are mathematically unnecessary but desirable in many situations as a matter of style. In the batting averages pictured in this topic, the "unnecessary" trailing zeroes really must be included in the display. You'll probably agree that the display on the left is more like what you're accustomed to seeing.



Controlling Decimal Placement

By clicking the **Numeric** checkbox and specifying the desired number of decimal places, the data can be configured to display correctly.

Using DB Link to Replace Graphics

Text and graphic updates can be mixed in the same database. To specify a graphic update:

1. Right-click on the 2D graphic that is to be updated, or on its listing in the **Scene Graph**. The **2D Object Template** dialog box is displayed.

	Name	Optional
	Arrow_Up	I Update
Diject Actual Scaled	Bitmap File Name C:\LyricDe	mo\Arrow_Up.tga
eight 94 94.0000	0 Embed Image Data	3
Vidth 109 109.0000	Height 94 W	/idth 109 Type 32-bits

2D Object Template Dialog Box

2. Set up **DB Link** in the same manner as with **2D Text Templates**, but instead of entering replacement text in the database, enter the *full* filepath of the 2D graphic that is to replace the existing graphic.

Note that the replacement graphic will automatically have the same dimensions as the graphic from which the **2D Object Template** was set. If the **Aspect Ratio** of the replacement graphic does not match the **Aspect Ratio** of the graphic it is replacing, the replacement graphic will appear distorted. To avoid distortion, make sure that the **Aspect Ratios** of all replacement graphics match that of the graphic they are replacing.

Registering an ODBC Data Source

Start > Settings > Control Panel > Administrative Tools > Data Sources (ODBC)

Config Menu > Preferences > Browser > Advanced

Browser > Select Database > Advanced

Databases are available in a wide variety of flavors, from complex Microsoft Access table structures to simple **Comma Separated Value** files. Registering databases via the **ODBC** (**Open Database Connectivity**) facility provided in Windows, enables Chyron and non-Chyron software which must access multiple database formats to read and work with these databases.

A number of Chyron applications require the use of **ODBC**-registered databases:

- Lyric's **DB Link** update of **2D Text Templates** and **2D Object Templates** is performed by drawing data from ODBC-registered databases.
- Chyron's **CAMIO and MOS** applications access Lyric assets cataloged in ODBC-registered Lyric **Browser** data sources.

Lyric Browser Databases and ODBC Registration

Lyric **Browser** data sources are automatically **ODBC**-registered on creation or importation. Under normal circumstances, it is not necessary to reregister **Browser** sources. As this automatic registration of **Browser** data sources was implemented in more recent versions of Lyric, **Browser** data sources that were created in earlier versions of Lyric my not show up in the list of registered data sources displayed in the **User DSN** tab of the **ODBC Data Source Administrator** (see below). If this is the case, simply import the database using the **Import** function available from either **Config Menu > Preferences > Browser** or **Browser > Select Database**.

Registering a Database

The following example illustrates the registration of a Microsoft® Excel (*.xls*) database from **Windows Administrative Tools**. Some of the dialog boxes shown in the procedure are specific to Excel, but the general procedure is similar for other data formats.

Note that databases of all supported formats can also be registered from **Config Menu > Preferences > Browser > Advanced** or **Browser > Select Database > Advanced**. Only *.mdb* databases, however can actually be used by the **Browser**.

To register an Excel database:

1. Access Start > Settings > Control Panel, then double-click Administrative Tools.

💀 Control Panel			
<u>File Edit View Favorites Tool</u> :	s <u>H</u> elp		
🖨 Back 🔹 🔿 👻 🔂 🙆 Search	$\mathbb{P}_{\mathbf{F}}$ Folders 🎯 $\mathbb{P}_{\mathbf{F}} \cong \mathbb{P}_{\mathbf{F}} \times \mathfrak{O}$		
Address 🐼 Control Panel		▼ 🖓 Go	
	Name 🛆	Comment	
	Accessibility Options	Customizes accessibility 📃	
	Add/Remove Hardware	Installs, removes, and tr	
Control Panel	Add/Remove Programs	Installs and removes prc	
and response on the	Madministrative Tools	Configures administrativ	
Administrative Tools	ChyronLM	Chyron License Manager	
Configures administrative settings	👑 Date/Time	Sets the date, time, and 💌	
	•	•	
Configures administrative settings for yo	ur computer	📃 My Computer 🛛 🏼 🍌	

Accessing Administrative Tools from the Control Panel

2. From the Administrative Tools list, double-click Data Sources (ODBC).

Administrative Tools				×
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites]	[ools <u>H</u> elp			12
Þ Back 🔹 🔿 👻 🔂 😡 Sean	ch 🔁 Folders 🎯 🔁 😤 🗙	2	=== -	
ddress 🔞 Administrative Tools				▼ ∂Go
	▲ Name △	Size	Туре	Modified
	Component Services	1 KB	Shortcut	8/8/2001 10:47 AM
	Computer Management	2 KB	Shortcut	1/24/2001 4:45 PM
Administrative	Data Sources (ODBC)	2 KB	Shortcut	1/28/2003 12:06 PM
Tools	Event Viewer	2 KB	Shortcut	1/6/2003 10:40 AM
	Local Security Policy	2 KB	Shortcut	10/24/2001 9:00 AM
Data Sources (ODBC)	Performance	2 KB	Shortcut	8/8/2001 10:42 AM
Shortcut	Services	2 KB	Shortcut	1/24/2001 5:03 PM
0dds, removes, and configures	Telnet Server Administration	2 KB	Shortcut	1/24/2001 3:08 PM
Open Database Connectivity				

Selecting Data Sources (ODBC)

3. The User DSN tab of the ODBC Data Source Administrator is displayed. Click Add.

Name	Driver	▲ <u>Add</u>
iasic Assets frowser IDASE Files	Microsoft Access Driver (*.mdb) Microsoft Access Driver (*.mdb) Microsoft dBase Driver (*.dbf)	Remove
Excel Files Excel Files February 2002 Assets	Microsoft Excel Driver (*.xls) Microsoft Excel Driver (*.xls) Microsoft Access Driver (*.mdb)	<u>C</u> onfigure
àolf	Microsoft Excel Driver (*.xls)	
nfinit	Microsoft Access Driver (*.mdb)	
1S Access Database	Microsoft Access Driver (*.mdb)	
ales Demo - Drive C	Microsoft Access Driver (*.mdb)	
eamScores.xls	Driver do Microsoft Excel(*.xls)	+
DN OBASE LN7	EVILA HACKELA DU OBASE	
An ODBC Use the indicated and can only I	er data source stores information about ho data provider. A User data source is only be used on the current machine.	w to connect to visible to you,

ODBC Data Source Administrator

4. Click the Add button. The Create New Data Source dialog box is displayed.



Create New Data Source Dialog Box

5. Highlight the entry for **Microsoft Excel Driver (*.xls)** (you may have to scroll to locate it), then click the **Finish** button. The **ODBC Microsoft Excel Setup** dialog box is displayed.

ODBC Microsoft Excel Setup	<u>? ×</u>
Data Source <u>N</u> ame:	OK.
Description:	Cancel
Database ⊻ersion: Excel 97-2000 ▼ Workbook:	<u>H</u> elp
Select Workbook	
Les Current Directory	<u>Options>></u>

ODBC Microsoft Excel Setup

6. If necessary, select a different version of Excel from the **Version** drop-down list box, then click **Select Workbook**. The **Select Workbook** dialog box is displayed:

elect Workbook		×
Database N <u>a</u> me <mark>*.xls</mark>	Directories:	OK Cancel
TeamScores.xls Yankees2002.xls	Civen and Timer F Civen and Timer F Civen and Timer F Civen and Timer F Civen and S Civen	▲ <u>H</u> elp Fc er Se ▼
List Files of <u>T</u> ype:	Dri <u>v</u> es:	
Excel Files (*.xls)	🔹 🖃 c: Local Disk	▼ <u>N</u> etwork

Select Workbook Dialog Box

7. Select an Excel file (in this example, Yankees.xls), and make sure that Read Only is disabled (unchecked), then click OK. The Select Dialog box closes, and the dialog box is displayed. The Workbook field displays the name of the selected Excel file. Enter a name and description for the database in the Data Source Name and Description fields, respectively. It is important to note that the Data Source Name is used by Lyric to access the Excel file.

DDBC Microsoft Ex	cel Setup	? ×
Data Source <u>N</u> ame:	NY Yankees BA - 2002	ОК
Description:	NY Yankees Batting Averages - 2002	Cancel
-Database ⊻ersion: Exc	cel 97-2000 💌	Help
Workbook: C:\\	Yankees2002.xls <u>S</u> elect Workbook	
📕 🛛 Use Current D	irectory	<u>O</u> ptions>>

ODBC Microsoft Excel Setup - File Selected

8. Options can be accessed by clicking the **Options** button. The dialog box expands.

ODBC Microsoft Ex	cel Setup	<u>? ×</u>
Data Source <u>N</u> ame:	NY Yankees BA - 2002	ОК
Description:	NY Yankees Batting Averages - 2002	Cancel
Database	cel 97-2000 💌	Help
Workbook: C:W	Yankees2002.xls Select Workbook	
🗖 Use Current D	irectory	ptions>>
Driver <u>B</u> ows to Scan:	🛛 🗖 Read Only	

ODBC Microsoft Excel Setup Options

- Rows to Scan specifies the number of rows, from 1 to 16, which ODBC Microsoft Excel Setup or the driver will scan when setting the columns and column data types. Make sure that the number of Rows to Scan includes all of the heading rows plus at least one data row.
- The **Read Only** setting reflects **Read Only** setting in the **Select Workbook** dialog box, but can be changed from this dialog box as well.
- 9. Click OK. The ODBC Microsoft Excel Setup dialog box closes.
- 10. Click **OK** in the **ODBC Data Source Administrator** dialog box, which then closes. Close the **Windows Control Panels** window. The file is now registered as an **ODBC** database, and can be accessed by Lyric **DB Link** and other applications.

Creating Templates from Existing 2D Text

Select Text, then: Tools Menu > Template; or Chyron Toolbar >

Some designers prefer to place their text elements into Lyric first, then create **Templates** containing those 2D text elements. To create a **Template** from existing 2D text:

- 1. Select the desired 2D text. **Important:** To ensure proper **Template** height, be sure to include a **space** character in the selected text. Multiple lines can be selected to create a multi-line **Template**.
- 2. Click the **Template** button or select **Template** from the **Tools** menu.

Lyric creates a **Template** over the selected 2D text. The 2D text is transferred into the **Template**. Inter-row spacing is maintained, but any deviation in inter-character spacing is not. The **Default Template Font** is taken from the leftmost character in the selection rectangle (usually the first character on the line).

Once a **Template** is created in this manner, **Template** attributes can be set/modified as usual.

14. 2D Text Animation

Roll

Tools Menu > Roll; Chyron Toolbar >

Crawls, in which one or more rows of 2D text travel vertically over the screen, can easily be created in Lyric. Creating a **Crawl** is a three-step process.

- 1. To create a 2D text Roll window, pull down the Tools menu and select Roll, or press the Roll feel button on the Chyron Toolbar.
- Next, enter text into the 2D Text Roll window exactly as you wish it to appear on the output, using whatever fonts, styles and sizes you desire. Click inside the Roll Window and type the desired text. Please note that lines wrap around automatically based on line length only, and could incorrectly split words. You may also create Templates within Roll windows, which afford greater control over linewrapping.



Roll Window

To resize the Roll window, you may drag the window's edges and corners. To reposition the entire window, move your pointer near the Title Bar until it becomes a "Move" cursor as seen at upper right in the illustration. Use the Scroll Bars to scroll up and down within the Roll's text.

3. Position and size the window as desired.

4. In the Properties menu, use the Arives to locate the Animation tab. (Or right-click anywhere on any Properties tab to open a context menu from which you may select the Animation tab.

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Animati	on Clock/Timer 🚺 া
Object	2D Roll 1
_ Modif	y Timeline
	Start Frame
C	00:00:00
	End Frame
C	00:00:05:00 -
	Duration
C	00:00:05:00 -
	Speed Number
C	
	Rate (scanlines/field)
œ	2.890
E E	Proportional Scaling
_ Roll C)ptions
E F	Pause Options
No F For 2	Pause 2D Roll 1
□ s	ioft 🔲 Random
Appl	y Apply All Reset

Roll Animation Properties

- 5. Make sure that the 2D Roll element is selected in the Object drop-down.
- 6. Using the available parameters (Start and End Frame, Duration, Speed and Rate (Scanlines/Field), set the duration or speed of the Roll. See **Animation** for more detail on using these controls.

7. Click the Play button on the Transport Controls. If you are working on a PC or on a Duet without

the Duet <u>"render"</u> button activated, the animation will play out on your VGA monitor. On a Duet

with the utton activated, the system will request confirmation that you wish to play the animation on the video output.

		×
. Start?		
No	Cancel	
	. Start? <u>N</u> o	Start? <u>N</u> o Cancel

Animation Ready Prompt

The following should be noted about **Rolls**:

- Lyric is capable of simultaneously animating multiple 2D Rolls and Crawls along with other animated objects.
- Since a 2D Roll window is a regular Lyric Object, you may animate and change its position attributes while it is rolling text!
- Text copied from any Windows application can be pasted into a Roll window (or any of Lyric's 2D Text windows, including Crawls, Type-On/Slow Reveals and Spline Windows).

To delete a Roll Window:

• Click on its title bar, then press **Ctrl + Delete**; or select the proper 2D Roll item in the **Scene Graph** then press **Delete**.

Crawl

Tools Menu > Crawl; Chyron Toolbar >

Crawls, in which one or more rows of 2D text travel horizontally across the screen, can easily be created in Lyric. Creating a Crawl is a three-step process.

1. Pull down the Tools menu and select **Crawl** OR press the **button** on the Lyric interface. A Crawl window appears. When first opened on the Canvas for composition, Crawl windows look exactly like regular 2D text windows except for the title bar.



Crawl and 2D Text Windows

2. Enter text into the 2D Text Crawl window exactly as you wish it to appear on the output, using whatever fonts/styles/sizes you desire.

3. In the Properties menu, use the Arimation tab, or right-click anywhere on any Properties tab and then select the Animation tab.

Properties _ 🗖	×
nimation Clock/Timer	ŀ
Dbject 2D Crawl 1 💌	
Modify Timeline	14
Start Frame	
C 00:00:00:00	
End Frame	
C 00:00:05:00	
Duration	
C 00:00:05:00	
Speed Number	
C 0 ±	
Rate (pixels/field)	
✓ Proportional Scaling	
Crawl Options	
T rause	
No Pause For 2D Crawl 1	
	8
E Soft E Bandom	
	-
Apply Apply All Reset	



Crawl Animation Properties

Refer to the section on the Animation Controls Properties page for information on programming Crawls and other animations using the attribute controls seen above.

Let's walk through the creation of a Crawl that lasts five seconds.

1. Create a 2D Crawl Window by clicking on the Crawl button:



Crawl Button

A Crawl window appears:



Crawl Window

- 2. Position and size the 2D Crawl window as desired.
- 3. Enter text into the Crawl Window:



Text Entered in Crawl Window

4. Select the Animation tab on the Properties menu. In the **Object** field, select the **2D Crawl** item from the dropdown, if it is not already selected:

Propert	ies 📃 🛛 🗙	
Animation	Clock/Timer	
Object 2D Crawl 1		
Modify Ti	meline art Frame	

Properties: Animation - Crawl Object Selected

5. Of the available parameters (Start and End Frame, Duration, Speed and Rate (Pixels/Field), select Duration, and set the value to five seconds (00:00:05:00). Click **Apply**.

6. On the Transport Controls, click the Play button. If you are working on a PC or on a Duet without the Duet "render" with activated, the animation will play out on your VGA monitor. On a Duet with the two button activated, the system will request confirmation that you wish to play the animation on the video output.

×			Lyric
	Animation Ready. Start?		
	Cancel	No	<u>Y</u> es
	Cancel	No	<u>Y</u> es

Animation Execution Prompt

The following should be noted about **Crawls**:

- Lyric is capable of simultaneously animating multiple 2D Crawls and Rolls along with other animated objects.
- Since a 2D Crawl window is a regular Lyric Object, you may animate and change its position attributes while it is crawling text!
- Text copied from any Windows application can be pasted into a Crawl window (or any of Lyric's 2D Text windows, including Rolls, Type-On/Slow Reveals and Spline Windows).

To resize the Crawl Window, you may drag the window's edges and corners. To reposition the entire Crawl window, move your pointer near the Title Bar until it becomes a "Move" cursor as seen at upper right in the illustration. Use the Scroll Bars to scroll left and right within the Crawl's text.



Resizing the Crawl Window

To delete a Crawl Window, click on its title bar, then press **Ctrl + Delete**. Or, select the proper 2D Crawl item in the Scene Graph then press **Delete**.

Type On/Slow Reveal

Tools Menu > Type On; Chyron Toolbar > []]; Canvas/Scene Graph Right-Click Menu > Type On

Type On (also known as Slow Reveal) produces an animation that mimics the look of a typewriter "typing" text on the screen. To set up a simple **Type On** animation:

- 1. Erase the Canvas, set the Timeline at 00:00:00:00, and open the Animation tab of the Properties window.
- 2. Select **Type On** from the **Tools** menu, or click the **I** icon. A **2D Type On** window appears on the Canvas.

.~1 FB0	Properties
	Animation Clock/Timer
	Object 2D TypeOn 1 💌
	Modify Timeline
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	C Inninninninn
	End Frame
	C 00:00:05:00 <u>→</u>
	Duration
	C 00:00:05:00
2D TypeOn 1	Speed Number
Turne On	• [●] ±
prype On	Rate (chars/sec)
	C 1.199 👱
	I Proportional Scaling
	TypeOn Options
	Pause Options
	No Pause
	For 2D TypeOn 1
06:00 07:00 08:00 09:00 1	
	☐ Soft 🔽 Random
	Apply Apply All Reset

Type On Window

- 3. Enter your text.
- 4. Press Play on Lyric's Transport Controls. The text you've typed now appears, one character at a time. By default, the **Type On** animation's duration is the same as the default animation length set in the Preferences > Animation Settings tab.

Remember that the **Type On** function automates the work of producing a complete animation. Therefore, Lyric automatically assumes the **Type On** animation's start point to be whatever the current time is on the **Timeline**. If the **Timeline** is at a point other than **00:00:00**:00 when you enter **Type On** text, the **Type On** region will "begin to exist" at that point, for a duration the same as Lyric's default animation length. This will cause the **Type On** region to extend beyond the end of the other elements on the **Timeline**, increasing the total length of the animation. Note however, that such crucial elements as **Camera** and **Global Lighting** are *not* automatically extended by such an action.

This type of adjustment is made on the **Properties > Animation** tab, using the **Start/End Frame**, **Duration**, **Speed Number** and **Rate** controls. Clicking the **Apply** button imposes these **Timeline** values on the **Type On** region on which you are working (or any Canvas object selected in the Object dropdown list box). Pressing the **Apply All** button imposes the same **Start/End Frame** and **Duration** values on every object on the **Timeline**, including **Camera**, **Global Light** and individual **Light Sources**.

Refer to *Animation Properties* for details on the Properties > Animation settings.

Several execution parameters can be set using the **Type On** feature.

TypeOn Options		
🗖 Pause	Options	
No Pause For 2D TypeOn 1		
🔽 Soft	🔽 Random	
Apply Apply All Reset		

Type On Options

- Click the Soft checkbox if you wish the characters to fade in.
- Click the **Random** checkbox if you wish the characters to appear in random order, instead of appearing first letter to last.
- If **Underline** is a font attribute and **Random** is active, the underline for the *entire* character string appears at a random point in the **Type On** execution. If **Underline** is a font attribute and **Random** is not active, the underline for the *entire* character string appears first when the **Type On** animation is executed, followed by the remainder of the characters.
- Don't forget to click **Apply** or **Apply All**. The **Soft** and **Random** options may be used on the same text.

A Pause can be programmed into Type On execution.

1. Click the **Pause** checkbox. The **Pause** button becomes active. Click the **Pause** button. The **Pause Options** dialog box is displayed. Available **Pause At** settings are specific to each **Pause For** selection.

Properties	
Animation Clock/Timer	
Object 2D TypeOn 1 💌	
Modify Timeline	Pause Options
Start Frame	Pause At
C [00.00.00.00	Row C Gut
End Frame	Every Ease
C 00:00:05:00	
Duration	Pause For
C 00:00:05:00	C Timeout
Speed Number	00:00:00:00-
	C GPI
Rate (chars/sec)	
c 0.000 🗧 /	C Replay
☑ Proportional Scaling	
TypeOn Options	
Pause Options	
Pause for Keystroke	OK Cancel
At Row Begin	
Soft Random	
Apply Apply All Reset	

Type On Pause Options

- 2. There are three **Pause** options for triggering **Type On** animation:
 - Select Keystroke if the Type On animation is to be triggered by an operator at the Lyric keyboard. There is only one choice for Pause At, which is Row. When the Type On animation triggered by clicking the Play button on the Transport Controls, a Paused for Keypress prompt is displayed in the Status Bar before each row is displayed on the screen. The user presses any key on the keyboard (except Esc) to execute the display of each row.
 - Click **Timeout** to instruct Lyric to program a delay. Clicking the **Timeout** radio button activates the **Timeout Frame Counter**, where a delay time can be entered. There is only one choice for **Pause At**, which is **Row**. When the **Type On** animation is triggered by clicking the **Play** button on the **Transport Controls**, the execution of each row is delayed by the amount of time set in the **Timeout Frame Counter**. A **Paused for Delay** prompt is displayed in the **Status Bar** before each row is displayed on the screen.
- If the Duet has GPI connections, the **GPI** radio button also becomes available. Click the **GPI** radio button. From the dropdown list box, select the **GPI** input that is to trigger the **Type On** animation. There is only one choice for **Pause At**, which is **Row**. When the **Type On** animation is triggered by clicking the **Play** button on the **Transport Controls**, the execution of each row is delayed by the amount of time set in the **Timeout Frame Counter**. A **Paused** for **GPI** prompt is displayed in the **Status Bar** before each row is displayed on the screen.
- The **Replay** radio button should not be selected for **Type On** execution. It is for use with **Multi FX** execution.

Spline Window

Tools Menu > Spline Window; Chyron Toolbar



Setting Up a Spline Animation

Lyric's Spline Window tool allows 2D text to be mapped and animated to a curved baseline. Note that double-byte characters from languages such as Korean, Chinese and Japanese are supported.

1. Select **Spline Window** from the **Tools** menu or click . The **Spline Editor** window is displayed.

Text	Spline Editor
Fade In Options Baseline Offset Image: Show Text At Image: Show Text At Image: Show Text At Image: Fade Out Image: Animate Image: Show Text At Image: Show Text At Image: Show Text At Image: Show Text At <td>Fade In Options Baseline Offset Show Text At 00000200 ÷ 25.00 ÷ Fade Out Cancel</td>	Fade In Options Baseline Offset Show Text At 00000200 ÷ 25.00 ÷ Fade Out Cancel

Spline Editor Window

2. Before continuing, locate the Fade In and Fade Out controls in the lower left corner of the dialog, and slide them all the way to the left. We'll get back to these controls shortly.

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The second se	۰.
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	1.1
Taue Duc	

Fade In/Fade Out Sliders

3. First, we'll practice creating static text on a curved path. By default, Lyric assumes that you wish to create *animated* text on a curve. So, to create static text, you'll simply designate a point in the default animation. In the **Options** area of the dialog, make sure **Show Text At** button is selected.

Show Text At	00 00 02 00 ÷
C Animate	
Use Reverse P	ath

Options Area

- 4. Enter a value in the **Frame Counter** window which specifies the point in the animation at which the text will appear in the Canvas. Given that Lyric's default animation length is most likely set to **5:00** (5 seconds), use a value of **2:00**.
- 5. Next, input some sample text, as shown here.

-Text										 	
Tes Fade	ting e In	Ty	pe-()n-/	4-C	urv S	/e)ptic	ons		

Entering Sample Text

6. Now, right-click in the **Spline Editor** window, and for this exercise, select **Insert**.

Spline	Editor	
· · · ·		
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1.1		
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11.1	Insert	
11	AND DESCRIPTION OF A DE	
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Spline Editor - Insert Selected

A Spline Control Point appears.



Spline Control

- 7. Click on the square in middle of the arrow and move it to any position to establish one end of the path onto which the text will be mapped. When you click on the arrow, it turns from its initial blue to yellow, signifying that it is active for editing.
- 8. Next, right-click on the Canvas and select Insert again, to add a Spline Control Point.

pline Editor		<u></u>
lesting lype-Un-A-	Lurve	
Fade In		ОК
- Eade Out-		
	- Use Reverse Path	Cancel

Spline Editor

- 9. Note the white line connecting the arrows. To start placing each end of a curved path, try moving the arrows around the Canvas by dragging them as desired. The line connecting the arrows remains more or less straight for the moment.
- 10. Now, click on each arrow's head and tail to lengthen or shorten the front or rear section of the arrow, or to change the arrow's direction. Note the effects of these actions on the path connecting the arrows. This may take a little getting used to, but you'll soon get accustomed to defining curved paths this way.

←
Click the arrow's tail to lengthen or shorten the rear half of the arrow
<≺
Click the square in the middle to move the arrow
<≺
Click the arrowhead to lengthen or shorten the front half of the arrow

Adjusting the Spline Control Point

Note that you may a	add as many a	arrows as ne	ecessary to	define the pa	ath by smo	oothing out the	e curve
as needed.							

Spline Editor		×
Text		
Testing Type-On-A-Curve		
Fade In	Options Baseline Offset Image: Show Text At Image: Doi to	
Fade Out	C Animate Cancel Cancel	

Spline Editor Window - Smoothing the Spline Curve

11. When you're finished defining the path, click **OK**. The Canvas appears with the text placed on the curve.



Canvas Showing Text on a Spline Curve

Note that in preview, the path itself is displayed, along with the text. The path won't appear when the text is displayed for air.

If you get something that looks like this, however, don't panic:



Text on a Spline Curve - Out of Bounds

All you need to do is drag the borders of the **Spline Curve** region on the Canvas until the entire composition is visible.



Adjusting the Spline Control Window Size

Note that the borders of the region *do* determine what's visible when the completed text is displayed, either statically or in an animation, not just in preview.

Again, remember that the time value you defined above is a point in the progress of an actual animation, so you need to be mindful of the effect it will have on the appearance of text you'll be showing as static in a finished composition.

Below, the text is shown as it would appear at 2 seconds into a five-second animation.

Spline Window 1	
Second Strand St	
Show Text At 00 00 02 00 +	

Animation at Two Seconds

Here's how it would look at 3 seconds, 25 frames.

Spline Window 1	
	Color Color
	SVIDAN
	Show Text At

Animation at 3 Seconds, 25 Frames

From here, let's move on to actually animating text on a curved path.

- 1. Open a new Canvas and a new **Spline Editor** window. This time, select the **Animate** option. The **Show Text At Frame Counter** becomes unavailable, because you are now creating an animation whose duration will be determined by Lyric's default animation length unless otherwise modified.
- 2. Also, for the moment, move the Fade In and Fade Out sliders all the way to the left again.
- 3. Enter some sample text again, and create a curved path using multiple arrows, as you did earlier.



Creating a Spline Curve

By the way, this time, *take note of the order in which you created the arrows*. The order of the arrows' creation determines the starting point of the animated text.

4. Click **OK** on the **Spline Editor** window, and the Canvas appears, displaying the path which you have defined. Note that in this situation, the text won't appear until the animation is running.



Spline Window Animation About to Execute

5. Click **Play** on the Lyric Transport Controls, and the text moves along the curve from the beginning of the path (established by the first arrow you placed on the **Spline Editor** dialog window) to the end.

After you've got the hang of animating text on a curved path, try adjusting other parameters:

- Experiment with the **Fade In** and **Fade Out** controls; these sliders cause the text to gradually appear and disappear at the beginning and end of the path.
- Use Reverse Path causes the animation to begin at the point originally established as the end of the path, moving to the point originally established as the beginning.
- The **Baseline Offset** adjustment varies the distance between text and the established path.
- Right-click in the Spline Editor window and select Insert Ellipse to define a circular path.



Circular Path

As seen above, the default shape is a perfect circle, but you may click on any of the corner handles to drag the circle into an ellipse of any proportions.



Elliptical Path

Click on the square in the center of the circle/ellipse to drag it to a new location in the **Spline Editor** window.

Any curved path arrow, or an elliptical path may be removed from the **Spline Editor** window by rightclicking and selecting **Delete**. The object you wish to delete must be active in the window (highlighted in yellow).

Modifying a Spline Animation

2D Text Window Right-Click Menu > Modify Spline

Once a **Spline** curve has been set up, it can be modified.

- 1. Place the cursor in a **Spline Window** on the Canvas.
- 2. Right-click, then select Modify Spline from the menu. The Spline Editor Window is displayed.
- 3. Adjust the curve as described in the section on **Spline Window**.

Modify Spline is available only when a Spline Window is active on the Canvas.

2D Character Animation

2D Text Right-Click Menu > Animate Elements

Individual 2D text characters can be converted into independently animatable objects that can be repositioned, rotated, scaled, etc.

- 1. Type some text in a **2D Text** window.
- 2. Right-click anywhere within a 2D Text window and the context menu pictured opens.
- 3. Select Animate Elements. When you do, keep an eye on the Scene Graph, below left. The entry 2D Text 1.Animated appears. Note that the entry includes the
 symbol, meaning that it can be expanded to show its constituent elements (The expanded entry is shown here.). Note also that the 2D Text window itself remains as a separate entity on the Canvas.

Msg: Untitled	Dir: C:\Program Files\Chyron F	2D Text 1 (Text Window) Normal Space
Scene Graph	2D Text 1	Modified Space Make Full Screen 2D Frames On Squeeze/Expand
	Lyric	Insert Row Delete Row Swap Row Up Swap Row Down Swap Row Priorities Up Swap Row Priorities Down
		Delete Pause Pause Properties
		Show Effect Progress
		Pick up Color/Font Set Current Color/Font Mask Character
		Template Properties Row/Tab Properties
		Animate Elements Advanced Text Effects
		Position Lock On Copy Animation State Paste Animation State
		Mask-To Layer 🔹 🕨

2D Text: Animate Elements and Scene Graph

4. Individual 2D text characters can be animated exactly the same way as other objects, independently of the text box that originally contained them. You may drag the characters to new locations on the Canvas or use the Properties > XYZ controls, and alter their time values with the Timeline, Animation Control dialog box or Scene Graph.

The characters themselves, however, cannot be edited. In other words, a spelling mistake cannot be fixed while in the **Animate Elements** mode. To edit the text, it is necessary to right-click on the 2D text, then select **Animate Elements** to disable (uncheck) it.

Note that unchecking **Animate Elements** on the right-click menu turns off the entire feature for the current message, even if you have saved the message. However, the animated 2D character information is saved with the message, and can be used if the feature is turned back on.

Advanced Text Effects

2D Text/Template Context Menu > Advanced Text Effects

Introduction

Advanced Text Effects provides a fast and convenient way to apply pre-scripted, keyframe-based animations to rows and/or 2D Text Templates in a 2D Text Window. Advanced Text Effects is an extension of the Animated Elements feature, which enables the conversion of 2D text into individually animatable objects. Effects include Horizontal/Vertical Blur, Drop Down, Push Up, Slide Left/Right, and Kern Left/Right. Custom effects can also be designed using the Advanced Text Effects Custom parameter settings. Advanced Text Effects can be saved and recalled for playback.

To access the Advanced Text Effect dialog box:

- 1. Read or create a Lyric message which includes 2D text in a 2D Text Window.
- Place the cursor on the row in the 2D Text Window to which the Advanced Text Effect is to be applied. If applying the Advanced Text Effect to all rows, the cursor can be placed anywhere in the 2D Text Window.

 Right-click to open the 2D Text/Template context menu, then select Advanced Text Effects. The Advanced Text Effects dialog box is displayed.

Advanced Text Effects
Effect
None
None Horizontal Blur Vertical Blur Drop Down Push Up Slide Left Slide Right
 Effect In Effect Out Apply To: Current Row Prev/Next Current Template All Elements
Duration of Entire Effect
Character Delay
Row Delay 0000000
OK Close
Save Recall Clear
Custom >>

Advanced Text Effects Dialog Box

The position of the cursor (on a template or a row) in the **2D Text Window** determines the initial **Apply To:** setting. The initial **Duration** reflects the length of the **Timeline** of the **2D Text Window**.

Note that each time that an effect is applied to an additional **2D Text Window**, the start point of the new effect is automatically placed at the start of the new **2D Text Window's Timeline**. You may need to adjust its **Timeline** to coordinate the execution of the effects.

NOTE

If applying both an Advanced Text Effect and Advanced Image Effect to a 2D Text Window, the two resulting animations are not combined with each other and applied to one object. Each of the effects creates a separate object that is rendered and executed separately. Execution of the two effects can, however, be simultaneous.

Basic Advanced Text Effects Setup

NOTE

Make sure that *before* setting up an Advanced Text Effect, the length of the 2D Text Window's Timeline accommodates the sum of the In Effect duration and Out Effect duration.

To set up a basic Advanced Text Effect:

- 1. In the Effect list box, select an effect from the following choices: Horizontal or Vertical Blur, Drop Down, Push Up, Slide Left or Right, or Kern Left or Right.
- 2. Effects can be set up, executed, saved and recalled in pairs. One effect acts as the **In Effect**, and the other as a separately triggered **Out Effect**. Each effect in the pair is set up separately. The total duration is displayed in the **Duration of Entire Effect** frame counter.

Click Effect In or Effect Out to specify which effect to set up.

NOTES

- Kern Right and Kern Left reverse the Anchor points for the Out Effect. For example, Kern Left kerns from the right to a left Anchor when executing as an In effect, and kerns from the right from a right Anchor when executing as an Out effect. Note that this does not occur when setting Dynamic Kern as a custom effect. See Creating a Custom Advanced Text Effect below for details.
- Horizontal and Vertical Blur produce the same type of effects as set in Properties > Font > Filter. Horizontal and Vertical Blur execute from focused to blurred as In Effects, and from blurred to focused as Out Effects.
- Drop Down, Push Up, Slide Left and Slide Right execute in their same respective directions for both In and Out Effects.
- 3. The effect can be applied to a row, a **2D Text Template** or all rows and **2D Text Templates**. In the **Apply To:** area, use one of the following methods to apply an effect:
 - Apply the effect to a row by clicking the **Current Row** radio button, or if necessary, scrolling through the rows by clicking the **Prev/Next** buttons. The current row is identified by the red end markers on the baseline. If necessary, deactivate the **All Elements** radio button.
 - Apply the effect to a 2D Text Template by clicking the Current Template radio button, and if
 necessary, scrolling through the 2D Text Template by clicking the Prev/Next buttons. The
 current 2D Text Template is identified by the green end markers on the baseline(s).
 - Click the All Elements radio button to apply the effect to all rows and 2D Text Templates.
- 4. Optional: Modify the **Duration of the Entire Effect**. This frame counter displays the durations of the **In** and **Out** effects.
- 5. The application of the effect to each subsequent character in the row or **2D Text Template** can be delayed by a fixed period. Set this delay in the **Character Delay** counter.

If the application of the **Character Delay** causes the total duration of the effect to exceed the duration of the **2D Text Window** object on the **Timeline**, the **Timeline** for the **2D Text Window** and the **Advanced Text Effect** object associated with the **2D Text Window** adjusts to accommodate the effect. The **Duration of the Entire Effect** frame counter reflects the adjustment. Additionally, if necessary, the **Timeline** of the entire Lyric animation adjusts as well.

6. The application of the effect to each subsequent row(s) or 2D Text Template(s) can be delayed by a fixed period. Set this delay by selecting (checking) Row Offset and entering a value in the Row Delay counter. Note that when setting Row Delay, the Duration of Entire Effect frame counter changes to show the Duration of Each Row.

If the application of the **Row Delay** causes the total duration of the effect to exceed the duration of the **2D Text Window** object on the **Timeline**, the **Timeline** for the **2D Text Window** and the **Advanced Text Effect** object associated with the **2D Text Window** adjusts to accommodate the effect. The **Duration of the Entire Effect** frame counter reflects the adjustment. Additionally, if necessary, the **Timeline** of the entire Lyric animation adjusts as well.

 Offset shifts the start point of each character for In Effect, and the end point of each character for the Out Effect. The Offset is calculated relative to the original position of each character. For example, the default Offset of 35 produces the following offset.

Change in the Start Position of an In Effect Start Position or an Out Effect End Position = (35)/10 = 3.5

The offset is reflected in the **Keyframe Graph XPosition** or **YPosition** and the **Properties > XYZ X** or **Y** position of each of the elements in the **Advanced Text Effect**. The **In Effect** start position or **Out Effect** end position before an offset is applied is X = 0; Y = 0. For example, if an **Offset** of **35** is set to a **Top-to-Bottom** effect, the new **Y** start point for each element will be **3.5**. Since this is a vertical effect, **X Position** remains unchanged.

- Increased/decreased Offset moves starting point of Right-to-Left effect further right/left respectively.
- Increased/decreased Offset moves starting point of Left-to-Right effect further left/right respectively.
- Increased/decreased Offset moves starting point of Top-to-Bottom effect further up/down respectively.
- Increased/decreased Offset moves starting point of Bottom-to-Top effect further down/up respectively.
- If **Offset** is not selected, the start point is not offset.

To set the default **Offset** of **35**, select (check) the **Offset** checkbox. For information on setting a custom **Offset**, refer to **Creating a Custom Advanced Text Effect** later in this section.

8. The entire procedure starting from Step 1 can be repeated to set up **Effect In** and/or **Effect Out** for any number of rows and/or **2D Text Templates** in the **2D Text Window**.

Advanced Text Effect settings can be recorded as part of the current message. When the message is read back, the effect(s) is executed as a normal animation(s).

Previewing/Executing/Stopping an Advanced Text Effect

To preview or execute the effect(s):

• Click . The effect executes from the In Effect, regardless of whether Effect In or Effect Out is active.

If an Effect Out has been set, the Effect In executes, then the message "Pausing; Press any key to continue" appears in the Status Bar to prompt for a keystroke to execute the Effect Out. Once the Effect Out has been executed, the Status Bar displays the message "Pause Released".

Advanced Text Effects can also be executed as a normal animation after the Advanced Text Effects dialog box has been closed.

To stop effect execution:

Click

Advanced Text Effects can also be stopped in the same manner as a normal animation after the Advanced Text Effects dialog box has been closed.

What Happens When an Advanced Text Effect is Applied?

When an **Advanced Text Effect** is applied to a **2D Text** window, and the **Advanced Text Effect** dialog box has been exited, the following occurs:

• The **2D Text** window is now in **Animate Elements** mode. This is indicated by the checkmark next to the **Animate Elements** item in the **2D Text/Template** context (right-click) menu. The characters have been converted into animatable objects. As shown below, the baselines in the **2D Text Window** are no longer visible and the characters within the window can no longer be edited as 2D text.

NOTE

The entire 2D Text Window is in Animate Elements mode even if an Advanced Text Effect has been applied to only one row/template of a multi-row/template 2D Text window.

 A new element has been added to the Scene Graph and the Timeline. As shown below, 2D Text1.Animated identifies the group of animated elements created from the 2D Text Window that is in Animate Elements mode. This newly-created group behaves in the same manner as other grouped elements with regard to characteristics and operations. In the figure below, 2D Text1.Animated is expanded to show its component elements. Note that the original 2D Text 1 element, which identifies the 2D Text window, is still present. The Status Bar (shown under the Scene Graph) indicates that 2D Text1.Animated is active.



Advanced Text Effect Applied - Changes to Canvas, Timeline, Scene Graph and Status Bar

The **Keyframe Graphs** of each of the elements can be viewed and edited as well. These edits are preserved on message recall. Keep in mind, however, that settings made to properties that can be adjusted from within the **Advanced Text Effects** dialog box override outside alterations of the same properties if:

- o Additional work is done within the Advanced Text Effects dialog box.
- A 2D Text Template content update was initiated by Intelligent Interface, DBLink, the Template Update dialog box, etc.
- The user toggles out of and back into the **Animate Elements** mode. Note that the current **Advanced Text Effects** settings are reapplied each time that the **Animate Elements** mode is activated.

For example, if the X, Y, Z and Z rotation parameters are changed from the **Properties > XYZ** tab, only the change to the Z position would be preserved, as the X and Y positions as well as the Z rotation are controlled by **Advanced Text Effects**. Animations of **2D Text Windows** in the same message that do not have **Advanced Text Effects** applied are not affected, nor are other objects.

Removing/Clearing an Advanced Text Effect

To remove an effect from a row or **2D Text Template** once an effect has been applied:

- 1. Make the **2D Text Window** active.
- 2. Open the **Advanced Text Effects** dialog box.
- 3. Click the **Current Row** or **Current Template Prev** or **Next** button in the **Apply To:** area to select the row from which to remove the effect.
- 4. Select **None** from the **Effect** list box.
- 5. Click **OK**. The effect no longer executes on the selected row or **2D Text Template**.

To clear all effect settings from the Advanced Text Effect dialog box:

 Click Clear, then click OK when prompted by the Lyric pop-up. The effect settings are cleared from the dialog box. The 2D Text Window remains in Animate Elements mode, unless Close is clicked immediately after this operation.

As mentioned earlier, after an effect is applied, the **2D Text Window** is in **Animate Elements** mode. The text within the **2D Text Window** cannot be edited unless it is converted from functioning as animated objects back to 2D text. To restore 2D text functionality:

• Right-click on the 2D Text window to display the 2D Text/Template context menu, then deselect (uncheck) Animate Elements. The text can now be edited. Note that settings in the Advanced Text Effects dialog box are not affected by this operation. If the row count remains the same, this allows adjustment of the text without having to rebuild the Advanced Text Effects. Adding or deleting a row(s) may require adjustment of the Advanced Text Effects settings.

Advanced Text Effects set in other 2D Text Windows are not affected by these operations.

Preserving/Not Preserving Advanced Text Effect Settings

Effect settings are preserved on exiting the **Advanced Text Effects** dialog box when one of the four following operations has been performed:

- Least the set and just before clicking **OK** or **Close** to exit.
- Either of the **Prev/Next** spinners are clicked after parameters are set and just before clicking **OK** or **Close** to exit.
- Either Effect In or Effect Out is clicked after parameters are set and just before clicking OK or Close to exit.
- **OK** is clicked.

To return to the Canvas without preserving effect settings:

• Click **Close** without having performed any of the above operations.

Saving/Recalling an Advanced Text Effects Message

Advanced Text Effect settings can be recorded as part of the Lyric message that is on the Canvas. When the message is read back, the effect(s) is executed as a normal animation(s). In addition, the Advanced Text Effects In Effect and Out Effect settings themselves can be saved and recalled to apply to other 2D Text Windows.

To save the **Advanced Text Effects** message:

 Click Save, enter a File Name, then click OK. The In Effect and Out Effect settings are saved to a Text Effect File (.*tfx*) format.

To recall and apply an Advanced Text Effects message:

- 1. Create or read a message into a **2D Text Window**.
- 2. Right-click on the **2D Text Window**, then select **Advanced Text Effects** to open the **Advanced Text Effects** dialog box.
- 3. Click **Recall**, select an effect message, and then click **OK**. The recalled **In Effect** and **Out Effect** settings are loaded into the **Advanced Text Effects** dialog box and are ready for execution.

Creating a Custom Advanced Text Effect

The effects available in the **Advanced Text Effects** dialog box can be modified to create custom effects, or new ones can be designed using only the parameters available in the custom effects area of the dialog box. To create a custom effect:

- 1. Read or create a Lyric message which includes 2D text in a **2D Text Window**. **2D Text Templates** can be included. Make the **2D Text Window** active.
- Place the cursor on the row or 2D Text Template in the 2D Text Window to which the Advanced Text Effect is to be applied. If applying the Advanced Text Effect to All Elements, the cursor can be placed anywhere in the 2D Text Window.
- 3. Right-click to open the **2D Text/Template** context menu, then select **Advanced Text Effects**. The **Advanced Text Effects** dialog box is displayed.

4. Click Custom >>> . The Advanced Text Effects dialog box expands to enable access to custom settings. If the dialog box is expanded to show custom settings, and an effect has already been applied to the Current Row, Current Template or All Elements, that effect is still selected and displayed in the dialog box. Likewise, effects that had already been set up for other rows or 2D Text Templates in the same 2D Text Window remain in effect, and can be viewed by clicking the Prev/Next buttons. The Apply To: setting is automatically set to Current Template or Current Row, depending on which set of Prev/Next buttons is used.

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Effect	- Effect Direction	
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Push Up	C Right -> Left C Bottom -> Top	5
Slide Left	-	
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ow Delay	Character Rotate Anchor Point	it-
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Save Becall Clear		
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Advanced Text Effects Dialog Box - Expanded

- 5. An existing effect can be modified or a new one can be built from scratch.
 - To build from an existing effect, select an effect in the **Effect** list box. The default settings for the effect are loaded.
 - To build from scratch, select None in the Effect list box.
- 6. Set Effect In/Out, Apply To, Duration, Character Delay, and Row Delay parameters as described above in basic Advanced Text Effects setup.

7. Set Effect Direction and Offset (in the Offset field in the Effect Direction area, not the Offset checkbox used for basic setup).

Effect Direction can be set to Left-to-Right, Right-to-Left, Top-to-Bottom, Bottom-to-Top or Static.

Offset shifts the start point of each character for **In Effect**, and the end point of each character for the **Out Effect**. **Offset** range is from **0** - **100**, and is calculated relative to the original position of the character. The **Offset** position of the character is calculated as follows:

Change in the Start Position of an In Effect Start Position or an Out Effect End Position = (Offset)/10

The offset is reflected in the **Keyframe Graph XPosition** or **YPosition** and the **Properties > XYZ X** or **Y** position of each of the elements in the **Advanced Text Effect**. The **In Effect** start position or **Out Effect** end position before an offset is applied is X = 0; Y = 0. For example, if an **Offset** of **8** is set to a **Top-to-Bottom** effect, the new **Y** start point for each element will be **.8**. Since this is a vertical effect, **X Position** remains unchanged.

- Increased/decreased **Offset** moves starting point of **Right-to-Left** effect further right/left respectively.
- Increased/decreased Offset moves starting point of Left-to-Right effect further left/right respectively.
- Increased/decreased **Offset** moves starting point of **Top-to-Bottom** effect further up/down respectively.
- Increased/decreased **Offset** moves starting point of **Bottom-to-Top** effect further down/up respectively.
- If **Static** is selected, the **Offset** setting is ignored, and the start point is not offset. This would be the same as setting the **Offset** to **0**. There would be no positioning associated with this setting.

NOTE

Effect Direction/Offset and Kern Rate (see Step 12) are independently implemented effect parameters. Even if a Static Effect Direction is selected or Offset is set to 0, setting a Kern Rate other than 0 will produce an effect where the positions of the characters change as the effect executes.

- Set Scaling. Choose to scale Vertical, Horizontal, both Vertical and Horizontal dimensions or None, then set the magnitude of the scaling in the Scale spin box. Scale range is 0 - 100, with values between 0 and 1 reducing size.
 - Select **Scale To** to change size from the original dimensions to the scale set in the **Scale** spin box.
 - Select **Scale From** to change size from the dimensions set in the **Scale** spin box to the original size.
 - If None is selected, other Scaling settings are ignored.

NOTE

When applying the same Scaling effect as In and Out effects, the Out effect will not appear to change the dimension(s). This is because scaling is based on the original dimensions. So, for example, if the In Effect doubles the horizontal dimension by scaling to 2.00, an Out Effect set at 2.00 will not change the size. To double the horizontal dimension again on the Out Effect, Scaling must be set to 4.00.

- Set Horizontal and/or Vertical Blur. Range for both Horizontal and Vertical Blur is 0 (completely focused) 50 (most blurred). These settings produce the same type of Blur as those set in Properties > Font > Filter.
 - Effect In: Objects transform from focused to blurred.
 - Effect Out: Objects transform from blurred to focused.
- Set Fade Rate. Fade Rate specifies over what percentage of the duration the Fade executes. Range is from 0 100. When executing an Effect In, the image fades up from black; when executing an Effect Out, the image fades to black. The examples below demonstrate Fade execution.
 - Effect In: In a 4-second (120-frame) effect, a Fade Rate of 25 executes the effect from black to full video over the span of the first second (30 frames), which is 25% of the total effect duration.
 - Effect Out: In a 2-second (60-frame) effect, a Fade Rate of 75 executes the effect from full video to black over the span of the first 1.5 seconds (45 frames).
- 11. Set Dynamic Kern > Anchor Point. Selecting Left, Right or Center causes leftmost/rightmost/center character respectively to act as the Anchor. If Anchor Point is set to Center, and there are an even number of characters on a line, the character directly to the right of the center line becomes the Anchor character.

When **Dynamic Kern** effect is executed, the other characters in the row or **2D Text template** kern to the **Anchor** character from the right/left/both sides respectively when an **In Effect** is executed, and kern to the left/right/both sides from the **Anchor** character when an **Out Effect** is executed.

Set Dynamic Kern > Kern Rate. The higher the Kern Rate, the farther apart the characters are positioned at the start of the In Effect or the end of the Out Effect. Range is from 1 - 50. The Kern Rate is calculated as follows:

The X coordinate of each of the characters relative to their **In Effect** start points and **Out Effect** end points (not taking into account an offset) is **0**. This is demonstrated on the **XPosition Keyframe Graph** and in the **Properties > XYZ X Position** setting for each character. When a **Kern Rate** is applied, it moves the **In Effect** start point or the **Out Effect** end point of the character to:

X Position = (Position Number)(Kern Rate)/10

Position Number indicates where the character is positioned in relation to the **Anchor** character, with the **Anchor** character occupying **Position Number** = **0**. Characters to the right of an **Anchor** character will have positive position numbers; characters to the left of an **Anchor** character will have negative position numbers.

See **Kern Rate Example** directly after this exercise for a simple example of how **Kern Rate** affects an Advanced Text Effect.

NOTE

As described in Step 7, Offset affects the start position of an In Effect and the end position of an Out Effect. Offset adds a positive value to the X position of a character if Effect Direction is Right-to-Left, and a negative value if Effect Direction is Left-to-Right. Offset values for Top-to-Bottom and Bottom-to-Top do not affect X-position.

- 13. Set **Character Rotate**. The characters in the row can be rotated about the **X**, **Y** or **Z** axis. Units are in degrees. Click the radio button for selected axis, then set a value in the spin box.
 - A positive **Character Rotate** value set for the **In Effect** causes the character to rotate clockwise; a negative **Character Rotate** value set for the **In Effect** causes the character to rotate counter-clockwise.
 - A positive **Character Rotate** value set for the **Out Effect** causes the character to rotate counter-clockwise; a negative **Character Rotate** value set for the **Out Effect** causes the character to rotate clockwise.

14. After setting just one custom parameter, the new effect is assigned to a **Custom Effect** in the **Effect**

list as soon as one of the following buttons is clicked: the **Prev** or **Next** buttons, **Effect In**, **Effect Out** or **OK**. The effect is named by default **Custom Effect <x>**. A name of the user's choice can be entered into edit box at the top of the **Effect** list. Like the default effects, it can be applied to a row, **2D Text Template** or to **All Elements** (All rows and **2D Text Templates**), and can also be modified, saved and recalled.

The custom effect is now ready to execute. The setup procedure can be repeated to set up Effect In and/or Effect Out for any number of rows and/or 2D Text Templates in the 2D Text Window.

To close the custom settings area of the dialog box:

• Click the **Custom** _ Custom << button.

Kern Rate Example

Here is a simple example to demonstrate how Kern Rate affects an Advanced Text Effect:

- 1. Type the characters **ABC** in a **2D Text** window, then open the **Advanced Text Effect** dialog box. Without modifying any settings, click **OK** to close the dialog box and return to the **Canvas**.
- Expand 2D Text 1.Animated on the Scene Graph to show the separate elements. Highlight the A element, then examine its X Position in the Keyframe Graph and in the Properties > XYZ X Position setting. Do the same for the B and C elements. They should all specify 0 at the start time.
- 3. Activate the **2D Text** window and return to the **Advanced Text Effects** dialog box. Click to open the custom settings. Set the **Kern Rate** to **7**; **Anchor** to **Left**; then click **OK** to close the dialog box and return to the **Canvas**.
- 4. Expand 2D Text 1.Animated on the Scene Graph to show the separate elements. The X Position in the Keyframe Graph and in the Properties > XYZ X Position start settings should indicate the following:

X Position of A = (0)(7)/10 = 0

X Position of B = (1)(7)/10 = .7

X Position of C = (2)(7)/10 = 1.4

A, being the anchor, has not changed start position; B's start position is offset by .7; and C's start position is offset by 1.4.

15. Clocks and Timers

Clocks, Timers and Clock/Timer Properties

Clock: Tools Menu > Clock; Chyron Toolbar >



Properties > Clock/Timer

NOTE

Multiple Clocks or multiple Timers can be simultaneously displayed on output. A Clock and Timer, however, cannot be simultaneously displayed.

Clock/Timer Setup

On-screen **Clock** and count-up or count-down **Timers** can be created and run in specialized **2D Text Windows** in Lyric. **Clocks** and **Timers** can be composed of Lyric **TrueType**[®] fonts or **RGB Fonts**, and can display a variety of hour-minute-second formats. **Clock/Timer Formats** are covered in depth later in this chapter. To place a **Clock** or **Timer** on the **Canvas**:

• Select Clock or Timer from the Tools menu, or click the is or icon. Depending on which tool is selected, a Clock or Timer Window is placed on the Canvas. Additionally, the Clock/Timer Properties tab, in which Clock/Timer parameters are set, is displayed.

Open a clock on the Canvas.

The following illustration shows setup of a time-of-day clock with a bitmap background in the clock window. As with conventional text in **2D Text Window**, fonts can be set and modified in the **Font** and **2D Font FX Properties** windows.



Clock and Clock Properties Tab

1. Enter a name for the clock that we will set up in this example. Use the drop-down Name menu; use the drop-down Type menu to determine whether you will be setting up a Clock, an Up Timer or a Down Timer. It is strongly recommended that you use only names from the drop-down menu to the right of Name. You may enter any name you wish; the resulting clock or timer will use that name on the Scene Graph, Timeline and the clock's title bar on the Canvas. However, when multiple clocks and timers are being used, clocks or timers added with the buttons in the toolbar will pick up the program's automatic numbering scheme from the last time it was used. In the illustration below, the clock that was user-named "Local" was the fourth one created. However, the next clock added was automatically named "Clock 4" by the program.



Multiple Clocks and Scene Graph

- 2. Use the **Add** button to open new clock or timer windows from within the **Clocks/Timers Properties** tab. The **Add** button is disabled until a new name is input by hand.
- 3. Next, specify the Clock's Format. Some frequently-used formats have been configured and may be chosen from the drop-down menu at the Format edit box. The user can, however, enter any format that uses the system's specifiers properly. A common format is hh:mm:ss, which displays hours, minutes and seconds in 'leading zero' fashion when the values are less than ten (02:09:07), and the "hh" specified is preceded by a "0". To strip leading zeroes from a Clock or Timer display, add -0 at the beginning of the format specification. Clock/Timer Formats are covered in depth later in this chapter.

The **Make Persistent** check-box causes the specified **Clock** or **Timer** (remember, more than one can be open at a time), to remain in the scene even if the **Canvas** is cleared or a new Lyric message is read.

The **Set Font** and **Set Background** buttons work in familiar ways. Click the **Set Font** button and set the appearance of clock characters with the controls on the **Font Toolbar**, or return to the **Font** and **2D Font FX** tabs in the **Properties** tab. Use the **Background** button to open a dialog box for selection of bitmaps to use as a background image in the **Clock** or **Timer** window. Note that the user may <u>not</u> change a font while a clock or timer is running.

The **Specify Timeline** area allows the operator to set up each of the two separate animations used for moving a **Clock** or **Timer** on and off the screen. Select **Anim In**. Use the **Timeline** to determine time values in bringing the **Clock** or **Timer** on-screen, and use the **Properties > XYZ** menu or drag the clock on the **Canvas** (as you would a **2D Text Window**) to determine its spatial movement. Click the **Anim Out** button to set the movement of the clock or timer off the **Canvas**.

It is not necessary to control the movement of **Clocks** and **Timers** separately from other animations. If the entire scene is played with the **Canvas**' transport controls, **Clocks** and **Timers** will animate along with the other elements. This option can replace use of the **Anim In** and **Out** controls.

When the **Xfer** or *live* button is clicked, any **Clock** or **Timer** in the scene will become visible on the video output. It should be noted that **Clocks** and **Timers** do not run on the monitor screen of your Duet or PC. They will only function on the VGE output of Duet via the XFER or Duet tools buttons on the Lyric interface.

(Remember that other actions such as playing an animation are equivalent to pressing the utton).

The manual **Show** and **Hide** controls may also be used. **Clocks** transferred to the video output via the **Xfer** or buttons immediately begin updating. However, **Timers** must be started manually.

In the **Operate Clock/Timer** area, the three large buttons are assignable; the **Toggle Start**, **Toggle Show** and **Reset** functions shown are simply the buttons' defaults. Any of the other functions may be selected from the pull-down menu and invoked with the **Execute** button.

	Properties
	Animation Clock/Timer
	Select Clock/Timer
	Name Clock 1
	Iype Clock 💌
	Add Delete
Timer Key/GPI Assignment 🛛 🔀	- Specify Appearance
Select Timer/Action	For <u>m</u> at Ohh:mm
Timer Clock 1 💌	Reset
Action Anim Out	Make <u>P</u> ersistent
Toggle Show	Set <u>F</u> ont Set <u>B</u> kg
Assign Key/I <mark>Anim Out</mark> Key Toggle Anim	Sound Effect
🗆 Ctrl 🗖 Alt 🗖 Shift	Specify Timeline
Assign GPI	
GPI 🔽	Operate Clock/Timer
Assign Button	Toggle Toggle Reset
Toggle Toggle Beset	Start Show rieset
Start Show	Set Key/GPI 💌 Execute
OK Cancel	Save Becall

Timer Key/GPI Assignment and Clock/Timer Setting

A **Countdown Timer** running on a Duet SD/HD can be set to trigger a **GPI OUTPUT** when execution is completed.

Timer Down Options	×
O No <u>A</u> ction O Sound Effect	
© <u>G</u> PI ▼ GPI 3: OUTPUT () ▼	
OK Cancel	

Timer Down Options

Note that the selected GPI appears in the Action as Timer Expires field.

Properties
Animation Clock/Timer
- Select Clock/Timer
Name Timer 1
Iype Timer Down
Add Delete
Specify Appearance
For <u>m</u> at mm:ss 💌
<u>R</u> eset 99:59
Make Persistent
Set <u>F</u> ont Set <u>B</u> kg
Action as Timer Expires
GPI 3 Modify
Specify Timeline
Operate Clock/Timer
Toggle Toggle Reset
Select Action 💌 Execute
Save Recall

Action as Timer Expires

To reassign the large buttons to functions other than their defaults, select **Set Key/GPI** and press **Execute**. The **Timer Key/GPI Assignment** dialog box opens. The **Action** pull-down at the top of this dialog box presents the same list of functions as the pull-down at the bottom of the **Clock/Timer Properties** tab. Select one and locate the large button in the Assign Function area to which you wish to assign the function. Click the button and it takes on the label of the function you have selected. Repeat this procedure with the two remaining buttons and click **OK**. The large buttons in the **Clock/Timer** tab take on these functions. See below for a complete list of these functions.

Duet SD/HD systems can specify a GPI Out trigger when a countdown Timer had completed execution.

Clock and Timer Functions

Function	Description
Start	Starts updating the clock or timer. If the clock or timer is off the Canvas or otherwise hidden, the Start command does not display it.
Stop	Stops updating the clock or timer. If the clock or timer is shown, the Stop command does not hide it.
Toggle Start	Cycles between Start and Stop.
Split (Lap)	Continue updating the clock or timer, but if visible, maintain display of the time value at the moment the Split was invoked.
Toggle Split	Cycle between Start and Split.
Reset	Reset clock to the current time or the timer to a previously defined reset value.
Show	Makes the clock or timer visible. If the clock or timer is stopped, the Show command will not start it. Note: The SHOW command will erase the Frame Buffer on HD Duet systems. Hence, Lyric compositions combining clocks with other graphic elements are not usable on-air. Clocks or timers appearing alone on the Lyric Canvas may be used for keying over other video sources.
Hide	Makes the clock or timer invisible. If the clock or timer is running, the Hide command will not stop it.
Toggle Show	Cycles between Show and Hide.
Anim In	Executes any defined animation to bring the clock or timer on-screen. Anim In is not supported on Duet LE/LEX/PCI/PCI+.
Anim Out	Executes any defined animation to send the clock or timer off-screen.
Toggle Anim	Cycles between Anim In and Anim Out.

Any appropriate action for the clock or timer may be executed in one of three ways:

- Selecting the desired action from the **Operate Clock/Timer** pull-down menu, and then pressing **Execute**.
- Typing a **Hotkey** combination that has been previously defined.
- Issuing any **GPI** event that has been previously set up to trigger the action.

Once all clocks and timers have been set up, you may press the **Save** button to save all clock/timer formatting information as a Lyric **Timer** message. This message will contain only clock/timer formatting information, and will not represent all elements that were on the **Scene Graph** corresponding to the original composition in which the clock or timer appeared.

Clock/Timer settings are also saved with a Lyric message when it is recorded.

Any previous Lyric **Timer** messages may be recalled by pressing the **Recall** button in the **Clock/Timer** dialog box, by pressing the **Read** key or selecting **Open** on the **File** menu. This will cause the saved clocks/timers to be imported into the current scene without erasing any existing scene elements from the **Canvas**. If a standard Lyric message containing clocks is read, however, then the entire Canvas will be erased prior to reading the new message. Existing persistent clocks and timers will not be erased upon message read. Persistent **Clocks** and **Timers** can only be deleted from the **Canvas** with the **Persistent Timers** option in the Erase dialog box.

However, DO NOT read a new Lyric message containing a clock while an existing clock is running and "shown" on the video output. Visible picture degradation on the video output will result. This limitation may be circumvented by hiding the clock or timer, or stopping it while keeping it visible, prior to reading a second Clock/Timer message. This assumes that Duet's video output is not on-air at the time!

A quick method for recording a **Clock/Timer** file is as follows:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Clocks/Timers.
- 3. Click **Record**. The **Clock/Timer** settings are saved to the current **Message Number** in the **Default Message Directory**.

A Hotkey combination can also be used to record the **Click/Timer** settings:

• Press Ctrl + Record K Enter. The Clocks/Timer settings are saved to the current Message Number in the Default Message Directory.

Using the **Timer Up** function differs from a clock only insofar as the count begins at a zero value (typically hours, minutes, seconds and tenths of a second) instead from the current time of day.

To use **Timer Down**, enter a value from which Lyric will count *down*, into the **Reset Time** edit box.

You can enter a file name of a .*wav* file in the **Sound Effect** field which is played automatically when the a countdown **Timer** reaches 00:00:00. Note that this function is not supported on Duet LE/LEX./PCI/PCI+ systems.

• Click the **Sound Effect** checkbox to enable, then enter the name of the .wav file.

See also Clock and Timer Formats.

Unsupported Clock/Timer Functions - Duet LE/LEX/PCI/PCI+

- The **SS.FS Timer** formats are not supported on Duet LE/LEX/PCI/PCI+ systems.
- Anim In, Anim Out and the Operate Clock/Timer Select Action list box are not supported on Duet LE/LEX/PCI/PCI+ systems.
- **Sound Effect** is not supported on Duet LE/LEX/PCI/PCI+ systems.

Clock/Timer Formats

Clock Formats

The format field for **Clocks** consists of a string of characters from the following set:

Format	Description
ww	Full current weekday (for example, Friday)
w	Abbreviated weekday (Fri)
ММ	Full current month (August)
М	Abbreviated month (Aug)
DD	Current day of month (1-31; if this field is preceded by a '0', then the day will be displayed with a leading zero)
YY	Full current year (1999)
Y	Abbreviated 2-digit year (99)
Hh	Current hour in 12-hour format; if this field is preceded by a '0', then the hour will be displayed with a leading zero
нн	Current hour in 24-hour format; if this field is preceded by a '0', then the hour will be displayed with a leading zero.
Mm	Current minute (0-59; if this field is preceded by a '0', or a previously specified 'hh', then the minute will be displayed with a leading zero)
Ss	Current second (0-59; if this field is preceded by a '0', or a previously specified 'mm', then the second will be displayed with a leading zero)
N	Meridian specifier (AM/PM) for 12-hour clocks
+hh:mm	Optional time zone offset which will be added to current time before display (for example +5 , +11)
-hh:mm	Optional time zone offset which will be subtracted from current time before display (for example -2 , -12 , -5)
Rules for Clock Use:

- Except for literal fields (those enclosed in quotation marks), each format specifier may be used only once.
- A leading zero may only be applied to the first specified time field (hh, mm or ss).
- To strip leading zeroes from a **Clock** display, add -0 at the beginning of the format specification.
- Meridian specifiers are invalid for 24-hour formats.
- With the exception of the space quotation characters, formats cannot end with a field delimiter character.

Timer Formats

The format field for **Timers** consists of a string of contiguous characters from the following set:

Format	Description
h	Total hours (0-9). If this field is preceded by a ' 0 ', then the hours will be displayed with a leading zero.
hh	Total hours (0-99). If this field is preceded by a $^{\prime}$ 0 $^{\prime},$ then the hours will be displayed with a leading zero.
hhh	Total hours (0-999). If this field is preceded by a ' 0 ', then the hours will be displayed with a leading zero.
m	Total minutes (0-9). If this field is preceded by a ' 0 ', then the minutes will be displayed with a leading zero. If an hour field has been added, this format is invalid.
mm	Total minutes (0-99). If an hour field has been specified, then the minutes in the hour (0-59) will be displayed. Otherwise, if this field is preceded by a ' 0 ', then the minutes will be displayed with a leading zero.
mmm	Total minutes (0-999). If this field is preceded by a ' 0 ', then the minutes will be displayed with a leading zero.
s	Total seconds (0-9). If this field is preceded by a ' 0 ', then the seconds will be displayed with a leading zero. If a minute field has been specified, this format is invalid.
SS	Total seconds (0-99). If a minute field has bee specified, then the seconds in the minute (0-59) will be displayed with a leading zero. Otherwise, if this field is preceded by a ' 0 ', then the hours will be displayed with a leading zero.
SSS	Total seconds (0-999). If this field is preceded by a ' 0 ', then the seconds will be displayed with a leading zero.
f	Fractional tenths of a second (0-9). This field is always displayed with a leading zero.
ff	Fractional hundredths of a second (0-99). This field is always displayed with a leading zero.

Rules for Timer Use:

- Except for user-typed text, each format specifier may be used only once.
- A leading zero may only be applied to the first specified time field.
- To strip leading zeroes from a **Clock** display, add **-0** at the beginning of the format specification.
- Only the first specified time field may have 3-digit precision (hhh, mmm or sss).
- With the exception of the space and quotation characters, formats cannot end with a field delimiter character.

Flexible Display Formatting for Clocks and Timers

To facilitate international display of time and date, clock and timer fields may be specified in any order and separated by any of the following delimiter characters: space, period (" . "), comma (" , "), semicolon (" ; "), colon (" : ") or forward slash (" / ").

Also, user-typed characters may be added to the clock or timer display's automatically generated characters. These characters must be input by the user in <u>quotation</u> marks and will appears exactly as input. For example, a clock might be modified *hh:mm:ss* "*EDT*". A timer display could be formatted *hh:mm:ss* "**Quartz-Precise Timing**".

16. 2D Objects

2D Objects

Tools Menu > Graphic; Chyron Toolbar > E ; File Menu > Open; Browser > Bitmap Assets

Supported Graphic Formats

2D graphics, also known as bitmaps, are widely used in Lyric compositions. They can act as objects in 3D space, placed in 2D Text Windows as 2D font characters, applied to 2D text Faces/Edges and 3D character and object surfaces, and used as Backgrounds for the entire Canvas, a 2D Text Window, or a 2D Text Template. Lyric can import over 30 distinct 2D file types. The following 2D graphics formats can be imported onto the Lyric Canvas.

lect a Graph	ic File			SWRFBCD ? ×
Look in: 🗲) Images	- • •) 📥 🖬 -	 ✓ Merge Layers ✓ Preview
Sports sco weather b weather b weather b weather b weather b	ore bar.tga oar barometer.tga oar blank.tga oar forecast.tga oar humidity.tga oar temp.tga	weather bar UV.tga Weather.psd weather_bg_all elemeni weather_bg_header ba weather_bg_hi-low bar weather_bg_hi-low bar	ts.tga ir.tga 2.tga .tga	Humstean 10 Mill No.e No.e 7.21F 62F 5.55F 5.55F 2.10% 0.5
File name:	Weather.psd]	Open]
Apply to Back	Graphic Files (1.07 Graphic Files (*.07 BRK G3/G4 (*.30 CALS (*.cal) CHY (*.chy.##### CLP (*.clp) DCX (*.dcx) IOCA G3 (*.ica) IFF (*.iff) IMNET G4 (*.imt) JPEG (*.ipg) MODCA G3/G4 (* PhotoCD (*.pcd) PCT (*.pct) PCX (*.pcx) PNG (*.png) PSD (*.psd) NCR G4 (*.ncr) RAS (*.ras) SGI (*.sgi *.rgb) Targa (*.tga) Tiff (*.tif) VPB (*.vpb) XBM (*.xbm) XWD (*.xwd) All Eirce (* *)	np:1301;1cal;1chy;????;*		Width Height Depth 720 486 24

Select a Graphic Dialog Box Showing Supported Graphic Formats

- CHY (*.chy) is no longer supported.
- The Apply to Background setting in the Select a Graphic dialog box is not currently implemented. For information on importing a 2D bitmap as a Background for a 2D Text Template, 2D Text Window or the Canvas, refer to the chapter on Color, Transparency, Background, Lighting and Texture: Backgrounds.
- For information on applying a 2D bitmap to a 2D font, refer to the chapter on **Creating and Using** Fonts in Lyric: 2D Font FX Properties.
- For information on applying a 2D bitmap to a 3D character or object surface, refer to the chapter on **Color, Transparency, Background, Lighting and Texture: Surface Properties**.

Importing a 2D Bitmap Graphic

2D graphics can be imported in a variety of manners:

- From the **Tools** menu.
- From the Import Graphic From the Chyron Toolbar.
- From the **Browser Bitmap Assets Window**, double-click an image in the **Browser**, or drag-and-drop it from the **Browser** to the **Canvas**. *Refer to the section on Browser: Bitmap Asset Operations for additional information.*

To import a 2D graphic:

1. Click on the **Chyron Toolbar**, or from the **Tools** menu, select **Graphic**. The **Select a Graphic File** dialog box is displayed.

Look in: 🚞 Images		- •	<u> ⇔</u> ≣-	 Merge Layers Preview
Sports score bar.tg weather bar barom weather bar blank. weather bar foreca weather bar humidi weather bar temp.t	a 💼 eter.tga 💼 tga 💼 st.tga 💼 ty.tga 💼	weather bar UV.tga Weather_psd weather_bg_all element weather_bg_header bar weather_bg_hi-low bar weather_bg_hi-low bar.	isitga ritga 2itga tga	None at RUB None 727 F 562 F 556 F \$58 F \$58 F 2 10% 2 10% 2 10%
File name: Weath	er.psd		Open	
Files of type: PSD (*	.psd)		Cancel	
Apply to Background— C Size to Fit C Ce	inter			Width Height Depth 720 486 24

Selecting a Graphic File

Navigate to the desired file, and then enter the file name in the File Name field. If the directory contains files of multiple formats, select the desired format in the Files of Type field. Only files of the selected format are displayed. When a graphic is selected, the image's Width, Height, and bit depth appear at the lower right corner of the dialog box. If Preview is selected (checked), a bitmap preview, if available, is displayed.

- 3. If the selected file is any format but Adobe[®] Photoshop[®] **PSD** (*.**psd**), skip this step. A Photoshop file can be imported as a single graphic with all layers merged, or as separate 2D graphic objects. To merge to a single layer on import, select (check) the **Merge Layers** checkbox. To import separate layers as individual objects, deselect (uncheck) **Merge Layers**.
- 4. Click **Open**. The image is imported to the **Canvas**. When imported, the **Scene Graph** shows the file name of the object. If Photoshop layers are imported, the layers all share the same object name, followed by layer numbers.



Scene Graph Showing Graphic Import of Photoshop Layers

The cursor position on the Canvas determines how the 2D graphic is treated in the composition.

- If the cursor is in 3D space when the 2D object is imported, i.e. not in a **2D Text Window**, it is treated as an independently animatable object. Right-clicking on the object accesses the 2D object context menu, in which various tools available. Of particular importance is the **2D Object Template** dialog box, in which the 2D object properties are displayed, and in which **Intelligent Interface** and **DBLink** parameters can be set. This 2D object context menu is covered later in this chapter.
- If the cursor is in a **2D Text Window** when the 2D object is imported, it becomes locked to a baseline and is treated as a 2D text character in how it can be animated.

The **Backspace** ← key can be used to delete only the most recently imported object. To delete a different object:

• Select the object, then click *M*, press **Ctrl + Delete** or select **Delete** from the **Edit** menu.

About Imported Graphics

On a Lyric **Canvas**, imported graphics appear as though printed on a sheet of paper. As such, graphics may be freely positioned, scaled and rotated.

A graphic created in a resolution different from the current **Canvas Resolution** may result in a stretched or squashed appearance when imported. If this occurs, correct the **Use 1:1 Pixel Aspect for Graphics Import** setting and reimport the graphic. *Refer to Getting Started - Canvas Resolution for details on setting these parameters.*

Enable Bounding Box - Selecting 2D Graphics

2D Object Context (Right-Click) Menu > Enable Bounding Box Flipbook Object Context (Right-Click) Menu > Enable Bounding Box

Selecting an Object Using a Bounding Box

Enable Bounding Box allows for the selection of a 2D bitmap object, including a **Flipbook** frame. A **Flipbook** is a collection of bitmap images that play back as an animation. Once selected, the object can be scaled, rotated and moved forward in backward along **Z**-axis.

To enclose a bitmap object or Flipbook image in a bounding box:

- 1. Click on the object in the Canvas, or highlight its listing in the Scene Graph.
- Select Enable Bounding Box from the context menu. A box appears around the object, and a check mark appears next to the Enable Bounding Box item in the menu. Note that if a Flipbook is selected, the Bounding Box is defined by the boundaries of the Canvas, even if Clip to Safe Title is selected when the Flipbook is saved. *Refer to Tools Menu: Flipbook for additional details on saving options.*



Bounding Box Around a 2D Bitmap Object

- 3. Use one of the following methods to transform the object or objects (see below).
 - Select a **Transform Tool** from the **Transform Toolbar**, then click-and-drag any of the blue handles to move, scale, rotate or change the center of rotation of the object.
 - Change the settings in **Properties > XYZ**.

When an object that has a **Bounding Box** is deselected, the **Bounding Box** disappears, but remains enabled. It reappears when the object is reselected.

Selecting Multiple Objects Using Bounding Boxes

Multiple objects can be transformed at the same time.

- 1. Enable the **Bounding Box** on each of the objects.
- 2. Use one of the following methods to select the objects:
 - Press and hold **Ctrl**, then on the **Canvas**, click on each object that is to be transformed.
 - In the **Scene Graph**, press and hold **Shift**, then click on each object that is to be transformed. Note that these objects must be consecutively listed.
- 3. Apply a transform as described above.
 - If the objects are not grouped using the **Group Tool** or **Tools** > **Group**, they will transform independently. For example, if three objects are selected and a rotation is applied, they will rotate around their own axes.
 - If the objects are grouped using the **Group Tool** or **Tools** > **Group**, they will transform as one entity. For example, if three objects are selected and a rotation is applied, they will rotate as one object around one axis.

Disabling a Bounding Box

To disable a Bounding Box:

- 1. Click on the object in the **Canvas**, or highlight its listing in the **Scene Graph**.
- 2. Select **Enable Bounding Box** from the context menu. The **Bounding Box** disappears from around the object, and the check mark disappears from next to the **Enable Bounding Box** item in the menu.

Saving a 2D Bitmap Graphics File

The currently displayed composition on the **Canvas** can be saved in a variety of supported graphics formats. To save a graphic file:

1. From the **File** menu, select **Save As**. The **Save Animation** dialog box opens. Note that although it is possible to save the file as an animation, that in this example, only one frame will be saved as a static graphic.

Msg: Untitled Dir: G:	\Lyric\Messages FB0	
Save Animat	ion	<u>?×</u>
Start Fra <u>m</u> e End Frame	D Image <u>W</u> idth 720 D Image <u>H</u> eight 486	Image: Save BGB Image: Save Alpha Image: Field Render Image: Dip to Safe Title
Save jn:	Images II.psd	- € 1 1 1
File <u>n</u> ame:	Frame.psd	Save

Saving a 2D Object

- 2. Select a file format from the **Save as Type** drop-down list box. In the preceding figure, the Adobe[®] Photoshop[®] *.*psd* format is selected.
- 3. In the **Start Frame** and **End Frame** fields, make sure that the values match, as only one frame is saved.
- 4. Optional: Adjust values for Image Width and Image Height.
- 5. Field Render is currently not implemented and not applicable to static graphics.
- 6. Optional: Select (check) Clip to Safe Title. If Clip to Safe Title is not selected, the contents of the entire Canvas is recorded as the graphic. If Clip to Safe Title is selected, only the contents within the Safe Title Area are recorded as the graphic. The Safe Title Area can be adjusted in the Safe Title Adjust dialog box, accessed from Config Menu > Safe Title Adjust.

- 7. Save RGB is always active. RGB information is always saved.
- Optional: Select (check) Save Alpha. This is available for those file formats where the Alpha (transparency) information can be saved as part of the graphics file (such as Adobe[®] Photoshop[®] *.*psd*). If Save Alpha is not selected, the Alpha information is not saved with the file. If Save Alpha is selected, the Alpha information is saved with the file. See example immediately following this operation.
- 9. Enter a File Name.
- 10. Click Save. The graphic is saved to the selected file format.

When the **Alpha** information is saved, it can be displayed and modified in a program such as Adobe[®] Photoshop[®] when the file is opened.

Layers	Channels Paths	<u>\</u>
	RGB	Ctrl+~
	Red	Ctrl+1
-	Green	Ctrl+2
	Blue	Ctrl+3
3	Alpha 1	Ctrl+4

Alpha Channel Displayed in Adobe[®] Photoshop[®]

Bitmap Asset Operations

Browser > Click ____; Browser Menu > Show Bitmap Assets

The **Bitmap Asset Browser** enables quick import of Lyric-supported graphics to the **Canvas**, additions of graphics to the **Browser** database and cataloging of **Bitmap Assets**. The **Bitmap Asset Browser** supports drag-and-drop of graphics to the **Canvas** or a **2D Text Window** in the **Canvas**, from one **Browser** window to another **Browser** window, and from Windows® Explorer®-type windows into the **Browser**. The **Bitmap Asset Browser** also supports drag-and-drop of graphics into the background of the **Canvas**, a **2D Text Window** or a **2D Text Template**.

Lyric also provides the ability to edit the **Bitmap Asset** information (metadata), delete the **Bitmap Asset** from the database, and update the **Bitmap Asset** when changes are made to the graphic. **Browser Bitmap Asset** entries contain information such as **Author**, **Title**, **Comments**, **Keywords** and **Date Modified**.

The use of the term **bitmap** in this context refers to all graphic formats supported by Lyric, and is used interchangeably with the terms **graphic** and **bitmap graphic**.

Adding a Lyric Bitmap to the Browser Database

When a bitmap is added to the database, what is stored in the database is not the bitmap itself, but rather the information about the bitmap. This includes searchable metadata and the path information to the bitmap. It does not, however, include the graphic itself. The **Browser** simply references the graphic. This makes it possible for the same bitmap to be referenced by virtually an unlimited number of **Browser** databases.

Adding a Bitmap to the Browser from the Canvas

To add a bitmap to a Browser from the Canvas:

1. Select the graphic from either the **Canvas** or the **Scene Graph**. The name of the graphic should be highlighted on the **Scene Graph**.

2. Click or select **Save to Database** from the **Browser** menu. The icon/text listing for the graphic is added to the **Browser** window.

Adding a Bitmap to the Browser from Another Browser

To add a bitmap to a **Browser** window from another **Browser** window:

• Drag-and-drop the graphic from the originating **Browser** window to the destination **Browser** window.

Adding a Bitmap to the Browser from a Windows® Explorer®-Type Window

To add a bitmap from a Windows® Explorer®-type windows into the **Browser** window:

• Drag-and-drop the graphic or a group of graphics from the Windows® Explorer®-type window to the **Browser** window.

Loading a Bitmap Graphic from the Browser

Loading a Bitmap from the Browser to the Canvas or 2D Text Window

To load a **Bitmap Asset** from the **Browser** to the **Canvas** or a **2D Text Window**, make the **Canvas** or **2D Text Window** in the **Canvas** active, then choose one of the following methods:

- Double-click the icon/text listing for the graphic.
- Select (click or by cursor) the **Bitmap Asset**, then click or select **Load from Database** from the **Browser** menu.
- Select (click or by cursor) the Bitmap Asset, then press Enter.
- Drag-and-drop the **Bitmap Asset** to the **Canvas** or into the **2D Text Window**.

The Bitmap Asset loads to the Canvas.

Loading a Bitmap as a Background

To use a Bitmap Asset as a background for the Canvas, a 2D Text Window or 2D Text Template:

1. Hold the **Alt** key while dragging-and-dropping a **Bitmap Asset** into the **Canvas**, a **2D Text Window** or **2D Text Template**. The following menu is displayed.

Stretch To Fit
Center

Background Menu

- 2. Select one of the two options from the **Background** menu.
 - Select **Stretch to Fit** to stretch the graphic to fill the **Canvas**, **2D Text Window** or **2D Text Template**. Note that the aspect ratio of the graphic may change, distorting its appearance.
 - Select **Center** to place the graphic in center of the background of the **Canvas**, **2D Text Window** or **2D Text Template**. The size and aspect ratio of the graphic remain unchanged.

For additional information on backgrounds, refer to the section on **Background**.

Applying a Bitmap Asset as a Texture for a 3D Character or 3D Object

To apply a **Bitmap** asset as a **Texture** for a 3D character or 3D object:

• Drag-and-drop the **Bitmap** asset to the **Texture Chip** in the **Properties > Surface** tab. *Refer to* **Surface Properties** for additional details.



Dragging-and-Dropping a Texture from the Browser

The Bitmap Asset Context Menu

Information (metadata) about the **Bitmap Asset** can be edited via the **Bitmap Asset** context menu. A **Bitmap Asset** can also be updated or deleted. To access this menu:

• Right-click on the **Bitmap Asset**.



Bitmap Asset Context Menu

<u>Edit</u>

A **Bitmap Asset** consists of the metadata, which is information about the bitmap, as well as a path to the bitmap. The user-defined metadata enables easier access to the bitmap by providing the means to easily search as well as identify the function of the bitmap.

<u>A</u> uthor:	Lewis	
<u>T</u> itle:	Arrow_Up	
<u>C</u> omments:	Used for business reports.	
<u>K</u> eywords:	Business, Stocks, Bonds, Index, Indice	
<u>S</u> ubject:	Business	
Last Modified:	September 11,2003	
Path and File:	C:\Program Files\Chyron\Lyric\Im	

Graphic File Information Dialog Box

Contents of the **Graphic File Information** fields are reflected in the **Browser Text View** and **Icon/Text View** displays.



Browser Showing Bitmap Information

There are both user-defined and non-editable parameters in the **Graphic File Information** dialog box. The non-editable parameters are determined on creation/modification of the font.

Parameter	Description	
Author	Identifies the author of the graphic.	
Title	Identifies the title of the graphic. By default, it reflects the file name, but can be edited. The file name does not reflect any change to the Title .	
Comments	Information can be typed in the Comments field to further define use or provide other details.	
	The Comments field can accommodate 255 characters. Pressing Enter performs the same function as clicking OK , so it cannot be used to start a new line. To insert a carriage return in the field:	
	Press Ctrl + Enter.	
Keywords	Keywords that can be used for Browser Search purposes.	
Subject	Identifies the subject of the graphic, e.g. news. sports, weather, etc.	
Last Modified	Indicates date that the graphic was last modified. Information field only - not editable from within this dialog box.	
Path and File	Identifies the path to the file.	
OK or press Enter	Applies the parameter settings to the Bitmap Asset .	
Cancel	Cancels the application of the settings to the Bitmap Asset .	

Delete

The **Delete** function enables deletion of a **Bitmap Asset** from the database. Deleting a **Bitmap Asset** from a **Browser** database does not delete the graphic itself, only the reference to the graphic.

To delete a graphic from a **Browser** database:

1. Right-click on the Bitmap Asset icon/text listing, then select Delete from the context menu.

OR

Select (click) the **Bitmap Asset**, then press **Delete** on the PC keyboard or **Delete Character** on the Duet keyboard.

The following prompt is displayed.



Delete Bitmap Asset Prompt

2. Click **Yes** to confirm the deletion of he graphic from the **Browser** database. The following prompt is displayed:



Delete Bitmap File Prompt

3. Click **Yes** to delete the graphic file from disk, or **No** to preserve the graphic file.

IMPORTANT!

Selecting Yes permanently deletes the original graphic file. Before deleting the file from disk, make sure that it is not referenced by other Browser databases! There is no Undo for this operation!

<u>Update</u>

The Update function for Bitmap Assets is not currently implemented.

Comments, Keywords

These items are informational only. To edit, select Edit in this menu.

Searching Bitmap Assets

To narrow down the assets in a **Browser** database, **Bitmap Assets** can be searched, based on a search strings (**Author**, **Title**, **Comments**, **Subject**, etc.), **Modification Date**, etc. *Refer to Searching the Browser for details on the Search tool.*

2D Object Templates

2D Object Context (Right-Click) Menu > 2D Object Properties

Also is displayed when bitmap is imported.

Overview

Each 2D object imported into Lyric has a number of attributes that can be set. To view these attributes:

Right-click on a 2D object (bitmap graphic) or its listing in the Scene Graph. For this example, a graphic of an arrow (shown below) is used. Select 2D Object Properties from the context menu. The 2D Object Template dialog box is displayed. For the purposes of illustration, it is split into two parts.

	20	D Object Template
	Arr	ame Optional rrow_Up Il Update Ext. Update DB Link
Object Actual Height 94 Width 109	Scaled 94.000000 109.00000	■□] Bitmap File Name C:\LyricDemo\Arrow_Up.tga I Embed Image Data Height 94 Width 109 Type 32-bits

2D Object with 2D Object Template Dialog Box

Setting 2D Object Properties

Name

By default, the **Template Name** is the file name. The **Template Name** can be changed. Note that changing the **Template Name** does *not* change the file name.

II Update

Enabling (checking) **II Update** allows for the **2D Object Template** to be updated by **Intelligent Interface** commands sent from a remote computer. A common example of this application is to display sports scores, using **Intelligent Interface** to update both the scores (**2D Text Templates**) and the team logos (**2D Object Templates**). *Refer to the section on Intelligent Interface for additional details.*

To enable/disable II Update:

• Select (check)/deselect (uncheck) the II Update checkbox.

Refer to Intelligent Interface for in-depth information on these commands.

NOTES

When receiving W commands to update 2D Object Templates, be careful about mixing Template fields enabled for DB Link with Template fields marked for Intelligent Interface Update. If DB Link is enabled for a particular Template(s) when the Template Data message is read, the Template(s) will update as per the Intelligent Interface command, but then immediately update again using data from the linked database. This occurs even if the Template is marked for Intelligent Interface Update, i.e., the DB Link data overrides the Intelligent Interface data. This is also the case for the U command that updates the data in a single Template in a Template Data Message. The DB Link Enable setting, however, does not affect the execution of the U* command which updates a specified Template without reloading the Template Data Message.

Ext. Update

When a Lyric message is containing a **Template(s)** marked for **External Update** is read, the system running Lyric sends an **X** command requesting **Intelligent Interface Update** to the host system. Additionally, the following prompt is displayed:

Intelligent Interface	×
Waiting for External Update (R cmd)	

Waiting for Update Prompt

The host computer then sends an **R** command to update the marked **Template(s)**. **2D Object Properties** settings are updated after an image is updated via **Intelligent Interface**.

To enable/disable Ext. Update:

• Select (check)/deselect (uncheck) the Ext. Update checkbox.

Note that when Ext. Update is enabled, II Update is automatically enabled as well.

Refer to the section on Intelligent Interface for additional details.

Disable Interface Fields

Edit Menu > Disable Interface Fields; Alt + U

Disable Interface Fields disables **Intelligent Interface**® External Update of all **2D Text Templates** and **2D Object Templates** in the entire Lyric composition. When a Lyric message is containing a **Template(s)** marked for **External Update** is read, the system running Lyric does not send an **X** command requesting **Intelligent Interface Update** to the host system. Disabling **Interface Fields** does not affect, however, the ability of **2D Text Templates** to be updated via other **Intelligent Interface** commands. It does, however, disable the ability of **2D Object Templates** to be updated via other **Intelligent Interface** commands.

To execute:

 Select Disable Interface Fields from the Edit menu, or press Alt + U. The following prompt is displayed.



Disable Intelligent Interface Fields Prompt

2. Click Yes to disable or No to cancel.

DB Link

2D Text Templates and 2D Object Templates can draw text and 2D objects (bitmap graphics), respectively, from any ODBC-accessible database that is available to the system on which Lyric is running. Each time a message containing linked Templates is read, Lyric checks the database, so that any change in the linked 2D Text Templates or linked 2D objects updates the Canvas. Text and graphic updates can be performed from the same database in real time for up-to-the-minute news, election and sports coverage. *Refer to the chapter on 2D Text Templates, in the section on DB Link - Using DB Link to Replace Graphics.*

Update DB Link Fields

Edit Menu > Update DB Link Fields

To update all **DBLink** fields with the latest data from the data source without having to save and re-read the message:

• Select Update DBLink Fields from the Edit menu.

Disable DB Link Fields

Edit Menu > Disable DB Link Fields

When **DBLink Update** capability has been set up in a Lyric message, selecting **Disable DBLink Fields** turns off the **DBLink** attribute for all **2D Text Templates** and **2D Object Templates** in the message, although the database links remain as set. **Templates** do not update from a database when the message is read or **Update DBLink Fields** is selected. To execute:

1. Select **Disable DBLinks** from the **Edit** menu. The following prompt is displayed.

Lyric			×
	Disable DBLi	nk for this me	ssage?
	<u>Y</u> es	No	

Disable DB Link Popup

2. Select Yes to Disable DB Link for the message, or No to cancel.

To re-enable DB Link:

- 1. Select the 2D object in the message, then right-click on the object. The **2D Object Template** dialog box is displayed.
- 2. Click the DB Link button. Note that the Enable checkbox is not enabled (checked).
- 3. Click the **Enable** checkbox to re-enable **DB Link** capability. Repeat the process for other 2D objects that are to be enabled for **DB Link**.

Refer to the section on 2D Text Templates for information on re-enabling DB Link for 2D Text Templates.

Object Parameters

Object parameters describe the actual and scaled height and width of the bitmap. All **Object** parameters are reflective of settings that are specified outside of the **2D Object Template Dialog Box**, and cannot be changed from within the **2D Object Template Dialog Box**.

- Actual Height: Specifies the original height in pixels of the bitmap. Matches Bitmap Height parameter.
- Actual Width: Specifies the original width in pixels of the bitmap. Matches Bitmap Width parameter.
- Scaled Height: Specifies the scaled height in pixels of the bitmap.
- Scaled Width: Specifies the scaled height in pixels of the bitmap.

Bitmap Parameters

The **Bitmap** parameters provide information about the bitmap. Except for **Embed Image Data**, all **Bitmap** parameters are reflective of settings that are specified outside of the **2D Object Template Dialog Box**, and cannot be changed from within the **2D Object Template Dialog Box**.

- File Name: Specifies the path to the bitmap.
- Embed Image Data: Embed Image Data specifies whether or not complete image data is included with a saved Lyric message.
 - When enabled (checked), all image data is saved with the Lyric message. This results in longer load time, as well as requiring disk space to store the image data each time it is embedded in a Lyric message.
 - When disabled, only data about the image, but not the image itself, is stored with the Lyric message. It is instead referenced whenever the Lyric message is read. This speeds load time. It requires, however, that the image be available at the specified path when the message is read.
- **Height:** Specifies the original height in pixels of the bitmap. Matches **Object Original Height** parameter.
- Width: Specifies the original width in pixels of the bitmap. Matches Object Original Width parameter.
- **Type:** Depth of the bitmap in bits. 32-bit indicates the presence of alpha.

2D Object Context Menu

Right-Click the Bitmap Graphic or the Graphic's Listing in the Scene Graph

Right-clicking on a bitmap displays a **Context** menu, also known as a right-click menu, which makes available a variety of functions related to bitmap operations. Note that all items in the menu are displayed as active. During Lyric operation, various items may be grayed out depending on active function and the system on which Lyric is installed.



2D Object Context Menu

The following provides a brief description of each of the menu items:

- Object Name and Type: The first item in an object's context menu displays the object's name and type. Refer to Navigating and Entering Information in Lyric: Object Name and Type for details on renaming objects.
- Show 2D Object Properties: Show 2D Object Properties opens the 2D Object Template dialog box, in which information about the physical properties are displayed and file path. Additionally, update parameters can be set. *Refer to Show 2D Object Properties later in this chapter for additional information.*
- Position Lock On: The Position Lock On setting specifies whether or not an object (2D Text Window, 2D or 3D object, etc.) can be moved on its X, Y or Z axes, as well as rotated, scaled or have its center of rotation changed. *Refer to the chapter on Position, Rotation, Scale and Orientation* for additional information.

- Enable Bounding Box: Enable Bounding Box allows for the selection of a 2D bitmap object, including a Flipbook frame. A Flipbook is a collection of bitmap images that play back as an animation. Once selected, the object can be scaled, rotated and moved forward in backward along Z-axis. Enable Bounding Box is covered earlier in this chapter.
- Squeezeback Duet SD: Squeezeback (Duet SD only) enables the creation of regions in a Lyric composition that can be displayed up to full-screen, with no loss of video quality. Squeezeback effects are created on the optional Squeezeback Board. Because Squeezeback effects are processed on its own board, manipulation of Squeezeback video has fewer effects on the behavior of other elements in a Lyric composition than similar Video Region effects created on the Duet's VGEs. Refer to the chapter on Squeezeback Duet SD for additional information on Squeezeback. Refer to the chapter on the Tools Menu: Video Region for information on Setting up a Video Region effect.
- Advanced Image Effects: Lyric's Advanced Image Effects capability allows sophisticated effects to be applied to imported bitmaps or entire 2D Text windows. Advanced Image Effects include Curtain, Explosion, Focus, Leaf, Matrix, PageRoll, PageTurn, Ripple, Slide, Venetian, Zoom and Wipe and more. Note that on Duet SD systems, Advanced Image Effects, which apply an effect to an entire page, are available via Multi FX. Refer to the chapter on Advanced Image Effects for additional information.
- Mask Object: Mask Objects function somewhat differently on Duet SD/HD/Offline systems versus Duet LE/LEX/PCI/PCI+ systems.
 - **Duet SD/HD/Off-Line:** An image specified as a **Mask Object** displays at 100% video, and cuts through the elements over which it is positioned and the background. Built-in transparent areas of a **Mask Object** allow video input to show through. *Refer to the chapter on Masks: Mask Objects Duet SD. HD and Off-Line for additional information.*
 - Duet LE/LEX/PCI/PCI+: An image specified as a Mask Object displays at the transparency set in Properties > Surface combined with built-in transparency, and covers the object over which it is positioned. Mask Layers, Mask Inside and Alpha Trim Mask are supported on Duet LE/LEX/PCI/PCI+ systems. Transparent areas of a Mask Object allow video input to show through. Refer to the chapter on Masks: Mask Objects Duet LE/LEX/PCI/PCI+ for additional information.
- Copy/Paste Animation State: Copy/Paste Animation State enables animation attributes such as Position, Rotation, Scaling, etc., to be copied from one object and pasted to another. *Refer to the chapter on Animation for additional information.*
- Mask-To Layer, Mask Inside, Alpha Trim Mask, Soft Mask Duet LE/LEX/PCI/PCI+: Mask-To Layer, Mask Inside, Alpha Trim Mask and Soft Mask are advanced Mask functions available to Duet LE/LEX/PCI/PCI+ systems. Refer to the chapter on Masks: Mask Objects Duet LE/LEX/PCI/PCI+ for additional information.
- Show Center of Rotation: The Center of Rotation for an object can be displayed on the Canvas for ease of editing. *Refer to the chapter on Position, Rotation, Scale and Orientation Transform Tools for in-depth information.*
- Motion Path: The path of an object as it progresses through an animation can be graphically displayed on the **Canvas**. The **Motion Path** can be edited, keyframes added and deleted, acceleration set and interpolation specified from the **Canvas**. *Refer to the chapter on Animation Motion Paths for in-depth information.*
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. The Internal Properties accessed from this menu are applied to the selected object. They include Alpha Trim, Depth Test, Depth Write, Lighting and Pixel Aspect.

Movie Objects - Duet LE/LEX/PCI/PCI+

Tools and Canvas/Scene Graph Context Menu > Movie

Animation files on Duet LE/LEX/PCI/PCI+ can be imported into a Lyric composition as **Movie** objects. As the **Movie** object plays its own animation, it can be moved, scaled and rotated through 3D space. Unlike clip files, which require access to the source files and the system on which to play them (e.g. an Aprisa DDR), imported **Movie** objects are self-contained. **Movie Objects** are limited to **250** lines in height.

To import a Movie object:

1. From the Tools menu, select Movie. The Movie Properties dialog box opens.

Movie File:	Browse
I Loop Trame Based	Enable Province I
First Frame	Preview FPS: 29.971
Last Frame	
Loop-To Frame 00000000 Goto	

Movie Properties

- 2. Enter a movie file name in the **Movie File** field, or navigate to and select a 24-bit or higher **Movie** (*.*avi*, *.*mov*), **AVI** (*.*avi*) or **Quicktime** (*.*mov*) file.
- 3. Optional: If the file is to loop (play continuously), select (check) **Loop**. The default setting is selected. If Loop is not selected, the animation plays through only one time.
- 4. Optional: To cut rendering time, select (check) **Frame Based**. Preview the animation before air, as the quality could be compromised if the animation is frame-based instead of field-based. The default setting is deselected.
- 5. Optional: Select (check) Enable Preview to view selected frames of the animation or to scrub through the animation. The default setting is selected. The Preview area features a non-editable FPS (frame per second) field which displays the frame rate of the animation. The Preview Window displays a frame of the animation as specified by the Goto function. It also previews the animation when the scrub slider, located directly beneath the Preview Window, is dragged. The Frame Counter displays the current frame of the animation.

- 6. Enter a frame number in the First Frame frame counter to set the start frame of the animation. To preview the entered frame, click Goto. If Enable Preview is selected, the frame is displayed in the Preview Window. Click Set to apply the value. The default First Frame is the first frame of the animation file. Note that setting frame numbers different from the first and last frames of the animation file does not modify the source file. These settings affect only what is imported into Lyric. The source file remains unchanged.
- Enter a frame number in the Last Frame frame counter to set the end frame of the animation. To
 preview the entered frame, click Goto. If Enable Preview is selected, the frame is displayed in the
 Preview Window. Click Set to apply the value. The default Last Frame is the last frame of the
 animation file.
- 8. Optional: If Loop is enabled, enter the frame number to which the animation should loop once it reaches the end of the animation. To preview the entered frame, click Goto. If Enable Preview is selected, the frame is displayed in the Preview Window. Click Set to apply the value. The default Loop-To Frame is the first frame of the animation file. The following figure shows a movie file about to be placed on the Canvas.

Movie Properties	×
Movie File:	
C:\Program Files\Chyron\Clip Files\Spir Browse	
▼ Loop	iew 🔽
First Frame FPS:	29.00
Last Frame 00 00 01 01 + Goto	
Loop-To Frame 0000000 • Set Goto	0
<u> </u>	Cancel

Movie Object Selected for Import

9. Click **OK** to import the movie file to the **Canvas**.

When a movie file is imported to the **Canvas**, it becomes a **Movie** object, and is added to the **Scene Graph** and **Timeline** as well. Right-clicking on the **Movie** object displays its context menu.



Movie Object Context Menu

The following provides a brief description of each of the menu items:

- **Object Name and Type:** The first item in an object's context menu displays the object's name and type. *Refer to Navigating and Entering Information in Lyric: Object Name and Type* for details on renaming objects.
- Show Movie Properties: Show Movie Properties opens the Movie Properties dialog box, in which Movie object parameters can be modified.
- Position Lock On: The Position Lock On setting specifies whether or not an object (2D Text Window, 2D or 3D object, Movie object, etc.) can be moved on its X, Y or Z axes, as well as rotated, scaled or have its center of rotation changed. *Refer to the chapter on Position, Rotation, Scale and Orientation for additional information.*
- Enable Bounding Box: Enable Bounding Box allows for the selection of a 2D bitmap object, including a Flipbook frame. Once selected, the object can be scaled, rotated and moved forward in backward along Z-axis. Enable Bounding Box is not implemented for Movie objects. Enable Bounding Box is covered in the chapter on 2D Objects.

- Squeezeback Duet SD: Squeezeback (Duet SD only) enables the creation of regions in a Lyric composition that can be displayed up to full-screen, with no loss of video quality. Squeezeback effects are created on the optional Squeezeback Board. Because Squeezeback effects are processed on its own board, manipulation of Squeezeback video has fewer effects on the behavior of other elements in a Lyric composition than similar Video Region effects created on the Duet's VGEs. Squeezeback is not implemented for Movie objects. Refer to the chapter on Squeezeback Duet SD for additional information on Squeezeback. Refer to the chapter on the Tools Menu: Video Region for information on Setting up a Video Region effect.
- Advanced Image Effects: Lyric's Advanced Image Effects capability allows sophisticated effects to be applied to imported bitmaps or entire 2D Text windows. Advanced Image Effects include Curtain, Explosion, Focus, Leaf, Matrix, PageRoll, PageTurn, Ripple, Slide, Venetian, Zoom and Wipe and more. Note that on Duet SD systems, Advanced Image Effects, which apply an effect to an entire page, are available via Multi FX. *Refer to the chapter on Advanced Image Effects for additional information.*
- Copy/Paste Animation State: Copy/Paste Animation State enables animation attributes such as Position, Rotation, Scaling, etc., to be copied from one object and pasted to another. *Refer to the chapter on Animation for additional information.*
- Mask Object (Duet LE/LEX/PCI/PCI+): An image specified as a Mask Object displays at the transparency set in Properties > Surface combined with built-in transparency, and covers the object over which it is positioned. Mask Object, Mask Layers, Mask Inside, Alpha Trim Mask and Soft Mask are supported on Duet LE/LEX/PCI/PCI+ systems. Transparent areas of a Mask Object allow video input to show through. Mask Object, Soft Mask and Alpha Trim Mask are not currently implemented for Movie objects. Refer to the chapter on Masks: Mask Objects Duet LE/LEX/PCI/PCI+ for additional information.
- Show Center of Rotation: The Center of Rotation for an object can be displayed on the Canvas for ease of editing. *Refer to the chapter on Position, Rotation, Scale and Orientation Transform Tools for in-depth information.*
- **Motion Path:** The path of an object as it progresses through an animation can be graphically displayed on the **Canvas**. The **Motion Path** can be edited, keyframes added and deleted, acceleration set and interpolation specified from the **Canvas**. *Refer to the chapter on Animation Motion Paths for in-depth information.*
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. Internal Properties is not available to Movie objects.

Flipbook Animation

To Save: Create Animation, then File Menu > Save As Targa (*tga)

To Read to Canvas: Tools Menu > Flipbook

A Lyric **Flipbook** animation is a series of targa (*.tga*), *.tif* or *.bmp* files, pre-loaded into memory and played out in sequence, much like the old-time paper flipbooks. In a **Flipbook** animation, each bitmap image appears for **1** frame of video. **Flipbook** animations can be created on the Duet platform, or on off-line PCs, typically using third-party animation applications such as SoftImage or 3D Studio. **Flipbook** animations can also be created within Lyric itself.

Flipbooks can be created in the *.tga*, *.bmp* or *.tif* format. It is recommended that the *.tga* format be used for **Flipbook** creation, as it can carry **Alpha** (**Transparency**) information. If the **Flipbook** image is rectangular with no **Transparency**, it could be saved in a *.bmp* format. Be aware, however, that **Alpha** information is not supported by the *.bmp* format. Creating a **Flipbook** in a *.tif* format is generally not recommended, due to the large size of uncompressed *.tif* files. The *.tif* file format does support **Alpha**.

For Duet playback, multiple **Flipbook** objects can be added to Lyric's **Scene Graph**, provided there is sufficient texture memory on Duet's VGE board(s). In addition, these objects can be keyframed and animated using Lyric **Transform Tools** (**Position**, **Scale**, **Rotate**, **Center of Rotation**).

A Flipbook animation on the Canvas is known as a Flipbook Region. Flipbook Regions are objects that may be manipulated in the same ways as bitmaps and 2D Text/Roll/Crawl windows (Rotation, Position and Scale on X, Y and Z axes, etc.).

Flipbook Regions can also act as Mask Objects (all systems), and on Duet LEX/LEX/PCI/PCI+ systems, be assigned to a Mask Layer, and have an Inside Mask and/or Alpha Trim Mask applied.

In this exercise, we will first create a simple **Flipbook** animation using Lyric itself to produce a series of **Targa** files. We will then open a **Flipbook** region containing this animation, and incorporate that region into another composition.

1. Create a 1-second animation that rotates text in a **2D Text Window**, finishing at its original position. This animation rotates 360 degrees on all axes over the span of 1 second.



Creating a Flipbook Animation

2. Create a directory named **Flipbook Test**. This is the directory in which the **Flipbook** files will be saved. This is not a required step, but helps to illustrate how **Flipbook** files are stored.

 Select Save As from the File menu, and browse to Flipbook Test directory in the Save In dropdown list box. The File Name field shown below will display the name of a new, untitled file in the format of the last saved file, most likely Untitled The expanded Save as Type dropdown list box is closed, and displays the file format of the last saved file.

Save Animati	on						? ×
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File <u>n</u> ame:	Untitled.lyr			_ [<u>S</u> ave		
Save as type:	Lyric (*.lyr)			<u> </u>	Cance	9	
	PNG (*.png) PSD (*.psd) RAS (*.ras) SGI (*.sgi) SWF (*.swf)	5 5 6					//
	Targa (*.tga)	e					

Saving a Flipbook Animation

- 4. Remember the number in the End Frame field in the upper left corner of the dialog box. Note that if Flipbook animations have previously been recorded during the current Lyric session, or there is already a Flipbook animation in the directory in which the new Flipbook is to be recorded, other frame numbers could populate the Start Frame and End Frame. These cases will be covered below.
- Select Targa (*.tga) from the Save As Type dropdown list box, as shown in the above figure. Enter a name in the File Name field, but do not press Save yet. In this example, the file is named Flipbook_Test.tga.
- 6. At this point, notice that the value in the **End Frame** field may have reset to **0**. Re-enter the **End Frame** value displayed and noted in Step 4. If, however, there are other values in the **Start Frame** and/or **End Frame** fields, enter **0** in the **Start Frame**, and **30** in the **End Frame** field. This defines an animation that runs for the entire **1** second.

Note that for this example, the entire animation is saved. A shorter animation can be saved by entering values other than **0** and/or **30** in the **Start Frame** and **End Frame** fields, respectively.

Save Anima	tion					<u>? ×</u>
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Saving a Flipbook Animation - Setting Start and End Frames

- Image Width and Image Height are set automatically, but can be changed. Note that changing these settings does *not* clip the graphic, but rather resizes the dimensions in this instance, the entire screen. To clip an image, use Clip to Safe Title, described below. When a Flipbook file is saved, all files in the Flipbook are sized to the Image Width and Image Height dimensions.
- If an animation is saved with Interlaced enabled (checked), the odd and even fields of the TGA (or other bitmap format file) are rendered offset in time by 1/60 second (NTSC) or 1/50 second (PAL) on playback. Interlaced should be enabled if the animation is to be saved to an animation format such as AVI, and then played back through a Matrox clip player. For Flipbook purposes, keep Interlace disabled.
- Clip to Safe Title clips the image to the size of the Safe Title box before saving the Flipbook. The Safe Title can be resized to clip the image, then enable (check) Clip to Safe Title. If Clip to Safe Title is enables when a Flipbook file is saved, all files in the Flipbook are clipped to the size of the Safe Title.
- Enabling Save Alpha saves the Alpha (Transparency) information with the file. If Save Alpha is not enabled, Transparency is lost in the recorded Flipbook. The Flipbook Region (described below) then appears as a rectangular area, in which the Flipbook animation executes.

7. Click **Save**. It may take a few moments to complete the **Save** operation, because Lyric creates a separate file for each frame of the animation. Look at the folder where the files are saved to see how they are stored and numbered.

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phics Temp Lo	My Computer	Flipbook_Test0009.tga	1,367 KB	tgafile	5/28/

Saved Flipbook Files

8. Return to Lyric and clear the Canvas.

Next, you will create a **Flipbook** region for playback as part of a Lyric composition. Remember that **Flipbook** regions are intended for use with sequences of files created by many types of animation programs. For the purpose of this exercise, however, the most convenient file sequence to use is the one you just created.

- If the Flipbook animation starts as just a black field, you may want to set the Default Background Color to gray for easier visibility. To do so, select Set Default Background Color from the Tools menu, or click on the Chyron Toolbar to change the Canvas to a gray backdrop.
- 2. From the **Tools** menu, select **Flipbook**.
- 3. The **Flipbook Region** dialog box opens. Click the **Browse** button next to the **First File** field. Note that the **Ignore Pauses** checkbox appears only on Duet LEX/PCI+ systems.

Flipbook Region	×	
First File:		
	Browse	
Last File:		
	Browse	
🔽 Loop	🔲 Ignore Pauses 🛶	Duet LEX/PCI+ Only
🔽 Embed Image Data On Save	📕 Play to End	
Compress Image Data		
ОК	Cancel	

Flipbook Region

4. The Select the First File for Flipbook Animation dialog box is displayed.

elect The First File for Flipbo	ok Animation		<u>?×</u>
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Apply to Background C Size to Fit C Center			Width Height Depth 720 486 32

Select the First File for Flipbook Animation

Select the first file that Lyric created in the previous exercise. Take careful note of the file names, so that you select the correct one. Its name will end with the digits **0000**.

Enable (check) **Preview** if to display a thumbnail of the selected frame directly below the **Preview** checkbox.

5. Click Open; the file selection box closes and the Flipbook Region dialog box is displayed, with the First File and Last File fields filled in. Note that Lyric selects the highest numbered file that it can interpret as the end of a Flipbook sequence. Both the First File and/or the Last File field, however, can be changed to shorten a sequence. When the First File and Last File settings are changed, only the playback is affected. The original files remain intact.

book Region	×	
<u>F</u> irst File:		
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Last File:		
C:\LyricDemo\Flipbook_Test	t0030.tga Browse	
✓ Loop	🗖 Ignore Pauses 🛶	
🔽 Embed Image Data On Sav	/e 🔲 Play to End	

Flipbook Region Dialog Box - Setting Files and Execution Parameters

• To set the **Flipbook** animation to repeat for the duration of the Lyric animation, select (check) the **Loop** checkbox.

Note that enabling the **Flipbook's Loop** option does *not* cause the **Flipbook** animation to repeat indefinitely. The **Flipbook** loops only for the set duration of the animation. It does not extend beyond the end point of the animation as set on the **Timeline**.

- Enabling Embed Image on Save saves the Flipbook image data in the Lyric message. Disabling Embed Image on Save allows Flipbook messages to be saved without embedded image data, in order to minimize the resulting size of the message. The Flipbook images, however, must be re-read from disk during message Read, which increases recall time.
- **Compress Image Data** compresses the file data, resulting in smaller **Flipbook** files on playback. Preview this type of playback before playing to air.
- Duet LEX/PCI+ Only: Enabling Ignore Pauses allows the Flipbook animation to continue running through a programmed Pause. This option does not appear on other systems. If Ignore Pauses is not enabled, or if the system is not a Duet LEX/PCI+, a Flipbook pauses at set Pause points during animation execution. Additionally, the Play to End checkbox becomes available. If Play to End enabled, the Flipbook plays to the end.
- 6. Click OK. The Flipbook Region appears on the Canvas as an object, showing the first bitmap file in the sequence specified above. In the illustration below, the boundaries of the Flipbook object are not visible, as the Alpha information has been saved. Other objects passing behind the Flipbook Region are visible if there is wherever there is Transparency. In this example, if the Alpha information had not been saved, the Background would not have been visible, as the Flipbook is the size of the entire screen.



Flipbook Region - Boundaries Not Visible

The following figure shows a smaller **Flipbook** where the **Alpha** information has not been saved. The Default Canvas Color has been changed to gray to show that the boundaries of the **Flipbook Region** are visible. Other objects passing behind the **Flipbook Region** are covered by the **Flipbook Region**.



Flipbook Region - Boundaries Visible

- 7. The **Flipbook** region can be repositioned, rotated, etc., and other objects can be added to create a Lyric composition.
- 8. Click the **Play** button on the **Transport Controls**. The **Flipbook** animation runs within the **Flipbook Region** as the Lyric animation plays. Additionally, the **Flipbook Region** can be animated the same as any other object. If you have selected "**Loop**" in the **Flipbook Region** dialog box, the animation continues to repeat for the default animation length as set in the **Preferences > Animation Settings** tab.

Once the Flipbook animation has been programmed, you can make changes:

1. Right-click on the **Flipbook** region. The (**Context**) right-click menu is shown below.



Flipbook Region Context (Right-Click) Menu

2. Select **Modify Flipbook**. The **Flipbook Region** dialog box described above opens, and the parameters can be modified.

The following provides a brief description of each of the menu items:

- Object Name and Type: The first item in an object's context menu displays the object's name and type. Refer to Navigating and Entering Information in Lyric: Object Name and Type for details on renaming objects.
- Show Flipbook Properties: Show Flipbook Properties displays the Flipbook Region dialog box, described earlier in this section, in which Flipbook parameters can be modified.
- Position Lock On: The Position Lock On setting specifies whether or not an object (2D Text Window, 2D or 3D object, etc.) can be moved on its X, Y or Z axes, as well as rotated, scaled or have its center of rotation changed. *Refer to the chapter on Position, Rotation, Scale and Orientation* for additional information.
- Enable Bounding Box: Enable Bounding Box allows for the selection of a 2D bitmap object, including a Flipbook frame. A Flipbook is a collection of bitmap images that play back as an animation. Once selected, the object can be scaled, rotated and moved forward in backward along Zaxis. Enable Bounding Box is covered earlier in this chapter.
- Squeezeback Duet SD: Squeezeback is not available to the Flipbook context menu.
- Advanced Image Effects: Advanced Image Effects is not available to the Flipbook context menu.

- Mask Object: Mask Objects function somewhat differently on Duet SD/HD/Offline systems versus Duet LE/LEX/PCI/PCI+ systems.
 - Duet SD/HD/Off-Line: An image specified as a Mask Object displays at 100% video, and cuts through the elements over which it is positioned and the background. Built-in transparent areas of a Mask Object allow video input to show through. Mask Object is not implemented for Flipbooks. Refer to the chapter on Masks: Mask Objects Duet SD. HD and Off-Line for additional information.
 - Duet LE/LEX/PCI/PCI+: An image specified as a Mask Object displays at the transparency set in Properties > Surface combined with built-in transparency, and covers the object over which it is positioned. Mask Object, Mask Layers, Mask Inside, Alpha Trim Mask and Soft Mask are supported on Duet LE/LEX/PCI/PCI+ system. Transparent areas of a Mask Object allow video input to show through. Mask Object, Alpha Trim Mask and Soft Mask are not currently implemented for Flipbooks. Refer to the chapter on Masks: Mask Objects Duet LE/LEX/PCI/PCI+ for additional information.
- Copy/Paste Animation State: Copy/Paste Animation State enables animation attributes such as Position, Rotation, Scaling, etc., to be copied from one object and pasted to another. *Refer to the chapter on Animation for additional information.*
- Show Center of Rotation: The Center of Rotation for an object can be displayed on the Canvas for ease of editing. *Refer to the chapter on Position, Rotation, Scale and Orientation Transform Tools for in-depth information.*
- Motion Path: The path of an object as it progresses through an animation can be graphically displayed on the Canvas. The Motion Path can be edited, keyframes added and deleted, acceleration set and interpolation specified from the Canvas. *Refer to the chapter on Animation Motion Paths for in-depth information.*
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. Internal Properties are currently not implemented for Flipbooks.

17. 3D Characters and Objects

3D Characters and Objects

About 3D Characters

3D characters are composed of extruded 2D characters created from **Font Faces**, also known as **Font Styles**, to which a set of characteristics such as **Font Size**, **Font Color**, textures, etc. can be applied. 3D characters are placed on the **Canvas** simply by typing anywhere on the **Canvas** outside of a **2D Text Window**.

Unicode text entry is supported. 3D text entry is also supported for Chinese, Japanese and Korean. **Unicode Only** must selected in **CG Preferences** in order to accommodate Asian language text entry. *Refer to the section on CG Preferences for information regarding the Unicode Only setting.*

2D Text vs. 3D Characters

Whenever there is not a **2D Text Window** on the **Canvas**, the default text entry is 3D characters. The default text entry mode can be set to 2D text or 3D characters as follows:

- 1. From the Config menu, select Preferences > CG Preferences.
- 2. Select an Initial Edit Mode setting:
 - Windowed to open the Canvas as completely blank. Default text entry is 3D character
 - Full Screen to open a full-screen-sized 2D Text Window on opening a new Canvas. Refer to Preferences: CG Preferences for additional information.

The Initial Edit Mode can also be set by selecting (clicking) either the 2D or the 3D radio button

^O 2^D [⊙] 3^D on the **Properties > Font** tab. *Refer to Properties: Font* for additional information.

2D Text Windows contain automatically generated baselines on which the 2D text is typed, and text can easily be repositioned on the baseline. 3D characters are typed using the same **Y**-position as a baseline, but cannot be repositioned in the same manner, and do not lock to the baseline when moved.

Each 3D character is a separate object, as seen on the **Scene Graph**, and can be separately animated. 3D characters can, however, be grouped. A **3D Text Template** can also be created into which **3D Text** is entered. The **3D Text Template** can then be updated using the **Template Update** function. *Refer to Grouping and Ungrouping Objects, 3D Text Templates and Template Update for additional details.*

Adding 3D Characters to the Canvas

To enter 3D characters:

• Place the cursor at the position at the first character should be placed. Begin typing.

There is no **Word Wrap** when typing 3D characters. The cursor can be moved to a new line by pressing **Enter**, and the 3D typing continued.

3D characters may also be added to the Canvas using the TrueType Font Preview function, accessed from the button in the **Properties > Font** tab. *Refer to Properties: Font* for additional information.

The **Backspace** ← key can be used to delete characters as long as the mouse has not been clicked on the **Canvas**, and no other editing has been performed on the **Canvas**. To delete a character:

• Select the character, and then click X, press **Ctrl + Delete** or select **Delete** from the **Edit** menu.

Repositioning 3D Characters

3D characters can be repositioned by selecting one or more 3D characters, then clicking-and-dragging or pressing the $\uparrow \downarrow \leftarrow \rightarrow$ cursor keys.

To aid in positioning 3D characters, a grid can be set up, displayed and used as a guide:

- 1. From the **Config** menu, select **Preferences**, then the **Alignment** tab.
- 2. Set grid parameters, then click **Apply** to preview, then **OK** to set. *Refer to* **Preferences Alignment** *for additional information.*

To best see the grid, the default **Canvas** color can be switched to gray:

Click
 Refer to Set Default Background Color for additional information.



Canvas Showing Gridline Display

Setting 3D Font Characteristics

Font Face/Style

Font Face or Font Style can be selected from either the Font Tools > Font Facename drop-down list box or the Properties > Font > Font Facename drop-down list box. *Refer to Font Tools and Properties: Font for additional information.*

<u>Style</u>

Style can be set from can be selected by clicking the Font Tools > Bold, Italic and/or Underline icons, or by selecting the Style (unlabeled) drop-down list box in Properties > Font setting. *Refer to Font Tools and Properties: Font* for additional information.

Size

The Font Tools > Size and Properties > Font > Size settings cannot be applied to 3D characters. Any change to 3D character size must be made using the Transform Tools > Edit Position (Z-axis) and/or Edit Scale tools, or the Properties > XYZ tab Position (Z-axis) and/or Scale settings. *Refer to Transform Tools and Properties: XYZ for additional information.*

Bevels

3D characters can be given depth and a sculpted appearance by adding **Bevels**. **Bevel** characteristics can be set in the **Properties > 3D Font FX** tab. *Refer to Properties: 3D Font FX for additional information.*

Color, Texture and Surface Properties

Solid color can be applied to the Face and Sides of 3D characters via Font Tools and Properties > 2D Font FX. Texture and solid color can be applied to Face, Sides and Bevels via Properties > Surface. Transparency and shininess can also be set. Ramped color cannot be applied to 3D characters. *Refer to* Font Tools, Properties: 2D Font FX and Properties: Surface for additional information.

TrueType Font Preview

TrueType® Font Preview enables the user to quickly review the available characters in a font, change the current font, or select a character (including **Unicode**) to add to the **Canvas** at the current cursor position. **TrueType Font Preview** can be used with both 2D and 3D characters. TrueType Font Preview is accessed from the Font Properties tab. *Refer to Properties: Font* for additional information.

About 3D Objects

Tools Menu > 3D Object; Chyron Toolbar > 3D; File Menu > Open

Unlike 3D characters, 3D objects are not created within Lyric; rather, they are imported. 3D objects can be built from any number of surfaces, each which can have texture and/or solid color applied. *Refer to* **Properties:** Surface for additional information.

3D objects can be resized using the same methods as for 3D characters. *Refer to Transform Tools and Properties: XYZ* for additional information.

Importing a 3D Object

Tools Menu > 3D Object; Chyron Toolbar > 3D; Canvas/Scene Graph Right-Click Menu > 3D Object

Lyric can import **Wavefront** (.obj) files and **3D Studio** files (.3ds and .prj) to the **Canvas** for use in a Lyric composition. To do so:

1. From the **Tools** menu, select **3D Object**, or click the **3D** icon on the **Chyron Toolbar**. The **Select a 3D Object** dialog box opens:

Select a 3D Object		▼ ⇔ 🗈 😤 🖬•	<u>?×</u>
3D_NOZL.3D5 BBALL.3D5 BRAIN.3D5 Centauri_Fighter.3D5 CLOCK.3D5 DISKET.3D5	 earth.3ds GOODSOCR.3DS LGHTBLB2.3DS MICROSCP.3DS SATDISH.3DS SPRING.3DS 	TELEVISN.3DS TYPWRITR.3DS COMMAN1.3DS COMMAN1.3DS COMMAN1.3DS COMMAN1.3ds COMMAN3.3ds COM	
File <u>n</u> ame: BRAIN.3D Files of <u>type</u> : All 3D files	S (*.3ds; *.prj; *.obj)	 Canc	n i

Select a 3D Object

Select a file type from the Files of Type dropdown menu. The choices are: All 3D files (*.3ds, *.prj, *.obj); 3D Studio files (*.3ds, *.prj); or Wavefront files (*.obj). Select a file name, then click Open. The object is placed at the center of the Canvas.

The **Backspace** ← key can be used to delete only the most recently imported object. To delete a different object:

• Select the object, then click , press **Ctrl + Delete** or select **Delete** from the **Edit** menu.

3D Character/Object Antialiasing

The edges of 3D objects and 3D characters can sometimes appear jagged (stair-stepped). **Full Scene Antialiasing**, accessed from **Config Menu > Preferences > Animation Settings**, can be enabled to smooth out the rough edges of these objects.

3D Text Templates

Templates for 3D text can be added to the Lyric scene. A **3D Character Template** can be updated via the **Template Update** dialog box in the same manner as a **2D Template**. To create a **3D Character Template**:

- 1. When outside of a **2D Text Window**, click the mouse at the desired location of the **3D Character Template**, then choose one of the three following methods to create the template:
 - Click the **Template** icon in the Chyron Toolbar.
 - Select Template from the Tools menu.
 - Press Alt O T (do not hold down the Alt key).
- Type a few characters to view the position of the 3D Character Template. Note that unlike 2D Templates, there are no boundaries to visually define the 3D Character Template on the Canvas. When finished typing the characters that are to be contained in the Template, click on the Canvas. Note that it is not necessary to type characters on the Canvas. The Template is still created and can be updated.

Note that a **3D Text Template** can contain more than one line of text, although when **Enter** is pressed to start a new line, the new line begins at the left edge of the **Canvas**.

To left-align all rows in a 3D Text Template:

• Place the cursor at the left edge of the **Canvas**, and then create the **3D Text Template**. Type the rows of text. If repositioning is necessary, select the **3D Text Template** in the **Scene Graph**, and then move the **Template** to the new position.

For other types of alignment, however, it is recommended that a separate **3D Text Template** be created for each row, and then the rows be individually repositioned.

When a 3D Character Template is created:

- A 3D Character Template item is added to the Scene Graph. This item can be expanded to show its individual elements, which can be separately selected and animated using the Keyframe Graph. Note, however, if the 3D Template is updated (see below), it removes animation information regarding individual elements.
- The **3D Character Template** text can be repositioned and animated as a group. When the **3D Character Template** item is selected on the **Scene Graph**, the **Group** and **Ungroup** items are grayed out.

To reposition or transform the elements as a group:

• Select the **3D** Character Template item on the Scene Graph. On the Canvas, use the Transform Tools or Properties > XYZ to reposition or transform the **3D** Character Template.

To reposition or transform an individual element:

• Select the individual element on the Scene Graph. On the Canvas, press and hold the Shift key while using use the Transform Tools or Properties > XYZ to reposition or transform the element.
Template Update

Tools Menu > Template Update; Alt + T

All **2D Text Templates** and **3D Text Templates** in your composition may not be visible on the **Canvas** simultaneously, and tabbing to each **2D Text Template** or selecting each **3D Text Template** that you wish to modify can be time-consuming. The **Template Update** feature offers a convenient way to view and update or edit text within templates. The example below shows a set of **2D Text Templates**. There can, however, be a mix of **2D Text Templates** and **3D Text Templates** on a **Canvas**.

1. Press **Alt + T** or pull down the **Tools** menu and select **Template Update**. The dialog box pictured below right appears:

2D Text 1	🔲 Template Update	
Kerenskv	Pitcher (Kerensky	
Prendergast	Catcher 1 Prendergast	
Yoshida	First Base 2 Yoshida	2
Gavdon	Second Base (3
Pardo	Third Base 4 Gaydon	1
	Short stop 5 Pardo	5
		OK Cancel

Canvas and Template Update

When the dialog box is first opened, up to six template fields are displayed, sorted by template number and showing the text content of each template. If there are more than six templates in your composition, the dialog box will include a scroll bar for access to the rest of the fields displaying template text.

- Pressing the **Page Up**, **Page Down** and **Tab** keys moves the cursor through the fields
- Pressing Shift + Tab moves the cursor back to the previous template.

- 2. Delete the current text in the **Template** field (if necessary), and then enter updated text in any field or fields.
- 3. Click on one of the following buttons:
 - **Apply:** Applies the change and keeps the **Template Update** dialog box open. Any changes you have made will be reflected in the text template(s) on the Canvas.
 - OK: Applies the change and closes the **Template Update** dialog box. Any changes to **Template** text are reflected in the **Text Template(s)** on the **Canvas**.
 - Cancel: Cancels any changes and closes the Template Update dialog box.

If a **2D Text Template** or **3D Text Template** contains more than one line, then the separate lines can be updated from the **Template Update** dialog box.

- 1. In the **Template Update** dialog box, select a **2D Text Template** or **3D Text Template** as previously described.
- 2. Delete the current text in the **Template** field (if necessary), and then enter the text for the first line of the **Template**, and then press **Shift + Enter**.
- 3. Enter the text for the second line of the **Template**, and then press **Shift + Enter**. Note that no special character or space indicates where **Shift + Enter** was typed. The text will appear to run together in the field.
- 4. Repeat the text entry Shift + Enter sequence for each subsequent row.
- 5. Press **Apply** or **OK** to apply the change.

The following occurs if an attempt is made to add a new line to a **Template**:

- Pressing Shift + Enter does not add an extra line to a 2D Text Template on the Canvas. If there is
 no new line available in the 2D Text Template, text typed after a Shift + Enter is appended to the
 text already on the 2D Text Template line.
- Pressing **Shift + Enter** does add an extra line to a **3D Text Template** on the **Canvas**. If, however, the first row does not begin at the left edge of the **Canvas**, the rows will be out of alignment. It is recommended that each row of 3D characters be typed in its own **3D Text Template** to make row alignment easier.

3D Character/Object/Template Context Menu

Right-Click the 3D Character/Template Object or the Character/Template/Object's Listing in the Scene Graph

Right-clicking on a 3D character or 3D object displays a **Context** menu, also known as a right-click menu, which makes available a variety of functions related to 3D character or 3D object operations. Note that all available items in the menu are displayed as active.



3D Character/Object Context Menu

The following provides a brief description of each of the menu items:

- Object Name and Type: The first item in an object's context menu displays the object's name and type. Refer to Navigating and Entering Information in Lyric: Object Name and Type for details on renaming objects.
- Position Lock On: The Position Lock On setting specifies whether or not an object (2D Text Window, 2D or 3D object, etc.) can be moved on its X, Y or Z axes, as well as rotated, scaled or have its center of rotation changed. *Refer to the chapter on Position, Rotation, Scale and Orientation* for additional information.
- Enable Bounding Box: Enable Bounding Box is not available to the 3D Character/Object/Template context menu.
- Squeezeback Duet SD: Squeezeback is not available to the 3D Character/Object/Template context menu.
- Advanced Image Effects: Advanced Image Effects is not available to the 3D Character/Object/Template context menu.
- Copy/Paste Animation State: Copy/Paste Animation State enables animation attributes such as Position, Rotation, Scaling, etc., to be copied from one object and pasted to another. *Refer to the chapter on Animation for additional information.*

- Mask Object: Mask Objects function somewhat differently on Duet SD/HD/Offline systems versus Duet LE/LEX/PCI/PCI+ systems.
 - Duet SD/HD/Off-Line: An image specified as a Mask Object displays at 100% video, and cuts through the elements over which it is positioned and the background. Built-in transparent areas of a Mask Object allow video input to show through. Mask Object is not implemented for 3D characters or 3D objects. Refer to the chapter on Masks: Mask Objects Duet SD. HD and Off-Line for additional information.
 - Duet LE/LEX/PCI/PCI+: An image specified as a Mask Object displays at the transparency set in Properties > Surface combined with built-in transparency, and covers the object over which it is positioned. Mask Object, Mask Layers, Mask Inside, Alpha Trim Mask and Soft Mask are supported on Duet LE/LEX/PCI/PCI+ systems. Transparent areas of a Mask Object allow video input to show through. Mask Object, Soft Mask and Alpha Trim Mask are not currently implemented for 3D characters or 3D objects. Refer to the chapter on Masks: Mask Objects Duet LE/LEX/PCI/PCI+ for additional information.
- Show Center of Rotation: The Center of Rotation for an object can be displayed on the Canvas for ease of editing. *Refer to the chapter on Position, Rotation, Scale and Orientation Transform Tools for in-depth information.*
- **Motion Path:** The path of an object as it progresses through an animation can be graphically displayed on the **Canvas**. The **Motion Path** can be edited, keyframes added and deleted, acceleration set and interpolation specified from the **Canvas**. *Refer to the chapter on Animation Motion Paths for in-depth information.*
- Internal Properties: Properties of an object or a message can be tailored to a specific composition or playback situation. The Internal Properties accessed from this menu are applied to the selected object. They include Depth Test, Depth Write, Lighting and Wireframe.

18. Color/Transparency/Background/Lighting/Texture

Color, Transparency, Background, Lighting and Texture

Color, transparency and texture can be applied to all 2D and 3D characters and objects in Lyric. Color can also be set for the **Background** of the entire **Canvas**, a **2D Text Window**, or a **2D Text Template**.

The Lyric composition can also be lit by an overall light, as well as individual, animatable lights. All lights can be individually colored as well.

The procedure for applying color and texture differs depending upon the type of object - 2D text, 3D text, 3D object, **Background**, etc. This chapter covers the various aspects of applying color, transparency, light, texture and **Background**.

Color Selection for 2D/3D Text and Backgrounds

2D/3D Text Color: **Properties** > 2D Font FX > Fill for Face/Edge; Font Toolbar then select the Color Select tool



Background Color: Tools Menu > Background > Solid/Ramp Color; Chyron Toolbar Solid/Ramp Color; 2D Text Template Context (Right-Click) Menu > Template Properties > Set Bkg

The color of the face and edges of 2D text, as well as the color of the **Background** of the **Canvas**, **2D Text Windows** or **2D Text Templates**, can be set by selecting colors from the **Color Window** in the **Color Select** dialog box, or by selecting preset colors from the **Palette**, also accessed from the **Color Select** dialog box.

Face and **Side** color of a 3D character can also be set using this color utility. However, the **Bevel** color and other 3D character attributes can be set only in the **Properties > Surface** tab. *Refer to Color Palette for Light Sources and 3D Characters/Objects for additional information on setting color for 3D characters.*

The **Palette** can be thought of as a library of favorite colors. It is not necessary to use **Palette** colors to create a message, as custom colors can be created on the fly and applied to text or **Background** without storing to a **Palette**. Ramped colors, which are colors that blend into each other, can also be applied to 2D text and **Backgrounds** and added to the **Palette**. Ramped color cannot be applied to a 3D character.

Palettes can be saved as *.reg* files and recalled for future use.

Quickly Setting Text Color

The **Face** color of 2D text or a 3D character(s), the **Edge** color of 2D text or the **Side** color of a 3D character(s) can be quickly set using preset **Palette** colors:

- 1. Select the 2D text or 3D character(s) as follows:
 - If color is to be applied to selected 2D text, use a **Bounding Box** to select the text.
 - If the color is to be applied to selected 3D text (Face or one Edge only), Ctrl + clicking the characters on the Canvas or in the Scene Graph, or Shift + click a range of characters in the Scene Graph.

2. To apply color to the Face of the selected 2D Text or 3D characters, click on the Font Face tool. To apply color to the Edge of selected 2D text or Sides of 3D characters, click on the Font Edge tool. A drop-down Palette is displayed. The colors of the Font Face Color correspond to the colors in Palette 1 in the Color Select dialog box; the colors of the Font Edge correspond to the colors in Palette 2 in the Color Select dialog box. Note that only one Palette can be pulled down at a time. Both are shown in the following figure.



Font Face and Edge Color Tool Drop-Down Palettes

Note that when the scroll bar is at the top of a **Font Face** or **Edge Color** tool drop-down (not shown in the preceding figure), the first (top) color displayed in the drop-down **Palettes** indicates the currently-selected color. This may or may not be a **Palette** color, i.e. a color that is assigned to a **Palette**.

3. Click a color to apply. The color is applied to the selected 2D text or 3D characters. Note that a ramped color cannot be applied to a 3D character.

When a color is applied to 2D text, any 2D text that is typed afterwards has the new color applied. When a color is applied to 3D characters, any 3D characters that are typed afterwards have the new color applied. Changes to the colors of 2D text do not affect 3D character color, and changes to 3D character color do not affect 2D text color.

NOTE

Be aware that if the current color is not assigned to a Palette, selecting a different color in the Font Face/Edge Color tool deletes the color from the drop-down and the color settings are lost. If text has already been typed using the lost color, the settings can be reloaded by using one of the following methods to apply the Color/Font function.

- Select the text with the lost color, then press the Color Font key on a Duet keyboard, or Alt + 12 on a PC keyboard.
- Right-click on the 2D Text Window containing the selected text, then select Pick Up Color/Font from the context menu.

The color settings are reloaded, and are applied when typing new text. The color also becomes active in the Color Select dialog box, and can be added to the Palette. *The Color Select dialog box is described below, and Adding Color to the Palette is described later in this section.*

Accessing the Color Select Dialog Box and the Palette

The manner in which the **Color Select** dialog box and the **Palette** are accessed determines to which element color is applied. If the dialog box is opened from a **Background** tool (**Canvas**, **2D Text Window** or **2D Text Template**), the color will be applied to the **Background**. If the dialog box is opened from a **Font Face** or **Font Edge Tool** or the **2D Font FX Properties** tab, the color will be applied to the **Face** or an **Edge** of 2D characters, or the **Face** or **Sides** of a 3D character(s).

Accessing Color Select Dialog Box for Setting 2D Text Face/Edge or 3D Text Face/Side Color

From the 2D Font FX Properties tab:

1. Open the 2D Font FX tab of the Properties window.



2D Font FX Properties Color Sample Chip and Font Sample

- In the Face/Edge Components list, select Face or the Edge to which to apply the color. In the preceding figure, the first applied Edge, which is a Border, is selected. In the case of a 3D character(s), any Edge component that is selected results in the color being applied to the Sides of the 3D character(s).
- 2. In the Fill for Face/Edge area, select (click) the Color radio button.
- 3. Click on the Fill for Face/Fill for Edge Color Sample Chip. The Color Select dialog box opens.

From the Font Tools:

Click on either the Face or Edge color setting tool on the Font Toolbar, then select the Color Select tool
 from the color drop-down list. If the Color Select tool
 is selected from the Face color of the 2D text or 3D character can be set. If the Color Select tool
 is selected from the Edge tool, the first applied Edge color of 2D text or Side color of a 3D character(s) can be set. The Color Select dialog box opens.



Face (Left) and Edge (Right) Font Color Tools

Accessing Color Select Dialog Box for Setting Background Color

To open the **Color Select** dialog box and access the **Color Palette** for the **Background**, use one of the following methods:

- Pull down the Tools menu, then select Background, then Solid/Ramp Color.
- Click On the Chyron Toolbar, then select Solid/Ramp Color.
- Right-click on a 2D Text Template, then select Template Properties from the context menu. Click Set Bkg, then select Solid/Ramp Color.

The Color Select dialog box opens.

The Color Select Dialog Box

Color Select			×
Mode Ramp	C Solid <u>C</u> olor	Color	
Ramp / Gradient-	O		
Palette 1		Irans:	Hug: 160 Red: 125 Sat: 0 Green: 125 Lum: 118 Blue: 125
Add To <u>P</u> alette <u>R</u> eset Palette	Sa <u>v</u> e Palette Recall Palette	Pick Up Color	OK Cancel

Color Select Dialog Box

The **Palette** area displays one of the seven available subpalettes, also called **Palettes**, each containing **16** colors, for a total of **112**. The **16** colors in the active (displayed) subpalette can be selected using a Duet keyboard **Color Key** or a PC **Hotkey** combination. For example, if **Palette 6** is displayed in the **Color Select** dialog box, the **Hotkeys** can load the **16** colors from **Palette 6**. At the right of the **Palette** area is a set of **Up/Down** scroll arrows. Click the arrows to scroll through the subpalettes.

2D/3D TEXT COLOR SELECTION			
Duet/Keystroke(s)	PC Keystroke(s)	Description	
Color Keys 1 - 8	Ctrl + 1 through Ctrl + 8	Selects entries 1 - 8 in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box.	
No corresponding keystrokes.	Ctrl + 9 Ctrl + 10	Selects Palette Positions 9 and 10 respectively in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box. Do not have corresponding dedicated Duet keyboard keystrokes.	
Color Keys 9 - 14 (Shift + Color Keys 1 - 6) Note: Color Keys 15 and 16 are not operational.	Ctrl + Shift +1 through Ctrl + Shift + 6	Selects entries 11 - 16 in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box.	

Applying Color to Background and Text

Applying an Existing Palette Color

To apply an existing Palette color:

- 1. Depending on which element the color is to be applied, either perform or skip this step:
 - If the color is to be applied to a **Background**, skip to the next step.
 - If color is to be applied to selected 2D text, use a **Bounding Box** to select the text.
 - If the color is to be applied to selected 3D text (Face or one Edge only), Ctrl + clicking the characters on the Canvas or in the Scene Graph, or Shift + click a range of characters in the Scene Graph..
- 2. Open the **Color Select** dialog box using one of the methods described in **Accessing the Color Select Dialog Box and the Palette** above.
- 3. Click a color tile in a subpalette and note that the **Color Sample Chip** in the **Color** area of the **Color Select** dialog box displays that color.

- 4. Click Apply.
 - If applying to a **Background**, the color should appear as the **Background** of the **Canvas**, **2D Text Window** or **2D Text Template**, and the procedure is complete.
 - If applying to a 3D character(s), the color should be applied to the Face or Edge, and the procedure is complete. The Font Sample in the Properties > 2D Font FX tab and the Font Tool Face or Edge Color also reflects the selected color. New 3D characters that are typed will also have the selected color applied. The new color is not applied to 2D text.
 - If applying to 2D text, note that the text on the **Canvas** does not yet assume the selected color. The **Font Sample** in the **Properties > 2D Font FX** tab as well as the **Font Face** or **Edge Color** tool, however, do reflect the selected color. Continue to the next step.
- Click Apply in the Properties > 2D Font FX tab. The text on the Canvas assumes the selected color. New 2D text characters that are typed will also have the selected color applied. The new color is not applied to 3D characters.

Setting and Applying a Custom Color

A color can be custom-set and if desired, added to the **Palette**. To set a custom color:

- 1. Use the appropriate method open the **Color Select** dialog box.
- 2. Click and drag the + symbol in the Color Window to a color of your choice. Moving the + across the Color Window adjusts the Hue. This determines the character of the color red, green, blue, etc. Moving the + up and down in the Color Window adjusts the Saturation, which determines the strength of the color. Moving the + down in the Color Window mutes the color. At the bottom of the scale, the color loses all strength and becomes gray. Moving the + up in the Color Window strengthens the color. At the top of the scale, the color is strongest. Note that any change is reflected in the Color Sample Chip and the Hue/Sat/Lum (HSL) and Red/Green/Blue (RGB) settings.

3. Click and drag the Luminosity slider to adjust the brightness of the color. At the bottom of the scale, the color is darkest (black). At the top of the scale, the color is lightest (white). Note that a change in Luminosity is reflected in the Color Sample Chip and the Hue/Sat/Lum (HSL) and Red/Green/Blue (RGB) settings. The purest color in a color family is set by moving the + to the top of the Color Window, and the Luminosity slider to exactly the half-way point.



Selecting a Color from the Color Window

Colors can also be set by entering values in the **HSL** or **RGB** fields. Changes to these settings are reflected in the **Color Window** and **Luminosity** slider. *Refer to* **Setting HSL and RGB Color Values** for details.

4. Also experiment with the Transparency slider. The range of Transparency is from 0 (completely opaque) to 100 (completely transparent). Note that a change in Transparency is reflected in the Color Sample Chip, but is not reflected in the Hue/Sat/Lum (HSL) and Red/Green/Blue (RGB) settings. Transparency is an attribute distinct from HSL and RGB.

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Setting Transparency

5. When the color is set, repeat Steps 4 and if necessary, 5, from the previous procedure to apply the color to the text or **Background**.

Adding a Color to the Palette

NOTE

When adding a color to the Palette, it must replace an existing color in the Palette. Make sure that the color that is being replaced is not needed.

When a color is set, it can be used to type text until another color is selected. When the new color is selected, the color it replaced is lost unless it had been added to the **Palette**. To add a color the **Palette**:

- 1. In the Color Select dialog box, set a color.
- 2. Select (click) on a color tile in any one of the seven subpalettes.



Selecting a Color to Replace on the Palette

1. Click Add To Palette. The set color replaces the color in the Palette, and becomes the new color at that Palette position.

Applying a Ramped/Gradient Color Scheme

The **Ramp/Gradient** area of the dialog box consists of a **Ramp/Gradient Color Window** with a **Color Anchor**, each represented by a small circle, at each corner. Additional **Color Anchors** can be added to the sides. Corner **Color Anchors** cannot be removed or repositioned, whereas side **Color Anchors** can. The color of a **Color Anchor** determines the color the adjacent area of the **Ramp/Gradient Color Window**.

Ramped color cannot be applied to a 3D character. Refer to **Color Palette for Light Sources and 3D Characters/Objects** for additional information on setting color for 3D characters.

Once a color ramp is set, it can be added to a **Subpalette** in the same manner as a solid color, and applied in the same manner as a solid color.

To set ramped color for text:

- 1. Depending on which element the color is to be applied, either perform or skip this step:
 - If the color is to be applied to a Background, skip to the next step.
 - If color is to be applied to selected 2D text, use a Bounding Box to select the text.
- 2. Use the appropriate method to open the **Color Select** dialog box.
- 3. In the **Mode** area, select **Ramp**. Click the upper-left **Color Anchor**. A black frame appears around the **Color Anchor**.

Ramp / Gradient-	
Ø	

Selecting a Color Anchor

- Use one of the following methods to set a color for the anchor and the upper left are of the Ramp/Gradient window. Note that any change to the Color Window/Luminosity and Transparency sliders, and HSL/RGB settings are immediately reflected in the Color Anchor color. Optional: Also set the Transparency.
 - Select (click) a color from the Palette
 - Use the + slider in the Color Window and the Luminosity slider.
 - Set **HSL** or **RGB** settings.



Setting a Color Anchor

5. Set different colors for each area of the color ramp by clicking each of the other three color anchors and repeating the color-setting procedure.



Ramp/Gradient Window

- 6. When the color ramp in the **Ramp/Gradient Window** is set, click **Apply** in the **Color Select** dialog box.
 - If applying the ramped color to a **Background**, the ramped color should appear as the **Background** of the **Canvas**, **2D Text Window** or **2D Text Template**, and the procedure is complete.
 - If applying the ramped color to 2D text, it is applied to the **Fill Color Sample Chip** and the **Font Sample** in the **Properties > 2D Font FX** tab, but not the 2D text. The figure below shows the ramped **Font Face** with a narrow **Border Edge**. Continue to the next step.



Fill Color Sample Chip and Font Sample Showing Gradient (Ramp)

 Click Apply on the Properties > 2D Font FX tab. The color ramp is applied to the face of each selected character in the 2D Text Window. New 2D text characters that are typed will also have the selected ramped color applied.

2D T	ext 1			_	
1	•		-	0	
		7		U	7

Ramp/Gradient Applied to 2D Text

A ramped color can be added to a **Palette** in the same manner as a custom color. Remember, however, that a ramped color cannot be applied to a 3D character.

Copying/Pasting a Ramped Color

A ramped color can be copied and pasted to another **Palette** position.

- 1. In the Mode area, select Ramp.
- 2. Right-click the Ramp/Gradient Window. From the context menu, select Copy ramp.



Copying and Pasting a Ramp

- 3. Select (click) a Palette color tile.
- 4. Right-click the **Ramp/Gradient Window**. From the context menu, select **Paste ramp**. The ramp is pasted to the new Palette position.

Color Anchors - Buddies, Copy, Paste, Add/Remove

Tie Color/Don't Tie Color to Buddy

Lyric has a convenient function for setting two anchors to the same color. The **Tie color to buddy** function pairs the top left/right corner anchor with its corresponding top right/left color anchor, or the bottom left/right corner anchor with its corresponding bottom right/left color anchor, so that the color of both anchors may be set simultaneously. In the case of an anchor that is not on the corner (see **Adding Additional Color Anchors** later in this section), it can be tied/untied from its opposing top/bottom or left/right anchor.

- 1. In the Mode area, select Ramp.
- 2. Right-click one of the anchors as shown below. A context menu is displayed.



Selecting Tie Color to Buddy

3. Select **Tie color to buddy**. The two opposing top color anchors are marked with horizontal lines. Additionally, the color of the new buddy now matches the color of the selected anchor.

Ramp / Gradient	
⊖	

Color Anchors Tied to Each Other

When two anchors are tied, any change in one anchor is reflected in the other anchor. This allows two anchors to be set to the same color simultaneously.

To "untie" two Color Anchors:

• Right-click on one of the tied color anchors and select **Don't tie color to buddy** from the context menu. The colors of the two anchors can now be independently set.



Selecting Don't Tie Color to Buddy

Copy/Paste Anchor Color

A color may be copied and pasted from one **Color Anchor** to another.

- 1. In the Mode area, select Ramp.
- 2. Right-click on the anchor from which the color is to be copied, then select **Copy anchor color** from the context menu.



Copying Anchor Color

3. Right-click on an anchor to which you wish to apply the copied color, then select **Paste anchor color** from the context menu.



Pasting Anchor Color

The selected **Color Anchor** takes on the attributes of the pasted color.

Adding/Removing Additional Color Anchors

An additional two pairs of color anchors can be added each to the top/bottom and left/right sides of the **Ramp/Gradient Window**, for a total of four additional pairs.

To add a pair of Color Anchors:

• In the **Mode** area, select **Ramp**. Right-click just outside of the border of the **Ramp/Gradient** window, at the position where one of the **Color Anchors** is to be inserted. A **Color Anchor** appears at that position, as well as at the opposing position. On creation, the anchors are always tied (**Tie to buddy**) to each other.



Adding Additional Color Anchors

The following choices are available from the context (right-click) menu of a side **Color Anchor**:

- Tie color to buddy/Don't tie color to buddy: A Color Anchor can tied to or untied from the opposing Color Anchor.
- Remove anchor: Select Remove anchor to remove a Color Anchor and its opposing Color Anchor.
- Copy/Paste anchor color: A Color Anchor's color can be copied, then pasted to another Color Anchor.

Pairs of side **Color Anchors** can be added and deleted. Pairs of opposing **Color Anchors** can also be repositioned along its side of the **Ramp/Gradient** window, by using the mouse to click-and-drag the anchor.

The following is an example of a complex ramp pattern created using multiple **Color Anchors**:



Multiple Color Anchors

Picking Up a Color

Pick Up Color enables a color to be "picked up" and used as the currently selected color.

1. Click **Pick Up Color**. Lyrics cursor takes on the appearance of an eyedropper.



Picking Up a Color

2. Click on any point on the Canvas or the Ramp/Gradient window. Note that the hot area of this cursor is the bulb of the eye-dropper, not the tip. When clicked on the Canvas, the Pick Up Color function can sample the color of anything visible on the Canvas, whether or not it is an object that will appear in Lyric compositions. The eyedropper can acquire sample non-Lyric objects, such as Title Bars or the displayed borders of 2D Text Windows.

The picked-up color picked up is displayed in the **Color Sample Chip**.

To apply this color to 2D/3D text or a **Background**:

• Use the **Apply** function as described earlier in this section.

This color can be added to the **Palette**.

Performing a Hot Color Test

The **Color Select** dialog also includes a **Hot Color Test**, which tests the color for settings which fall outside of NTSC and PAL standards. Any color selected or custom-set by the user can be tested against NTSC and PAL standards before being added to a **Palette**, or applied to characters or windows. To run the test:

- 1. Click the **Hot Color Test** checkbox.
- 2. Selecting or set a color or ramp
- Click Add to Palette or Apply. If the color falls within NTSC or PAL standards, the color is added to the Palette or applied to the text or Background. If the color tested does not meet NTSC or PAL standards, the following warning is displayed:

Color Select			×
Mode Ramp	C Solid <u>C</u> olor	Color	
Lyric Color n Do you	hay be illegal for NTSC want to automatically	Cor PAL. y adjust the color? Cancel	_
Palette 1		▲ Irans:	Hug: 231 Reg: 236 Sat: 236 Green: 2 Lum: 112 Blue: 55
Add To <u>P</u> alette <u>R</u> eset Palette	Sa <u>v</u> e Palette Recall Palette	Pic <u>k</u> Up Color Apply	OK Cancel

Hot (Illegal) Color Warning

- 4. Select one of the following choices:
 - Click **OK** to allow Lyric to automatically adjust the color to within legal limits.
 - Click No to leave the color as is.
 - Click **Cancel** to cancel the procedure.

Saving/Recalling a Palette

Saving a Palette

A **Palette** can be saved as a *.reg* file, which is a Lyric **Profile** format. When a **Save Palette** is executed, all seven subpalettes are saved under one **File Name**. To save a **Palette**:

1. After setting the colors in the **Palette**, click **Save Palette**. The **Store Palette To** dialog box opens.

Store Palette	To:			[? ×
Save in: 🔂	Messages	•	🗕 🖻 🖻	* 🎟	
News_11pr	n.reg				1
News_5pm	.reg				
Ryan.reg					
woir.reg					
1					
File <u>n</u> ame:				<u>S</u> ave	
Save as type:	Palette Profile (* reg)		-	Cancel	
	J		-		-//

Storing a Palette

 Only one choice of File Type is available, which is the *.reg* format. Enter a File Name, then click Save. The file is saved and can be recalled for future use. Note that the format is the same as that used for saving User Profiles.

Recalling a Palette

To recall a saved Palette:

1. In the Color Select dialog box, click Recall Palette. The Load Palette From dialog box opens.

Load Palette	From:		? ×
Look in: 🔂	Messages	▼ ← €	-* 🎫 -
News_11p News_5pn Ryan.reg Wolf.reg	m.reg h.reg		
File <u>n</u> ame:	[<u>O</u> pen
Files of <u>t</u> ype:	Palette Profile (*.reg)		Cancel

Loading a Palette

 Only one choice of File Type is available, which is the *.reg* format. Enter a File Name, then click Open. All seven subpalettes that comprise the Palette file are loaded in the Color Select Palette area.

NOTE

User Profiles also store Palette information, and therefore a Palette can also be loaded by opening a User Profile *.reg* file from the Load Palette From dialog box. Use caution when doing this, however, as other settings in the User Profile may be applied as well. To prevent accidental change to the settings, first save the current settings as a User Profile, then load the User Profile which has the desired Palette. Save the Palette, then load the original User Profile. Open the saved Palette. The new Palette is loaded without disturbing other Lyric settings.

Resetting a Palette

Resetting the **Palette** restores the first eight **Palette** colors of **Palette 1** and the first eight colors of **Palette 2** to default Lyric colors. Note that the default **Palette** colors **1** through **8** in **Palette 1** and colors **1** through **8** in **Palette 2** provide pairs of colors that can be used to quickly type fonts with color-coordinated **Faces** and **Edges**. The figure below shows the default **Palette 1** colors matched with their default **Palette 2** colors. The number characters represent the position of the colors within their respective **Palettes**. For example, the **Face** color of the character **1** is created from **Palette 1**, **Position 1**, and the **Edge** from **Palette 2**, **Position 1**; the **Face** color of the character **2** is created from **Palette 1**, **Position 2**, and the **Edge** from **Palette 2**, **Position 2**; and so on. These **Palette** colors also appear as the first eight **Face** and **Edge** colors in the **Font Face** and **Font Edge Color** tool drop-down **Palettes**. The first (top) color displayed in the drop-down **Palettes** indicate the currently-selected color.



Default Lyric Face and Edge Palette Colors

To reset the Palette:

• Click Reset.

Color Selection for Light Sources and 3D Characters/Objects

Lighting: Properties > Lighting

3D Characters/Objects: Properties > Surface

See also Color Palette for 2D Text and Backgrounds.

The colors of individual lights and surfaces of 3D characters and objects can be set using a color **Palette**. The **Palette** can be accessed from the **Properties > Lighting** or **Properties > Surface** tabs.

Properties		Properties
Surface Camera	Loops/ 🔸 🕨	Lighting Surface Camer.
Color Color Color Texture Color	Transparency	Global Light Intensity Color 55 5 1 1 2 3 4 5 6 1 2 3 4 5 6 6 Flood Light Spot Light Color 62 5 0 Spot Light Attenuation Angle

Surface and Lighting Properties Tabs

To access the **Palette** from the **Properties > Lighting** tab:

• If selecting a color for the Global Light, click the Global Light Color Chip. If selecting a color for an Individual Light, select the Individual Light (1 - 6), select Flood Light or Spot Light, then click the Individual Light Color Chip. The Color dialog box is displayed. *Refer to Properties: Lighting for additional information on setting Lighting attributes.*

To access the **Palette** from the **Properties > Surface** tab:

- 1. Select the 3D character or 3D object **Surface** to which to apply the color.
- 2. Click (check) the **Color** checkbox, then click the **Color Chip**. The **Color** dialog box is displayed. *Refer to Properties: Surface for additional information on setting Surface attributes.*

Color	?)
Basic colors:	*
Custom colors:	Hue: 164 Red: 63
Define Custom Colors >>	Sat: 177 Green: 45 Color Solid Lum: 126 Blue: 223

The Color dialog box contains a Palette of Basic and Custom colors.

Color Dialog Box

To select a **Basic** or previously set **Custom** color:

• Select (click) a color from one of the predefined **Basic Colors**, or previously set **Custom Colors**, then click **OK**. The color is applied to the select light or surface.

To set a new user-defined color:

- Click-and-drag the Hue/Saturation cursor to the desired location on the grid and Click-and-drag the Luminosity slider as desired. Note that the Hue/Sat/Lum (HSL) and Red/Green/Blue (RGB) settings reflect the color set using the sliders. Colors can also be set by entering values in the HSL or RGB fields. Refer to Setting HSL and RGB Color Values for details.
- 2. Optional: Click the Add to Custom Colors button to add the user-defined color to the Custom Colors Palette.
- 3. Press **OK**. The color is applied to the select light or surface.

The **Color** dialog box is also used for color-coding an object listing in the **Scene Graph**. *Refer to the chapter* on **Animation - Scene Graph** for additional information.

Setting HSL and RGB Color Values

The **Palette for 2D Text and Backgrounds** and **Palette for Light Sources and 3D Objects** both feature multiple methods for setting color. A color can be set using sliders, or by entering values in the **HSL** or **RGB** fields. The slider and **HSL/RGB** methods are described in the sections covering the respective **Palettes**. This section describes how **HSL** and **RGB** settings are used to set color.

NOTE

HSL and RGB settings must be entered using the alphanumeric keys on the keyboard. Using the numeric keypad keys changes the Message Number displayed on the Lyric interface.

HSL Settings

HSL settings break color into three components. It is an intuitive color-setting system that makes it easy to creates families of colors that share the same **Hue**, but are different shades.

- Hue defines the property of the color that gives it the appearance of being blue, yellow, green, etc. The color of an object is based on the wavelength of light that is reflected from the object. Range: 0 (red) - 239 (red). The colors progress through the range in the following order: red, orange, yellow, green, blue, purple and red.
- Saturation defines the weakness or strength of the color. Range: 0 (no saturation) 240 (complete saturation).
- Luminance, also referred to as brightness, defines the lightness or darkness, also sometimes referred to as a shade, of the color. A setting of **120** defines the point at which the color is neither light or dark. Range: 0 (darkest) **240** (lightest).

RGB Settings

RGB settings also break colors into three components: **Red**, **Green** and **Blue**. Different levels of **Red**, **Green** and **Blue** are combined, or added, to produce the colors used and/or output by video and computer devices. This type of video is known as **Component Video**. There is also an additional **Alpha**, or **Transparency** component that can be set for **2D Text** and **Backgrounds** within the **Palette for 2D Text and Backgrounds**, and for **3D Characters/Objects** within the **Properties > Surface** tab. A video/computer graphic that contains an **Alpha** component is referred to as an **RGBA** graphic.

The **Red**, **Green** and **Blue** levels each indicate the level of intensity of the component color that combines with the other components to produce the resulting color. **Range of Each: 0** (no presence of the component color) - **255** (100% presence of the component color).

Sample Color Settings

The following table shows settings for a few sample colors in **HSL** and **RGB**, and for graphics that could be used for the web, **HTML**.

Color		HSL			RGB		HTML
	Н	S	L	R	G	В	
Red	0	240	120	255	0	0	#FF0000
Green	80	240	120	0	255	0	#00FF00
Blue	160	240	120	0	0	255	#0000FF
Fuchsia	200	240	120	255	0	255	#FF00FF
Yellow	40	240	120	255	255	0	#FFFF00
Aqua	120	240	120	0	255	255	#00FFFF
Black	0 - 239	0	0	0	0	0	#000000
White	0 - 239	0	240	255	255	255	#FFFFFF
Gray	0	0	120	127	127	127	#7F7F7F
Pure Red as defined in this table can cause problems when processed as video, and is considered to be an illegal color. A slight adjustment to the HSL/RGB settings brings the color within acceptable bounds. Use the Hot Color Test feature in the 2D Text/Background Palette to check and adjust a questionable color.							

Background

Tools Menu > Background; Chyron Toolbar >

Canvas/Scene Graph (Light, Global Light or Camera Selected) Context (Right-Click) Menu > Background

2D Text Template Dialog Box > Set Bkg

A **Background** can be applied either to the **Canvas**, to an individual **2D Text Window** (including **Roll**, **Crawl** and **Type On/Slow Reveal**) or an individual **2D Text Template**. A **Background** is always positioned behind the editable elements on the **Canvas** and cannot itself be edited. A **Background** is not available on a PCI-Squeezeback board (Duet LE/LEX/PCI/PCI+ only). There are two types of backgrounds:

- A **Solid/Ramp Color Background**, which is rendered by Lyric as either a solid color or gradations involving more than one color.
- A Graphic Background that uses an imported bitmap graphic as a Background.

Different types of **Backgrounds** are illustrated in the last section of this topic.

A few points to note regarding **Backgrounds**:

- Unless it is transparent, a Background covers anything over which it is positioned, including an external video source. The Background can be cut through using a Mask Object, Squeezeback Object (Duet SD), resizeable areas generated by a PCI-Squeezeback board (Duet LE/LEX/PCI/PCI+) or Video Regions. Refer to Mask Introduction, Squeezeback Object, Video Squeezeback and Video Region respectively for additional information.
- The Transparency of a Background can be animated.

Selecting the Element to Which to Apply the Background

Before applying a **Background**, select the **Canvas**, the **2D Text** window or the **2D Text Template** to which the **Background** is to be applied.

To select the Canvas:

• Click on the Canvas outside of a 2D Text window.

OR

• Select any element on the Scene Graph except a 2D Text window (which includes Roll, Crawl and Type On - Slow Reveal). Global Light or Camera is a safe choice.

To select a **2D Text** window:

• Click on the **2D Text** window, but not inside a **2D Text Template**.

OR

• Select the **2D Text** window on the **Scene Graph**.

To select a 2D Text Template:

Click in the 2D Text Template. Make sure that the row handles in one of the Template rows are visible, indicating that the Template has been selected. If the row handles are not visible, it indicates that the 2D Text Window has been selected, and the Background will be applied to the 2D Text Window instead of the 2D Text Template.

Selecting Background Type

To select the **Background** type to apply to the **Canvas** or selected **2D Text Window** or **2D Text Template**:

1. Select **Background** from the **Tools** menu or the **Canvas/Scene Graph** right-click menu, or click the

button on the **Chyron Toolbar**. The **Background** submenu opens. The figure below shows the submenu from the button.



Background Tool Drop-Down Menu

OR

In the instance of a **2D Text Window** only, right-click on the **2D Text Template**, then select **Template Properties** from the context menu. From the **2D Text Template** dialog box, click **Set Bkg** in the **Background Area**.



Background Drop-Down Menu in 2D Text Template Dialog Box

2. Select one of the following:

Solid/Ramp to apply a Lyric-rendered solid or gradated color **Background**. Continue to "Applying a **Solid/Ramp Color Background**" below.

OR

Graphic File to use a bitmap graphic as a **Background**. Continue to "Applying a **Graphic File Background**" below (follows "Applying a **Solid/Ramp Color Background**").

The procedures for applying a **Solid/Gradient** or a **Graphic Background** differ greatly and are covered separately below.

Applying a Solid/Gradient Background

After selecting **Solid/Ramp Color** from the **Background** submenu, the **Color Select** dialog box is displayed. This dialog box is used as well to set palettes for other functions.

- 1. Refer to the section on "Color Palette for **2D Text** and **Backgrounds**" for details on setting and applying a **Solid** or **Ramp Color**.
- 2. When **Solid** or **Ramp Color** selection is complete, click **Apply**, then **OK**. The color is applied to the **Background** of the Canvas or the **2D Text** window.

Applying a Graphic File Background

After selecting **Graphic File** from the **Background** submenu, the **Select a Graphic File for the Background** dialog box is displayed:

BG_720x4	86 Blue.tga	🛋 Chyron_logo News.tga	Chyr		
BG_720x486 Stocks.tga		📓 Chyron_logo Olympics.tga 🛛 📓			
BG_720x4	86 Yellow.tga	🔊 Chyron_logo small - Resized.tga	Duet		
Chyron_lo	go big.tga	🔊 Chyron_logo small.tga	Duet	(Chuont	
Chyron_lo	go Elections.tga	💌 Chyron_logo Sports.tga	Duet		
	go Live.tga	m Chyron_logo Scocks.cga	alprec		2
•			•		
ïle <u>n</u> ame:	Chyron_logo big.tg	a <u>D</u> I	pen		

Select a Graphic File for the Background

- 1. Enable (check) the **Preview** checkbox to display a thumbnail of the selected graphic at the right side of the dialog box.
- 2. Select Graphic Files from the Files of Type list box.
- 3. Select the file that is to be applied as the **Background**. Note that the **Width** (in pixels), **Height** (in scanlines) and color **Depth** (in bits)reflect the original size of the selected graphic. These values cannot be changed.
- 4. In the **Apply to Background** area, select **Size to Fit** to automatically resize the graphic to fill the screen, or **Center**, to center the unresized graphic on the screen. Note that **Size to Fit** may change the aspect ratio of the graphic.
- 5. Select **Open** to apply the graphic file to the **Background**. The graphic is applied to the **Background**.

Background Examples

The figure below illustrates the different types of **Backgrounds**.

- The Canvas has a complex Ramp Color Background.
- The 2D Text 1 has no Background and contains five Templates. From top to bottom, they have no Background; a Solid Color Background, a simple Ramp Color Background, a complex Ramp Color Background and a Graphic Background.
- 2D Text 2 has a Solid Color Background.



Background Examples

Deleting a Background

Edit Menu > Delete Background; Chyron Toolbar > *Delete; Chyron Toolbar* > *Background* Before deleting a **Background**, make sure to select the **Canvas**, **2D Text Window** or **2D Text Template** from which the **Background** is to be removed.

Choose one of the following methods to delete a **Background**:

• Canvas, 2D Text Window or 2D Text Template: Select Delete Background from the Edit menu.

OR

• Canvas, 2D Text Window or 2D Text Template: Click the Background icon on the Chyron Toolbar, then select Delete from the dropdown menu as shown below.



Background Button with Delete Selected

• **Canvas:** Click the **Erase** icon in the **Chyron Toolbar**. The **Erase** dialog box is displayed. Select the **Scene** radio button, and the **Background** checkbox. Click **OK**.

Erase	<u>?×</u>
Ihis Window ℃ All Windows ℃	2D Text ☐ Te <u>m</u> plates ☑ Te <u>x</u> t ☑ Backgroun <u>d</u>
Scene •	Scene Dijects Persistent Timers Sackground
Erame Buffers C	Cancel

Erase Background from Scene (Canvas)

• 2D Text Window: Click the Erase icon on the Chyron Toolbar. The Erase dialog box is displayed. Select either the This Window or All Windows radio button, and the Background checkbox. Click OK.

rase	?)>
This Window © All Windows ©	2D Text ☐ Te <u>m</u> plates ☐ Te <u>x</u> t ☑ Backgroun <u>d</u>
<u>S</u> cene O	Scene Dijects Persistent Timers Background
Erame Buffers C	Cancel

Erase Background from a 2D Text Window

• 2D Text Template: Right-click on the 2D Text Template, then select Template Properties from the context menu. In the 2D Text Template dialog box, click Clear in the Set Background area.



2D Text Template - Clear Background

Lighting Properties

Properties > Lighting

Click on the Lighting tab of the Properties window to view or change Lighting properties.

The Lyric Canvas always includes one Global Light Source (which cannot be turned off) and up to six (6) independent movable Light Sources.



Lighting Properties

Property	Description			
Global Light	A Canvas may have one Global light, which is ambient light that comes from all directions equally. You may set an Intensity level for the Global light, and also you may set/change the light Color.			
Individual Light	A Canvas may have up to six Individual Lights, which may be configured and positioned independently. Like any other Lyric parameter, lighting changes may be animated.			
	 Individual Lights may be configured as either Flood (light radiates at all angles from light source) or Spot (light is focused in one direction). Up to 6 Light Sources may be on, but only one may be configured at a time. Turns Light Source on or off 			
	Individual Light \overrightarrow{O} \overrightarrow{O} \overrightarrow{O} \overrightarrow{O} \overrightarrow{O} \overrightarrow{O} 1 2 3 4 5 6			
	Configures Light Source Setting Intensity: Enter value numerically			
	Click arrows to change value			
	Move Slider to change Intensity			
lcon Visible	If Icon Visible is checked, the selected Light Source(s) appears on the Canvas, for ease in positioning.			



A Canvas may have, in addition to one Global light source, up to six Individual light sources. Each Light Source may be configured and positioned separately. And, like all Objects in Lyric, Light Sources may be animated.

Control	Description
Individual Light	The round buttons turn the Individual Light sources on and off in any combination. The numbered square buttons select an Individual Light source for editing.

Control	Description
	Each Individual Light may be set up as a Flood Light or a Spot Light . Flood Lights radiate in all directions; Spot Lights radiate in one direction, with variable angle and attenuation (see below). Spot Light Source Flood Light Source
 Flood Light Spot Light 	For Light Source
Intensity Color	 Intensity of a selected light is adjustable over a range from 0 to 100. Click the Color sample to open a color selection dialog.
Spotlight Attenuation Angle 75 • 45 •	 The Attenuation control varies the difference in the light's intensity as measured at the source rather than at the edges of the cone-shaped area being illuminated. A value of Zero (0) Attenuation indicates that there will be no decrease in illumination at the edges of the illuminated area. Changes in the Attenuation value will only be evident in the Spotlight's effect on objects it illuminates. You may vary the Angle between the edges of the cone-shaped area of illumination.
	Spotlight at left is set to a 15° angle; the yellow Spotlight is set to a 45° angle.
Con Visible	IT THIS ITEM IS CHECKED, THE SELECTED LIGHT SOURCE APPEARS ON THE CANVAS AS SHOWN IN THE FIRST Illustration.

To reposition an Individual Light source on the Canvas, you may drag it with the mouse, or use the controls on the XYZ (Positioning) Window to reposition Light Sources.

Surface Properties - Applying Color, Transparency and Texture

Properties > Surface

Surface Properties defines how Colors, Transparencies and/or Textures are mapped to the various Surfaces on a 3D character or object, as well as Transparency of a 2D object or 2D Text Window. These properties are set in the Surface tab of the Properties window.

About Objects and Surfaces

2D Text Windows and 2D Objects

Transparency can be adjusted for selected 2D Text Windows or 2D objects. Colors, Textures and other settings in the Surface Properties tab do not apply to 2D Text Windows or 2D objects.

3D Characters

A 3D character is comprised of three types of **Surface** elements:

- Faces: The Front and Back faces represent the 2D character from which the 3D character is built.
- Sides: The sides determine the depth of the 3D character.
- Bevels: The Bevels determine the transition between the faces and the Sides.



3D Character

Color and/or **Texture** can be applied independently to each of these elements. Note that **Color** can also be applied to the **Face** and **Sides** of a 3D character from the **2D Font FX Properties** tab, as well as from **Font Tools**. *Refer to Properties: 2D Font FX and Font Tools for additional information.*

3D Objects

A 3D object can be comprised of a number of different **Surface** elements, which are grouped and named by the creator of the object. The example below shows a soccer ball that is composed of two types of **Surface** elements that are named **Ball** (shown below as the white areas) and **Panels** (shown below as the black areas). **Color** and/or **Texture** can be applied independently to each of these elements.



Soccer Ball Comprised of Two Surface Elements
Setting Surface Properties

To access Surface Properties, select the Surface tab in the Properties window.

• Click on the Surface tab of the Properties window to view/change Surface Properties:

The following figure shows **Color** and **Texture** applied to a 3D object called **SoccerBall**, which is comprised of two **Surfaces**, **Panels** and **Ball**. The **Properties** tab on the left shows that the color black is applied to the **Panels Surface**. The **Properties** tab on the right shows that a Chyron[®] logo graphic is applied, or mapped, to the **Ball Surface**.



Surface Properties Tab

Note that the **Antialiased** checkbox does not appear on the **Surface Properties** tab on a Duet LE/LEX/PCI/PCI+ system.

The following figure shows examples of **Color** and **Texture** mapping. **Color** and **Texture** can be simultaneously applied to the same **Surface**.



No Color/Texture Applied to Ball or Panels



Color and Texture Applied to Ball; Color Applied to Panels



No Color Applied to Ball; Color Applied to Panels



Color/Texture Applied to Ball; Texture but No Color Applied to Panels



Texture Applied to Ball; Color Applied to Panels



Color and Texture Applied to Ball and Panels

Selecting a Surface to Which to Apply Settings

The **Apply To** drop-down list box, at the bottom of the **Properties** tab, displays a list of all available 3D character or 3D object **Surfaces** to which to apply **Surface** settings. Note that when a 2D object or 2D **Text Window** is selected, no choices are displayed, as the settings are applied to the entire object. To select a **Surface**:

1. Click the arrow to display the list of available **Surfaces**. The figure below shows drop-downs for a 3D character and a 3D object **SoccerBall**. The **Default Surface** choice is a group of **Surfaces** set by the creator of the object.

Apply To	Apply To
Al	All
All	All SoccerBall : default
Bevels -	SoccerBall : Panels
Sides	SoccerBall : Ball

Apply To Drop-Down for 3D Character and 3D Object Soccer Ball

2. Select the desired **Surface**. All settings associated with that surface are displayed in the **Surface** tab.

Additionally, a surface of a 3D object can be selected by clicking on it using the mouse. The selected surface then is displayed in the **Apply To** drop-down list box, and all settings associated with that surface are displayed in the **Surface** tab. Note that **Lock Selection** checkbox must be unchecked in order to select a surface using the mouse. When **Lock Selection** is enabled, mouse selection of a surface is disabled.

Color

Color for 3D characters and 3D objects can enabled or disabled for a **Surface**. A different color can be applied to each individual **Surface**.

- If **Color** is enabled or disabled, and **Texture** is disabled, the color displayed in the **Color Chip** is applied to the selected **Surface**. To remove the color, set the **Transparency** to **0**.
- If **Color** is enabled and **Texture** is enabled, the color displayed in the **Color Chip** is applied to the selected **Surface**.
- If **Color** is disabled and **Texture** is enabled, the color displayed in the **Color Chip** is not applied to the selected **Surface**.

Note that the position and intensity of the **Global Light** and any individual **Lights** can change the appearance of colors applied to 3D characters and objects. A light positioned further away may make white look grayish. Proper intensity and position of lights, however, can enhance the appearance of depth of 3D characters and objects. *Refer to* **Properties > Lighting** for additional information.

Color selection is accessed from the Color Chip.



Color Chip

To enable/disable the application of a color:

• Select (check)/deselect (disable) the Color checkbox.

To select a color to apply:

Click the Color Chip. The Color dialog box opens. Refer to Color Selection for Light Sources and 3D Characters/Objects for information on setting a color in this dialog box. Note that if the applied Color is white, the appearance of a Texture applied to the same Surface may or may not be affected. Experiment with enabling and disabling the color to see which produces the optimal results. If the applied Color is black, however, a Texture applied to the same surface will not be visible unless Shininess is set towards 0.

Transparency and Shininess

Transparency

Transparency for a Surface can be set from completely opaque (0) to completely transparent (100). Transparency settings applied to selected text in a 2D Text Window affect all text in the 2D Text Window.

To set Transparency:

• Enter a value or drag the slider to the desired value. The figure below shows complete **Transparency** applied to the **Ball Surface** of the object **SoccerBall** and to the **Faces** and **Sides** of the a 3D character. The same Texture is applied to **Panels** of **SoccerBall** and to the **Bevels** of the 3D character.



Transparency Applied to Surface Elements of 3D Object and 3D Character

Note that changing the **Transparency** property does not change the **Transparency** of the object itself, in that it does not provide alpha information where there was none before, nor does it change the **Transparency** level of existing alpha information of the object. It does, however, change the video level at which the object is displayed. This distinction is particularly important when setting up **Mask Objects** (2D bitmap graphics only). The source of the displayed **Transparency** affects the appearance of the **Mask Object** depending on which system Lyric is running. *Refer to Mask Objects - Duet SD/HD/Offline or Mask Objects - Duet LE/LEX/PCI/PCI+ for additional information.*

Shininess

Shininess determines the reflectivity of the 3D character or 3D object Surface. The range is from 0 (flat matte) to 128 (most reflective). Note that on entering the **Properties** tab, Shininess may be set to a default value, even though the object appears to be at a different value. This default Shininess setting does not become active until clicked.

Texture Applying a Texture

Texture for 3D characters and 3D objects can enabled or disabled for a **Surface**. A different **Texture** can be applied to each individual surface. The source of the **Texture** can be a 2D graphic file, live video or from a **2D Text Window**. The **Texture** can be oriented, rotated and scaled, and can be wrapped, made reflective or masked.



Applying a Texture

- If Texture is enabled, the Texture displayed in the Texture Chip is applied to the selected Surface.
- If **Texture** is disabled, the **Texture Chip** is grayed out and **Texture** is not applied to the selected **Surface**.

Note that the position and intensity of the **Global Light** and any individual **Lights** can change the appearance of **Textures** applied to 3D characters and objects. Proper intensity and position of lights can enhance the appearance of depth of 3D characters and objects. *Refer to* **Properties > Lighting** for additional information.

The Texture drop-down list box (grayed out) is currently not implemented.

Disabling Texture

To disable the application of a **Texture**:

• Select (check)/deselect (disable) the None radio button. The Texture Chip becomes grayed out.

Applying Texture from a Graphics File

Choose one of the following methods to select a Texture to apply to the 3D character or object:

• Click the **Texture Chip** or select (click) the **File** radio button. The **Select a Texture** dialog box opens. Select a file, then click **Open**.

TV Plue UI			IV Preview আনন
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TX Copper	r.tga	M TX Red.tga	
🔊 TX Glass.ti 🔊 TX Gold.to	ga Ia	🐲 TX Red-Blue Squares.tga 📾 TX Silk toa	
TX Green.	tga	🖼 TX Silver.tga	
•			•
File <u>n</u> ame:	TX Blue Waves.	tga <u>D</u> pen	1
-1 ()	Graphic Files (*)	Cancel	

Select Texture Source Dialog Box

• Drag-and-drop a graphic from the Browser Bitmap Asset Window or Browser Aprisa 100 (Still) Asset Window to the Texture Chip. Refer to Browsers: Bitmap Asset Operations and Browser: Aprisa Still Operations for additional details.



Dragging-and-Dropping a Texture from the Browser

Once a **Texture** from a file has been selected:

- The File radio button is automatically selected.
- A **Texture** that does not completely cover the object surface repeats.
- If the selected **Texture** contains **Alpha** information, i.e. built-in **Transparency** (as opposed to **Transparency** applied from the **Surface Properties Transparency** setting), the 3D character or object will contain transparent areas wherever transparent **Texture** is applied. In the following figure, the Chyron logo contains areas that are completely transparent.



Applying a Texture with Alpha Information

• If the selected **Texture** contains **Alpha** information and a color is selected but not enabled, the color shows wherever there are transparent areas.

Applying a Texture from Live Video (Duet SD Only)

Live video can be mapped to the **Surface** of a 3D character or 3D object if there is a video source input to the **Frame Buffer**. The default **Source** is Duet's Video I/O board. **Live Video** texture is not supported for Duet LE/LEX/PCI/PCI+ and Duet HD. To apply live video:

1. Select the Live Video radio button. The Video Surface Settings dialog box opens.

Video Surface Settings 🛛 🗙		
Source		
Video I/O		
Enable Key Input		
🔽 Enable Video Shaping		
Enable VGE Shaping		
Size 512 x 256		
OK Cancel		

Video Surface Settings

2. Select a video **Source**. If a Duet SD system is equipped with a **Mixer** board, the mixer will also be available in the **Source** drop-down. If the following error message is displayed, a video source is not available to the **Frame Buffer**.



Live Video Error Message

- 3. Set Enable Key Input, Enable Video Shaping, Enable VGE Shaping and Size parameters.
- 4. Click **OK**. The live video will be applied to the surface.

Applying a Texture from an Object

The contents of a **2D Text Window**, including its **Background**, can be mapped to a 3D character or 3D object.

- Open a 2D Text Window, and create text. RGB Font characters and bitmaps imported into the 2D Text Window can be used. In the example shown during this procedure, there are three 2D Text Windows on the Canvas. 2D Text 1 has no Background. It will be applied to the object SoccerBall.
- 2. Select the 3D character or 3D object to which to apply the **2D Text Window**.
- 3. Select the **Surface** to which to apply the **2D Text Window**.
- 4. In the **Surface** tab, select (click) the **Object** radio button. The **Select An Object Texture** dialog box opens. In this example, three **2D Text Windows** are available.

2D Text 2	
2D Text 3	

Selecting an Object Texture

5. Select (click) a **2D Text Window** to use as a **Texture Source**. In this example, **2D Text 1** is selected.



2D Text 1 Selected

 Click OK. The 2D Text Window is applied to the selected Surface of SoccerBall. The figure below shows the same 2D Text Window mapped to both the Panels and the Ball Surfaces, so that there is continuity in the text. Additionally, the color black was applied to the Ball surface, and the color gray was applied to the Panels.



Mapping an Object

When a **2D Text Window** is mapped to a 3D character or object, it is turned off on the **Scene Graph**. It can be turned back on for editing or display. Note that to change the 2D text that had been applied to the object, the **2D Text Window** must be made visible, edited, and then reapplied to the 3D character or object.

About Orientation (U Offset, V Offset, Rotate and Scale)

All changes in orientation, i.e. **U-Offset**, **V-Offset**, **Rotate** and **Scale** are relative to only to the 3D character or 3D object. The orientation of the 3D character or 3D object within the space of the **Canvas** has no bearing on the orientation settings for the **Texture**.

A change in the **U-Offset**, **V-Offset**, **Rotate** and **Scale** settings of a **Texture** do not affect the **XYZ** settings of a 3D character or 3D object, nor does a change in the **XYZ** settings of a 3D character or 3D object affect the **U-Offset**, **V-Offset**, **Rotate** and **Scale** settings of a **Texture**.

U Offset, V Offset

The **U** Offset and **V** Offset settings allow horizontal and vertical adjustment of the applied **Texture**. The range of both settings is from **-1.000000 - +1.000000**. **0** for both settings centers the **Texture** map.

- **U Offset:** Negative values move the **Texture** map left from center; positive values move the **Texture** map right from center.
- V Offset: Negative values move the **Texture** map down from center; positive values move the **Texture** map up from center.

Note that the **Texture** may repeat as it is adjusted. The figure below shows a **0** setting for both **U** and **V**; a **U Offset = 0.170000**, a **V Offset = 0.150000**, and a **U** and **V Offset** applied at the same time.



Centered, U Offset, V Offset and Both Offset

To set U or V Offset:

• Adjust the **Spin Control Box** or the slider.

Rotate

The **Rotate** setting allows rotational adjustment of the applied **Texture**. Range is from **0.000000° - 360.000000°**.



No Rotation, 30° Rotation, 90° Rotation

To set Rotation:

• Adjust the Spin Control Box or the jog wheel.

<u>Scale</u>

The **Scale** setting specifies how many iterations of the **Texture** are applied to the 3D character or 3D object. Range is from **0.010000 - 10.000000**. Values less than **1.000000** show a fraction of the **Texture**.



Scale Set to 0.610, 1.00, 3.00, 10.00

To set Scale:

• Adjust the Spin Control Box or the slider.

Wrap

The **Wrap** setting specifies whether the selected **Texture** is applied to only the specified **Surface** element or to all **Surface** elements. In the case of 3D characters, **Wrap** is available only if **Face** or **All** is selected. If **Wrap** is enabled (checked), **Texture** settings for the other **Surface** elements are ignored, and the **Texture** applied to the currently selected **Surface** element is applied to the entire 3D character or object. The figure below shows the same **Texture** applied to the **Face**, with **Wrap** disabled (left) and enabled (right).



Wrap Disabled (Left) and Enabled (Right)

To enable/disable Wrap:

• Select (check)/deselect (uncheck) the Wrap checkbox.

Reflective

When **Reflective** is enabled, the 3D character or 3D object acts like a mirror, with the **File**, **Live Video** or **Object** reflecting from the 3D character or 3D object. Depending on the location of the object surface, different areas of the flag are reflected by the surface. Both **Reflective** and **Wrap** can be simultaneously active. **Reflective** and **Masked** cannot be simultaneously active. Each surface of a 3D object (not a 3D character) can have **Reflective**, **Masked** or neither applied. When applied to a surface of a 3D character, **Reflective** is applied to all surfaces of the character.



Reflective Texture

To enable/disable Reflective:

- If the system is a Duet LE/LEX/PCI/PCI+, skip to the next step. If the system is Duet SD/HD, select (check) the Antialiased checkbox at the bottom of the Surface tab. The 3D character or object must be antialiased in order for the Reflective texture to be applied.
- Select (check)/deselect (uncheck) the Reflective checkbox. Note that if switching from Masked to Reflective, the Reflective checkbox must be clicked two additional times to apply the Reflective texture.

Masked

When **Masked** is enabled, the **File**, **Live Video** or **Object** is mapped to the **Canvas**, and the 3D object reveals it as it passes over it. If the **Texture** source does not cover the area of the **Canvas**, it repeats, or tiles, to fill up the **Canvas**. Both **Masked** and **Wrap** can be simultaneously active. **Reflective** and **Masked** cannot be simultaneously active. Each surface of a 3D object can have **Reflective**, **Masked** or neither applied. When applied to a surface of a 3D character, **Masked** is applied to all surfaces of the character.

The following figures show the front of a 3D box with an American flag mapped as **Masked**. Depending on the location of the front of the box, different areas of the flag are revealed by the "cutout" defined by the front of the box.



Masked Texture Mapping

If more than one object and/or different surfaces of the same object have **Masked Textures** from the same source applied, each **Texture** can be independently controlled. For example, a **Masked Texture** applied to the front of the box can have a different **Scale** and **Rotation** from the **Masked Texture** on a side of the box.

To enable/disable Masked:

- If the system is a Duet LE/LEX/PCI/PCI+, skip to the next step. If the system is Duet SD/HD: If not already selected, select (check) the Antialiased checkbox at the bottom of the Surface tab. The 3D character or object must be antialiased in order for the Mask texture to be applied.
- 2. Select (check)/deselect (uncheck) the **Masked** checkbox. Note that if switching from **Reflective** to **Masked**, the **Masked** checkbox must be clicked two additional times to apply the **Masked** texture.

Antialiased – Duet SD Only

Enabling **Antialiased** smooths the "stair-stepping" sometimes seen on the edges of a 3D character or object. Lyric automatically antialiases all 2D characters and objects. On a Duet SD/HD system, **Antialiased** must be enabled in order to apply **Reflective** or **Masked** texture. The **Antialiased** checkbox does not appear on the **Surface Properties** tab on a Duet LE/LEX/PCI/PCI+ system.

To enable/disable Antialiased:

• Select (check)/deselect (uncheck) the Antialiased checkbox at the bottom of the Surface tab.

Tri (Triangles)

Tri displays the number of triangles generated to create the 3D character or 3D object. It is a good indicator of the complexity of the character or object.

19. Position, Rotation, Scale and Orientation

Object Orientation and Point of View

Overview

Most objects on Lyric can be positioned, rotated, scaled, and have their center of rotation set. These orientation attributes can be applied to a static object or can be set to change over time during an animation.

Quick adjustments to these attributes can be applied using the **Transform Tools** in the **Chyron Toolbar**.

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Transform Tools

More precise adjustments can be applied from the XYZ tab in the Properties Window.

In addition, the point of view can be set, in the **Camera** tab in the **Properties Window**, to place the viewer closer of father away from the screen. The projection, that is, how the viewer sees the scene, can be set to set to **Orthographic** or **Perspective**. The **Camera** can be positioned as a static object, or can be animated. The **Camera** settings are part of the Lyric scene, and are applied to the output.

In addition, there are **Canvas** view options: **Front**, **Top**, **Perspective**, **Left**, or **Multi View**, which displays all views simultaneously. Output from the **Canvas** is always from the **Front** view, regardless of the currently selected **Canvas** view. *Refer to the section on the Canvas for additional information on the Canvas view.*

Position Lock On

Object Context Menu > Position Lock On

While working with Lyric, it may be desirable to lock the position and orientation of an object or group of objects to prevent unintentional movement. **Position Lock On** prevents an object (**2D Text** window, 2D or 3D object, etc.) from being moved on its **X**, **Y** or **Z** axes, as well as from being rotated, scaled or changing its center of rotation. When **Position Lock On** is enabled, the **Position settings** in the **Properties > XYZ** tab, as

well as the **Transform Tools S S S**, become inactive when the locked **2D Text** window is active (selected).

To lock/unlock the position of an object or group of objects:

- Right-click on the object or group of objects, then select **Position Lock On** from the menu.
 - If there is no checkmark next to **Position Lock On**, a checkmark appears next to it when selected, indicating that the object's or object group's position is locked.
 - If there is already a checkmark next to **Position Lock On**, it will disappear when selected, indicating that the object's or object group's position is no longer locked.

Transform Tools

View Menu > Chyron Toolbar > Transform Tools



Transform Tools

Transform Tools provide specialized cursors for repositioning, rotating, scaling and changing the center of rotation for almost any object on the **Canvas**.

- If the currently selected object is an individual light source, only Position can be adjusted.
- Transform functions are not available to the Global Light object.

While **Transform Tools** provide a quick way to perform these operations, fine-tuning can be accomplished in the **XYZ** tab of the **Properties** window. In addition, settings specifying how **Transform** operations are applied are also set in the **XYZ** tab.

Transform operations can be applied to a single keyframe of an object's **Timeline**, or all **Keyframes** of an object's **Timeline**. *Refer to Properties > XYZ for details.*

NOTE REGARDING GROUPED OBJECTS

When using the mouse in conjunction with Transform Tools to move, rotate, scale or change the center of rotation of a grouped set of objects, the user can manipulate the group as one unit, even if only one object of the group is selected. To manipulate an individual object within group, hold down the Shift key while using the mouse to click and drag the object to its new Position/Rotation/Center of Rotation.

Edit Position

Transform Toolbar >	, Transform Toolbar > Ctrl + 💌	; Also from Properties > XYZ > Position
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To change the XY position of an object on the Canvas:

Click **C**, then click-and-drag the selected object to a new **XY** position.

To change the **Z** position of an object on the **Canvas**:

• Click . , then press and hold **Ctrl** while clicking-and-dragging the selected object to a new **Z** position. Moving the cursor up on the **Canvas** repositions the object forward in **Z**-space; moving the cursor down on the **Canvas** repositions the object back in **Z**-space.

Edit Rotation

		1					
>	Ctrl +	0	Also	from	Properties	> XYZ :	> Rotation

To change the rotation of an object around the **X** and/or **Y** axis on the **Canvas**:

• Click , then click-and-drag the selected object to a new XY position. Moving the cursor to the left/right rotates the object around the Y-axis; moving the cursor up/down rotates the object around the X-axis.

To change the rotation of an object around the **Z**-axis on the **Canvas**:

• Click , then press and hold **Ctrl** while clicking-and-dragging to rotate the selected object around the **Z**-axis. Moving the cursor up on the **Canvas** rotates the object counter-clockwise around the **Z**-axis; moving the cursor down on the **Canvas** rotates the object clockwise around the **Z**-axis.

If 2D text or a 2D bitmap is moved to a position that is 180° relative to the viewer ("edge-on"), it will seem to disappear.



Text, Bitmap and 3D Object Rotations

Edit Scale

Transform Toolbar > , *Transform Toolbar* > *Ctrl* + ; *Also from Properties* > *XYZ* > *Scale* Scaling can be applied in a freeform mode, or with Locked Aspect Ratio. This attribute is set in Properties > XYZ > Rotation.

To change the XY scale of an object on the Canvas:

• Click Land, then click-and-drag the selected object to change its size. Moving the cursor to the top/bottom scales the object taller/shorter respectively; moving the cursor left/right scales the object narrower/wider respectively.

To change the **Z** scale of a 3D object on the **Canvas**:

• Click [1], then press and hold **Ctrl** while moving the cursor up to scale the 3D object larger in the **Z**-plane, or down to scale the 3D object smaller in the **Z**-plane. Note that **Z**-scaling is implemented only for 3D objects.

Edit Center of Rotation

Transform Toolbar > [+], Transform Toolbar > Ctrl + [+]; Also from Properties > XYZ > Center of Rotation

The **Center of Rotation** determines the point about which an object rotates when a rotation is applied. Note that if adjusting the **Z Center of Rotation** as well as an **XY Center of Rotation**, it must be performed *before* the adjustment to the **XY Center of Rotation**. Note that the **Center of Rotation** can be set to be absolute on the **Canvas**, or relative to the position of the object. This attribute is set in **Properties > XYZ** > Center of Rotation.

The Center of Rotation display on the Canvas can be toggled on or off:

• Select the object and then right-click. Select **Show Center of Rotation**.



Center of Rotation

The Center of Rotation can be repositioned in XYZ space.

To set the XY Center of Rotation for a selected object on the Canvas:

• Click :, then click the point on the **Canvas** about which the object should rotate. If the Center of Rotation display is enabled, it moves to follow the cursor.



Center of Rotation Cursor

To set the Z Center of Rotation for a selected object on the Canvas:

• Using the Ctrl key + 🔄 is not yet implemented. The Z Center of Rotation should be set in Properties > XYZ > Center of Rotation.

To quickly return the Z Center of Rotation for a selected object on the Canvas to 0.000:

• Click . then click the **Canvas**.

XYZ Properties

Properties > XYZ

The **XYZ** attributes of an object determine its orientation in the Lyric **Canvas'** 3D space. Settings are based on the same type of **XYZ** axes used for mathematics.



XYZ Properties affect positioning and rotation for all objects in Lyric, including 2D text, 2D bitmaps, **Flipbooks**, 3D characters, 3D objects, the **Camera** and light sources. Parameters that are set in **XYZ Properties** are immediately reflected on the **Canvas**.

Properties	
3D Font FX XYZ	Ligh 💶 🕨
Rotation	_
X Y	2
\square	
Position	-
× -1.699	
γ -1.280 -	F
7 2.000	-
- Saala	J
× 1.000	4
]
Y 1.000]
z 1.000 🖻	1
Lock Aspect Ra	atio
Center	т
X 0.000 🖻	1
Y 0.000 🚊	-
z 0.000 🕂	Ξ
Relative to Posi	ition
Heset to Defa	uic

XYZ Properties

If the currently selected object is an **Individual Light** source, **Position** is the only field in the **XYZ** window that is available. Note that no positioning of the **Global Light** source is possible.

Any change to an **XYZ Property** is applied to all currently selected objects. *Refer to Transform Tools* for additional information on **XYZ** attributes.

Property	Description
Rotation	The Rotation settings specify how an object rotates about the X , Y and Z axes. Circular Sliders , also known as Jog Wheels , and Spin Control Boxes are used to adjust rotation values.
Position	The Position settings specify the location of the object in XYZ space. The Canvas center is the origin point; i.e., $X = 0$, $Y = 0$, $Z = 0$.
Scale	The Scale settings specify how the object is scaled in relation to its original size. Scaling is applied to the X , Y and Z axes. Settings can be individually applied to each of the axes, or can be evenly applied to the X and Y axes in order to maintain the aspect ratio of the object.
	 If Lock Aspect Ratio is not enabled (unchecked), the value for each of the axes can be individually set.
	• If Lock Aspect Ratio is enabled (checked), any change to the X value is reflected in the Y value, and vice versa.
Center	The Center settings specify the center point about which an object rotates and from which it is scaled.
	 If Relative to Position is enabled (checked), the center point about which the object rotates or from which it is scaled is relative to the individual object.
	 If Relative to Position is disabled (unchecked), the object rotates about or is scaled from the center of the Canvas.
	The Center of Rotation display on the Canvas can be toggled on or off:
	 Select the object and then right-click. Select Show Center of Rotation.
	Center of Rotation
	Show Center of Rotation

Property	Description
Single Keyframe Adjust	Single/Global Keyframe Adjust determines whether changes to the XYZ Properties affect a <i>single</i> Keyframe or <i>all</i> Keyframes of a selected object(s) in an animation. The down arrow specifies Single ; the horizontal arrows signify Global (all).
Global Keyframe Adjust	 When Single (arrow down) is selected, any change to the XYZ Properties of an object results in the creation of a new Keyframe at the frame (Timeline location) at which the change was made. For example: 1. Position the Time Indicator on the Timeline at 0. 2. Place an object at position X = 0.000, Y = 0.000, Z = -2.0, and all other XYZ settings at default. 3. Move the Time Indicator to 2 seconds 4. Move the object to X = 0.500, Y = 0.500, Z = -2.0, and all other XYZ settings at default. A new Keyframe is created at 2 seconds.
	 When Global is selected, any change in the XYZ Properties of a selected object(s) in the animation results in the same change applied to all of the Keyframes of the selected object(s) in the animation. For example: Place an object on the Canvas, and then place a second object directly on top of the first object. Animate both objects on exactly the same path. Execute the animation and observe the positions of the objects. Select one of the objects, then change its X position by +0.500, and its Y position by +0.500. Execute the animation. The animation of the selected object executes to the upper right of its original path. The object that was not selected animates on its original path. Global Keyframe Adjust is a valuable tool when used in conjunction with Motion Paths Copy/Paste Path function. <i>Refer to the section on Motion Paths for additional information.</i>
Reset to Default	Restores all XYZ values for the selected object(s) to default settings. Rotation: All 0 Position: X = 0.000; Y = 0.000; Z = -2.000 Scale: All 1.000 Center: All 0.000 Lock Aspect Ratio: Off Relative to Position: On Single/Global Keyframe Adjust: Single Do not use this function to reset the default values for a Video Region (Duet SD), as it resets scale to X = 1.000; Y = 1.000; Z = 1.000 instead of X = 1.333; Y = 1.000; Z = 1.000.

Camera Properties

Properties > Camera

Camera properties, accessed from the **Properties > Camera** tab, describe how the Canvas is to be viewed (**Projection**) and where the viewer is represented by a **Camera** (**Camera Lens**). Like any other Lyric object, the **Camera** may be adjusted, repositioned and even animated. The **Camera** feature is a powerful editing tool, enabling you to quickly scale or reposition all objects on a Canvas, simply by changing the viewer's perspective.

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Properties: Camera

Property	Description	
Orthographic	Orthographic Projection views the object(s) as if they were placed on a drawing plane perpendicular to both the viewer and the lines of projection. An Orthographic camera is fixed in space and renders objects at an absolute size on a flat plane. When Orthographic Projection is selected and rotated objects are viewed, they are displayed as Isometric projections. Camera Lens adjustment is not available when Orthographic Projection is selected.	
	Orthographic Projection	
	Unrotated Rotated	

Property	Description	
Isometric	Isometric Projection is a subset of orthographic projection, in which only a single plane of projection is used (<u>see above</u>). In renderings containing 90° angles, the lines that form the 90° angles are parallel to three rectangular planes passing through the three axes.	
Perspective	Perspective Projection differs from Orthographic Projection in that there is always a Vanishing Point, so that objects further away from the camera position tend to reduce in size until the Vanishing Point is reached. Note that adjustments in Camera Lens affect the viewer perception of where the Vanishing Point is located. Perspective Projection	
	Projection Lines meet at meet at Vanishing Point Vanishing Point	
Camera Lens	Camera Lens adjusts the magnification of the Camera and the apparent distance between the view and the objects when Perspective Projection is selected. The range of Camera Lens adjustment is from 0 (objects are closest) to 180 (objects are furthest away). Camera Lens adjustment is available only when Perspective Projection is selected.	

20. Animation

Overview

Lyric can animate any objects or objects placed on the **Canvas**, including, but not limited to **2D Text Windows**, **2D Roll Windows**, **2D Crawl Windows**, **2D Type On (Slow Reveal) Windows**, **2D Spline Windows**, 3D characters, 3D objects, bitmaps, object groups, **Individual Light Sources**, the **Camera** and specialized objects such as **Flipbooks**.

Lyric uses a **Timeline**, **Keyframe Graph** and **Properties** and **Keyframes** in creating and editing animations. The **Timeline** and **Keyframe Graph** provide a comprehensive linear display of every object on the canvas, and reflects animation changes over time. **Properties > XYZ** display the coordinates of selected object at a particular **Frame** (also sometimes referred to as time). A **Keyframe** is a selected frame on the **Canvas** where an object attribute(s) can be edited.

You do not have to set up a **Keyframe** for every frame of an animation. For a simple move, such as sliding an object from the upper left corner of the screen to the lower right corner of the Canvas, only two **Keyframes** need to be assigned: the **Start Keyframe** and the **End Keyframe**.

Object Type	Attribute(s) that may be animated	
Global Light	Intensity, Color (RGBA Diffuse).	
Flood Light	Intensity, Color (RGBA Diffuse), XYZ Position.	
Spot Light	Intensity, Color (RGBA Diffuse), XYZ Position, XYZ Rotation, Angle (Focus), Shine.	
2D Characters	XYZ Position, XYZ Rotation, XYZ Scale, XYZ Center of Rotation.	
2D Text Windows	XYZ Position, XYZ Rotation, XYZ Scale, XYZ Center of Rotation, Transparency (including the Background).	
	Transparency does not appear on the Timeline until it is set in the Properties > Surface tab. To do so:	
	 Set starting, keyframe (if appropriate) and ending Transparencies of the 2D Text Window, using the Transparency spin box or slider in the Properties > Surface tab. When Transparency is set at two different points in an animation, it becomes an element which can be manipulated on the Timeline and the Keyframe Graph. When the Transparency of 2D Text Window is animated, the animated Transparency is applied to the entire 2D Text Window, including the Background. 	
2D Bitmaps	XYZ Position, XYZ Rotation, XYZ Scale, XYZ Center of Rotation, Transparency, Shininess.	
Camera	Camera Lens (Zoom effect).	
3D Text	XYZ Position, XYZ Rotation, XYZ Scale, XYZ Center of Rotation.	

Lyric can also animate a variety of Attributes for almost any object that can be placed on the Canvas.

Object Type	Attribute(s) that may be animated	
3D Objects	XYZ Position, XYZ Rotation, XYZ Scale, XYZ Center of Rotation, Transparency.	
	The transparency of 3D characters can be animated. For each character:	
	1. In the Properties > Surface tab, set Apply To to All .	
	Note that even though the animation transparency is applied to All (Face , Sides and Bevels), Transparency that is already applied to the face, sides or bevels will still be applied in conjunction with the animated Transparency , although the separately applied transparencies will not animate. For example, if the face is set at 50% , the sides and bevels are set to 0% , and the animation is set from 100% to 0% , the result is an animation that transitions from 100% of 50% (completely transparent) on the face to 0% of 50% ("half" transparent) on the face.	
	2. Set starting, keyframe (if appropriate) and ending transparencies using the Transparency spin box or slider. When Transparency is set at two different points in an animation, it becomes an element which can be set on the Timeline and the Keyframe Graph .	
Transparency	Attribute is visible only when Transparency is applied at two different points for the same object in an animation. See specifics above in this table for details.	

Setting Up a Simple Animation

Let's set up a simple animation.

- 1. Open a new Canvas, then type the 3D character **W** in the upper left corner.
- 2. A new object **W** is added to the **Scene Graph**. If the **Scene Graph** is not displayed, select **Scene Graph** from the **View** menu. Note that there are three other objects on the **Scene Graph**: **Light 1**; **Global Light** and **Camera**. These objects are present in every Lyric composition. They can be turned on/off by selecting/deselecting their checkboxes, but they cannot be deleted. They can also be animated like any other object.
 - Light 1 acts as a virtual light whose position, diffusion, color and other attributes can be set. Additionally, five additional controllable lights can be added to a Lyric scene. Default Intensity is 85; color is gray; beam type is Flood. *Refer to Properties > Lighting for additional details.*
 - Global Light is washes the entire scene. Intensity and color can be set. Default Intensity is 85; color is gray. *Refer to Properties > Lighting for additional details.*
 - **Camera** determines where the viewer is positioned, focal length of the lens and what type of projection is used to render the scene. Default **Projection** is **Perspective**; **Camera Lens** focal length is **65.000**. *Refer to Properties > Camera for additional details.*



Scene Graph - New Object "W" Added

A new object W is also added to the Scene Graph. If the Timeline is not displayed, select Timeline from the View menu. Note the small red square that is positioned at the 00:00:00:00 on the Timeline for W. This is a Keyframe that is automatically added to any Object or Attribute Timeline when the object is added to the Canvas.

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Timeline at 00:00:00:00 Seconds

- 4. Use one of the following methods to move the Time Indicator to 00:00:05:00:
 - Click and drag the green **Time Indicator** on the **Timeline** or the **Keyframe Graph** (see *below*) to **00:00:05:00**.



Timeline at 00:00:05:00 Seconds

• Enter the time in the Frame Counter Display.



Frame Counter Display

- Click the on the **Go to End** button **M** on the **Transport Controls**. This moves the **Time Indicator** to the last **Frame** in the animation.
- 5. On the **Canvas**, click and drag the **W** down to the lower right corner. The following will now have occurred:
 - A **Keyframe** has been added to the Timeline at **00:00:05:00**. The presence of two **Keyframes** on a **Timeline** indicate that the scene has become an animation.
 - The **Transport Controls**, which normally appear black, have turned blue, indicating that there is an animation that is ready to play.
- 6. Click the **Play** button on the **Transport Controls** to execute the animation. The **W** should move smoothly in a straight line from the upper left corner to the lower right corner. Note that the **Frame Counter** updates as the animation plays, but the **Time Indicators** on the **Timeline** and the **Keyframe Graph** (*see below*) do not. They do, however, update when the animation is stopped, either in midstream or at the end.



Animation Showing Two Keyframes

Lyric automatically interpolates the **Frames** positioned between the two **Keyframe** to produce the animation. The duration of an animation has no bearing on the number of assigned **Keyframes** necessary to perform the effect. The simple slide described above requires only two assigned **Keyframes** for a five-second effect.

7. The motion of an animation is reflected in the Keyframe Graph, which graphically displays the change in each of the attributes of an object over time. If the Keyframe Graph is not displayed, select Keyframe Graph from the View menu. The default view of the Keyframe Graph is the XPosition. Keyframes appear as small red dots at the ends of the Keyframe Graph. Notice how the X value increases in value over time, as the W moves from left to right on the Canvas.



Keyframe Graph - XPosition Displayed

8. Next, right-click on the **Keyframe Graph**, but not on a **Keyframe**, then select **YPosition** from the context menu to view the **Y** attribute. Notice how the **Y** value decreases in value over time, as the **W** moves from top to bottom on the Canvas.



Keyframe Graph - YPosition Displayed

9. Experiment with clicking and dragging the **Keyframe Graph** or an individual **Keyframe**, and note the effect on the animation. Try also left-clicking on the **Keyframe Graph** of an attribute at a midpoint, then select **Add Keyframe** from the context menu. Drag the **Keyframe** to a new position. Play the animation. What happens? How has the **Timeline** changed?

10. Examine the Properties > XYZ tab. If the Properties Window is not visible, select Properties from the View menu to display, then select the XYZ tab. The Position X, Position Y, Position Z, and other coordinates reflect the position and orientation of the object at the Frame indicated by the Time Indicator or Frame Counter. Note that Position, Rotation, Scale and Center of Rotation can be adjusted from this tab, or via the Transform Tools. Experiment with changing the settings and note how the effect on the animation and the settings in the Timeline and the Keyframe Graph.

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XYZ Properties

11. Try adding Loops and Pauses to the animation. *Refer to Loops/Pauses Properties and Animation Properties for details.*

Any change to the **Timeline**, **Keyframe Graph**, **Scene Graph**, **Properties**, etc., updates all such settings throughout the Lyric interface.

Refer to the sections on **Timeline**, **Keyframe Graph**, **XYZ Properties** and **Transform Tools** for additional information on animation.

Saving an Animation

An animation can easily be saved by using the **Address Keypad** or to record it as a Lyric message with a numeric file name. The message can then be played back in **Read Next** and **Read Previous** sequences. Messages recorded in this manner are automatically saved in the **Default Message Directory** as determined by the **Config Menu > Preferences > Defaults Paths** settings. To record:

- 1. Using the Address Keypad, enter a Message ID. If a Message ID is not entered, the animation is saved to the currently displayed Message ID.
- 2. Press **Record** on the Duet keyboard, or the minus (-) key on the **Address Keypad** of the PC keyboard. The animation is recorded to the Message ID number in the *.*lyr* format.

A Lyric animation can also be saved under its current name using the File Save function.

1. In the **Windows Toolbar**, click the **Save** icon , press **Ctrl + S** or select **Save** from the **File** menu. A prompt is displayed asking for overwrite permission. If the file has not yet been named, it is assumed by Lyric that the name is **Untitled**.

Confirm	Dverwrite X
?	Overwrite existing file? C:\Program Files\Chyron\Lyric\Images\News_Logo.lyr Modified: 02/11/2004 10:47:18 AM, Size: 178463 bytes
14	OK Cancel

Overwrite Confirm

2. Click **OK** to save the animation, or **Cancel** to cancel the save.

It may be desirable to save the animation as a named file, set specialized parameters or to save the file in a different format, such as **.avi*.

1. From the File menu, select Save As. The Save Animation dialog box opens.

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Save Animation Dialog Box

2. Select a file format from the **Save as Type** drop-down list box. In the preceding figure, the **.lyr* format is selected.

- 3. In the **Start Frame** and **End Frame** fields, set the **Start** and **End Frames** of the animation. The default values are set to record the entire animation. These are the only settable parameters available for **.lyr* animations.
- 4. Optional Available for some non-Lyric animation formats, as well as some static graphics formats: Adjust values for **Image Width** and **Image Height**.
- 5. Save RGB is always active. RGB information is always saved.
- 6. If an animation is saved with Interlaced enabled (checked), the odd and even fields of the TGA (or other bitmap format file) are rendered offset in time by 1/60 second (NTSC) or 1/50 second (PAL) on playback. Interlaced should be enabled if the animation is to be saved to an animation format such as AVI, and then played back through a Matrox clip player. Otherwise, Interlaced can be disabled.
- 7. Optional Available for some non-Lyric animation formats, as well as some static graphics formats: Select (check) Clip to Safe Title. If Clip to Safe Title is not selected, the contents of the entire Canvas is recorded as the graphic. If Clip to Safe Title is selected, only the contents within the Safe Title Area are recorded as the graphic. The Safe Title Area can be adjusted in the Safe Title Adjust dialog box, accessed from Config Menu > Safe Title Adjust.
- 8. Optional Available for some non-Lyric animation formats, as well as static graphics formats: Select (check) Save Alpha. Alpha information is *always* saved with *.lyr animations. The Alpha setting is also available for those file formats where the Alpha (transparency) information can be saved as part of the graphics file (such as Adobe[®] Photoshop[®] *.*psd*). If Save Alpha is not selected, the Alpha information is not saved with the file. If Save Alpha is selected, the Alpha information is saved with the file.
- 9. Enter a File Name.
- 10. Click Save. The animation is saved to the selected file format.

Animation Settings Preferences

Config Menu > Preferences > Animation Settings

Animation length, execution, memory allocation, and other animation parameters are set in the **Animation Settings Preferences**. The **Animation Settings Preferences** for the Duet SD, HD and LE/LEX/PCI/PCI+ are almost identical to each other.

To access **Animation Settings Preferences**, pull down the **Config** menu, then select **Preferences**. The **Preferences** window opens. Click the **Animation Settings** tab.

Default Animation Length	Duet LEX Streaming Default Stream Size	Rendering Mode
Interpolation C Linear C Spline C None Duet LEX Streaming is the Frame athough it is inactive on Duet LEF	Options Show Preview Frame Prompt to play on Duet AutoPlay On Read True 3D Ordering + Full Scene Antialiasing + e Counter label on Duet LE/LEV/PCI/F	Duet LE(X)/PCI(+) Settings Frame Based Load (Quick Load) Enable SD Transfer Compatibility Stream Intelligent Interface as Default Duet SD/HD Only Duet LE/LEX/PCI/PCI+ Only CI+ Systems,

Animation Settings Tab

Note that the **Frame Counter** at the top of the middle column is labeled **Default Stream Size** when the system is a Duet SD/HD, and is labeled **Duet LEX Streaming** in Duet LE/LEX/PCI/PCI+ systems, although it is grayed out (inactive) on Duet LE/PCI systems.

The Duet LE(X)PCI(+) Settings in the third column are only active on Duet LE/LEX/PCI/PCI+ systems.

Animation Length, Stream Size and Streaming

- **Default Animation Length** defines the duration for animations when Lyric is first launched. Unless changed by the user, the **Default Animation** length is five seconds (150 frames). Animation length can be changed in a number of ways during composition, including **Modify Animation Length** (accessed by right-clicking on the **Timeline**) and **Animation Properties**, accessed from the **Properties** window..
- Default Stream Size (Duet SD/HD) determines the speed with which information is processed by Duet's video engine. The video information is processed in segments determined by the Default Stream Size, as opposed to in a continuous stream (as on the Duet LEX/PCI+). It is recommended that this adjustment be left at the default setting. Experimentation with Default Stream Size, however, can smooth the playback of Rolls, Crawls, and other animations. The Default Stream Size cannot be set to a higher value than the Default Animation Length.
- **Duet LEX Streaming** (Duet LEX/PCI+) determines the length of the video that is preloaded. The video is processed in a continuing stream. As video is rendered, new video preloaded to replace it. This allows for the rendering of animations that exceed the 6-second limit for **Load-and-Play** animations. *Refer to Streaming Animation* for additional information.

Default Interpolation

Interpolation determines how the transition is made from one keyframe to the next in an animation.



Keyframe Graph Showing Linear and Spline Interpolation

The following types of interpolation can set in Animation Settings Preferences.

- Linear Interpolation moves an object in an animation at constant speed from Keyframe to Keyframe.
- **Spline Interpolation** provides the ability to vary the speed and path the object follows during the animation.
- None Interpolation causes the animation to shift between **Keyframes** instantaneously, without following a continuous path from one **Keyframe** to the next. This is also known as **Jump** interpolation.

Interpolation for individual keyframes can also be set from the **Timeline**, **Keyframe Graph** and the **Motion Path**. In addition, a fourth type, **Ease**, can be set for individual keyframes in the **Timeline** and the **Keyframe Graph**.

Refer to the section on **Preferences: Animation Settings** for detailed information on the different types of **Interpolation**, including **Ease**.

Options

The following options determine what occurs when the animation is read and how the animation is executed.

Show Preview Frame

Typically when animations are read, the first or frame is displayed on the **Canvas**. If working primarily with animations that start off-screen, it may be advantageous to have a different frame, known as a **Preview Frame**, display on the **Canvas** when they are read. The **Preview Frame** is set when the message is recorded.

- If **Show Preview Frame** is selected (checked), the frame saved as the **Preview Frame** in the animation is displayed on the **Canvas** when the animation is read. If a frame had not been specified as a **Preview Frame** when the message was saved, then the last frame is displayed.
- If **Show Preview Frame** is not selected (unchecked), then the first frame of the animation is displayed on the **Canvas** when the animation is read.

Show Preview Frame does not affect animation execution. The animation still executes from the first frame.

Refer to **Reading and Recording Messages: Selective Recording - Message, with Options** for details on setting a **Preview Frame** in a message.

Prompt to Play on Duet

When an animation message is read to the **Canvas**, Lyric can request confirmation before executing the animation.

- If **Prompt to Play on Duet** is selected (checked), Lyric requests confirmation before executing the animation to the Duet output.
- If **Prompt to Play on Duet** is not selected (not checked), Lyric executes the animation to the Duet output without confirmation. When **Prompt to Play on Duet** not active, playback on the video output

occurs regardless of whether the Duet Live button is active or not.

On Duet LE/LEX/PCI/PCI+ systems, the **Prompt to Play on Duet** setting pertains **Load-and-Play Mode**, not **Streaming Animation**.

AutoPlay On Read

Auto Play on Read causes animation playout to begin automatically when a message is called up, without awaiting a Play command. Note: On Duet LE and LEX systems, the load method is set by the default Frame Based Load setting (see later in this section).

True 3D Ordering (Duet SD/HD Only)

NOTE

On Duet LE/LEX/PCI/PCI+ systems, 3D Ordering can be controlled by setting Internal Properties Depth Test and Depth Write for each object.

Grouped 3D objects that are rotated in an animation, not only rotate as a group, but also rotate individually within the group. This may at times be desirable. To rotate the group objects as a group without each object rotating individually, **True 3D Ordering** should be selected (checked).

The following figure shows a grouped set of unrotated 3D characters.



Unrotated
The following figure shows two groups of 3D characters: the top group rotating counter-clockwise; the bottom group rotating clockwise. **True 3D Ordering** is not enabled. Note that the characters in both groups are also rotating individually within their own groups.

Because of this individual rotation, the order in which the characters were typed (N-E-W-S, which places each subsequently typed character on the one preceding it), and the direction of the rotation, the characters in the top group appear to be overlapping in the wrong order. The grouped characters in the bottom row are behaving in the same manner, but the overlap does not appear to be incorrect because of the direction of the rotation.



Rotated

The following figure shows the same two groups of 3D characters: as before, the top group is rotating counter-clockwise; the bottom group is rotating clockwise. In this example, **True 3D Ordering** is enabled, and therefore the characters in both groups are *not* rotating individually within their own groups.

Both the top and bottom groups now have the correct appearance, regardless of the direction of rotation.



Rotated - 3D Ordering Enabled

Note that enabling **True 3D Ordering** requires additional processing time per field of animation. It may be necessary to disable **True 3D Ordering** in order to play back the animation in real time.

New messages should be composed with **True 3D Ordering** turned on. However, leaving this option on while playing back animations created with earlier versions of Lyric may cause improper reproduction of the original message. It is therefore suggested that the animation is previewed in order to determine the proper setting.

Full Scene Antialiasing (Duet LE/LEX/PCI/PCI+ Only)

The edges of 3D objects and 3D characters can sometimes appear jagged. **Full Scene Antialiasing** can be enabled to smooth out the rough edges of these objects.

Rendering Mode

The type and complexity of an animation may require that it be rendered in a specific manner in order to play back correctly. In addition, depending on the system and the graphic boards, one **Rendering Mode** may be more suitable than another for playback. Lyric has a variety of **Rendering Modes** to provide the highest-quality playback.

- **Fast Rendering** allows some animations that may not play back properly in real time to play back smoothly. There may be an infrequent trade-off when **Fast Rendering** is enabled, in that the compositing of overlapped transparent pixels and the antialiasing of characters may not display properly. Preview the animation before sending to air.
- Normal Rendering plays back animations using Duet's normal rendering process.
- **Depth (2 Pass)** corrects the rendering of 2D objects, that have transparency, and that either intersect in 3D space or overlap. While rendering in this mode is slightly slower, it usually unnoticeable, due to the high rendering speed of current graphics cards.
- Fast/Fix Key (Duet LE/LEX/PCI/PCI+ Only) corrects the rendering of the Key Out signal. Rendering in this mode is necessary only if the rendered Key signal is to be used downstream of the Duet system. While rendering in this mode is slightly slower, it usually unnoticeable, due to the high rendering speed of current graphics cards. Using this mode also requires the presence of specific graphics cards. *Contact Chyron Customer Service (631-845-2132) for additional information*. Note that on Duet SD/HD systems, using this mode is not necessary, as the Key signal is rendered properly.

Rendering Mode can also be set for an individual message, overriding the default **Rendering Mode** set in **Animation Settings**. *Refer to Internal Properties for additional information.*

Duet LE(X)/PCI(+) Settings

Frame Based Load (Quick Load)

Frame Based Load (Duet LE/LEX/PCI/PCI+ only) provides the choice of choosing frame-by-frame (**Quick Load**) or field-by-field loading as the default load method. Using **Frame Based Load** cuts memory requirements, as well as speeds the load process. It can, however, result in less smooth playback, therefore, animations should be previewed before playing to air.

• If Frame Based Load (Quick Load) is selected (checked), animations load frame-by-frame. This is

the same type of load performed when the **Quick Load** icon 🔛 is clicked.

- If Frame Based Load (Quick Load) option is not checked, animations load field-by-field. This is the same type of load performed when the icon is clicked.
- Using either the Load function overrides the default Frame Based Load setting after it is loaded.

Enable SD Transfer Compatibility (Duet LE/LEX/PCI/PCI+ Only)

Normally, executing an Xfer on LE/LEX/PCI/PCI+ systems causes any Roll, Crawl or Flipbook in the current composition to immediately play when it appears on the video output. In contrast, when Xfer is executed on Duet SD systems, Rolls, Crawls and Flipbooks do not begin playing until triggered. Selecting the Enable SD Transfer Compatibility checkbox gives this Duet SD-type behavior to Duet LE/LEX/PCI/PCI+ messages, causing Rolls, Crawls and Flipbooks not to start playout immediately upon transfer to video output. Note that holding down the Shift key while executing Xfer always causes these types of animation to play immediately upon transfer to the video output, and may be used to override Enable SD Transfer Compatibility.

Stream Intelligent Interface Default (Duet LEX/PCI+ Only)

When animation executions are triggered by **Intelligent Interface**, enabling **Stream Intelligent Interface Default** streams animations on the Duet LE/LEX/PCI/PCI+ by default, as opposed to using **Load-and-Play** to execute the animations.

Animation Playback - Transport Controls, Reverse Animation

Transport Controls

The **Transport Controls** provide easy navigation and playback control of the current animation. They are usually located at the bottom edge of the **Canvas**, and are organized as familiar **Play**, **Stop**, **Rewind** and **Fast Forward** buttons. Intermediate buttons advance or reverse the animation by one frame or one second of video, or to the next/previous keyframe. The buttons at each end advance or reverse animation to the end or beginning of the sequence.



Transport Controls

Changes made with the **Transport Controls** buttons are reflected by the **Frame Counter** display, and by the **Current Frame** indicator on the **Timeline** and on the **Keyframe Graph**.

The speed of the Advanced Image Effect can be changed during execution:

• Press the up ↑ cursor key to speed up the animation, or the down ↓ cursor key to slow down the animation.

Note the following with regard to changing speed:

- A change of speed affects all animated components of a Lyric composition that are currently in progress. Test speed changes before performing them on air. It is recommended not to perform a speed change while an Advanced Text Effect is currently executing.
- Clicking on the **Timeline** during execution may display new **Keyframes** that are generated when pressing the cursor keys to change speed. These **Keyframes** are temporary and disappear once the execution is over and the mouse is clicked or a key is pressed.

Reverse Animation

Tools Menu > Reverse Animation

Reverse Animation reverses the direction of the animation currently on the **Canvas**, causing the animation to run in reverse. To apply **Reverse** animation:

- 1. Click on the Canvas to make it active.
- 2. Select Reverse Animation from the Tools menu.

Once **Reverse Animation** has been applied, the reversed animation becomes the new forward animation state, which is why a checkmark does not appear next to the **Reverse Animation** item on the **Tools** menu.

While **Reverse Animation** cannot be applied to selected objects, reverse and forward animations can be mixed on a Canvas:

- 1. First create the animated objects that are to be reversed, then apply **Reverse Animation**. Remember that this now creates a new forward state.
- 2. Now, create the animated objects that are to remain in the forward direction.

When executed, the objects to which the **Reverse Animation** was applied will still appear to animate in reverse, while the other objects will animate in the forward direction.

Copy/Paste Animation State

Copy Animation State: Edit Menu > Copy Animation State; 2D Text Window/2D Object/3D Object Right-Click Menu > Copy Animation State

Paste Animation State: Edit Menu > Paste Animation State; 2D Text Window/2D Object/3D Object Right-Click Menu > Paste Animation State

Animation attributes such as **Position**, **Rotation**, **Scaling**, etc., can be copied from one object and pasted to another.

To copy animation attributes of an object:

- 1. Click on the object on the Canvas or select it in the Scene Graph.
- 2. Select Copy Animation State from the Edit Menu.

OR

Right-click on the object or its listing in the Scene Graph, then select Copy Animation State.

The animation attributes have now been stored.

To paste the copied animation attributes to an object:

- 1. Click on the object on the Canvas or select it in the Scene Graph.
- 2. Select Paste Animation State from the Edit Menu.

OR

Right-click on the object or its listing in the Scene Graph, then select Paste Animation State.

The animation attributes have now been pasted to the new object.

The same attributes can be pasted to other objects until a new **Copy Animation Attributes** operation overwrites the stored attributes.

Scene Graph

The **Scene Graph** provides a listing of all objects in a composition, as seen below. Visible objects in the Scene Graph are listed in order of visual display-priority.

If the Scene Graph is not visible:

Select Scene Graph from the View menu. The Scene Graph is then displayed.

Scene Graph	
 ✓ ITVEvent ✓ TVObject ✓ Squeeze Back Region 1 ✓ Live Video Region 	Special elements in iTV compositions.
- ♥ Audio Clip 2 - ♥ Video Clip 1 - ♥ Mix	——— Indicates the presence of a <u>Mixer</u> effect in the message.
🛛 🗹 Full Page ————————————————————————————————————	Indicates that this message was read through MultiFx.
Pauses	Not visible Canvas objects, these elements contain time, repetition and other data about the animation.
 ☑ 3 ☑ 2d imported bitmap ☑ 3d imported object ☑ Spline Window 1 ☑ Timer 1 	 3-dimensional character generated by Lyric from TrueType fonts.
- 🗹 Clock 1 - 🗹 2D TypeOn 1 - 🖓 2D Crawl 1 - 🖓 2D Roll 1	——— Different types of 2-dimensional text windows.
✓ 2D Text 1 → ✓ Light 1 → ✓ Global Light → → → → → → → → → → → → → → → → → → →	The Global Light and the Camera cannot be deleted from the Canvas.

Scene Graph

The Checkbox next to each element determines that element's visibility (and accessibility for editing) on the **Canvas**. When working on a complex composition, you may find it helpful to turn individual elements "on" and "off" for a better view of what you're doing. The **Global Light** and **Camera** cannot be turned off (unchecked) or deleted from the scene.

Object names can be changed in the **Scene Graph**. Note that the names **Camera** and **Global Light** cannot be changed.

- 1. Highlight the object name in the Scene Graph, then click the object name.
- 2. Type the new name, then press Enter.

The creation of a new scene is automatically accompanied by the creation of a **Scene Graph**, containing by default, a **Camera**, a **Global Light** source, and one movable **Light Source** (of the six individual lights that a composition may contain). Depending on Lyric's **Preferences** settings, a 2D Text window can also open by default with the creation of a new scene.

Animated elements generated from **Unicode** characters are named **U+<code>**, as is indicated as such in the **Status Bar** and the **Scene Graph**. A **Unicode** character(s) is brought into Lyric by first copying the character(s) either from existing text or from the Windows® **Character Map**. The character(s) is then pasted into a **2D Text Window**, using the **Paste Unicode Text** function, accessed either from the **Edit** menu, or by pressing **Ctrl + Alt + V**. A **Unicode** character can be animated in the same manner as any other character.

The **Scene Graph** context menu is virtually the same as the **Tools** menu and the **Canvas** context menu. To display the **Scene Graph** context menu:

• Right-click on an empty area of the **Scene Graph**, i.e., not on an object listing.

Color-Coding an Object Listing

Object listings in the **Scene Graph** can be color-coded for easy identification. When an item is color-coded, The listing is displayed in the selected color. To color code a listing:

- 1. Select (click) the object listing in the **Scene Graph**, and then right-click to display the object's context menu.
- 2. Select Color-Code Object. The Color dialog box opens.

Color	<u>?</u> ×
Basic colors:	
	Hue: 160 Red: 0
	Sat: 0 Green: 0
Define Custom Colors >>	Color/Solid Lum: 0 Blue: 0
OK Cancel	Add to Custom Colors

Color Dialog Box

3. This is the same dialog box from which color is set for 3D characters, 3D objects and light sources. Select a color, and then click **OK**. The color of the listing changes to the selected color.



Color-Coding an Object Listing

The following figure shows a Scene Graph with multiple color-coded object listings.

📑 Scene Graph 📃	
⊠ N	
Frame	
🛛 🗹 Bar	
News Logo	
D 2D Text 1	
Light 1	
Global Light	
⊡ Camera	•

Color-Coded Object Listings

Refer to Color, Transparency, Background, Lighting and Texture - Color Selection for Light Sources and 3D Characters/Objects for additional information.

Selecting Canvas Objects via the Scene Graph

If you select an object for movement on the Canvas (using the mouse), it is highlighted for editing on the Scene Graph (and the Timeline). Likewise, if you select an object on the Scene Graph, it is selected for movement via the mouse pointer on the Canvas. Selected object(s) may be positioned, scaled, and otherwise manipulated via the Properties menu, Toolbar, etc.

Multiple-object selection follows Windows conventions. To select multiple objects whose entries are adjacent on the Scene Graph, select the first or last item and hold SHIFT while clicking the object at the other end of the range of entries. To select multiple non-adjacent objects, hold the CTRL key while you clicking the desired elements.

Selecting Overlapping Objects on the Canvas (ALT + Click)

When Canvas objects overlap, it can be difficult to select the one you wish to work with. Position your cursor over the overlapping objects and hold down the ALT key while clicking with the mouse. Repeat this action until the Scene Graph (and Timeline) show that the desired object has been selected.

Display Priority

Display priority determines the overlapping of one object over another on the Lyric Canvas. It is determined by the location of the objects along the **Z**-axis. The higher the **Z**-axis value, the closer to the front the object appears.

Additionally, when objects are introduced to the **Canvas**, they are automatically placed at the same **Z**-position. Each new object that is added to the **Canvas** has a higher **Display Priority** than the object that was previously placed on the **Canvas**. This is reflected in the **Scene Graph**, as each new object is added to the top of the listing. The higher the position of the listing in the **Scene Graph**, the closer to the front the object appears.

Display priority, i.e., the layering of the objects on the **Canvas**, can be changed by dragging-and-dropping an object listing to a different position on the **Scene Graph**. Additionally, objects within a group can be dragged-and dropped to new positions within the group. The group itself can also be dragged-and-dropped to a new position.

To facilitate these changes, a group added to a new message will now dictate display priority of all its members of equal Z value. This is enabled/disabled via **Use Group Priority**, accessed from the context (right-click) menu for the object in the **Scene Graph** or **Canvas**, and then selecting **Internal Properties**.

Lyric User Guide

In the following illustration, the 3D objects **MICROSCP** and **BBALL** each have a **Z**-position value of **-2.000**, which defines their positions on the **XYZ** axes. The object **BBALL**, however, occludes the object **MICROSCP** because it has display priority due to its position in the **Scene Graph**.



On the Scene Graph, drag-and-drop the BBALL object below the MICROSCP object.



Note that the two objects have been transposed on the Canvas, and that the object **MICROSCP** occludes the object **BBALL**. Note that their **Z**-position values remain identical.

Grouping and Ungrouping Objects

Select multiple objects.

Scene Graph	
 ✓ 2D Text 1 ✓ BBALL ✓ MICROSCP ✓ Light 1 ✓ Global Light ✓ Camera 	

Selecting Multiple Objects

To group the objects:

Click the Group icon

The grouped objects are labeled and rearranged on the Scene Graph as shown:



Grouped Objects - Unexpanded

Grouped Objects - Expanded

At left, the grouped object is shown in unexpanded view. At right, the 🗄 button has been clicked to show expanded detail of the group.

To ungroup the objects:

• Select the grouped object in the unexpanded view, or select any object in the expanded view, and then click the **Ungroup** icon

Renaming/Deleting Objects On the Scene Graph

To help keep track of Canvas objects, you may rename them (with the exception of 3D characters and imported 3D objects). Double-click on the desired **Scene Graph** object to rename it.

An object(s) can be deleted from the **Scene**. The only objects that cannot be deleted are the **Global Light** and the **Camera**. To delete an object from the **Scene**:

• Select the object(s) on the Scene Graph, then press Ctrl + Delete, select the Delete icon K from the Windows toolbar, or select Delete from the Edit menu.

Shortcuts for Navigating the Scene Graph and the Timeline

An item on the Scene Graph can be selected as follows:

- Type the first letter of the object name.
- Use the **Up** and **Down** arrow keys and the **Home** and **End** keys to select entries.

An object on the **Scene Graph** can be made visible or not visible on the **Canvas** or output. When the object's checkbox is selected, the object is visible on the **Canvas** or output. When the object's checkbox is deselected, the object is not visible on the **Canvas** or output.

• Press the keyboard's **Space** bar or click the checkbox to select (check) or deselect (uncheck) a selected **Scene Graph** object.

Timelines

View Menu > Timeline

Introduction

The **Timeline** and **Keyframe Graph** each provide a method for displaying the animation state of a composition and its constituent elements on the Canvas at any given time. The **Timeline** is composed of **Object Timelines** and **Attribute Timelines**, which can be modified by changing length and position; and **Keyframes** can be added and modified so that the attributes (**Position**, **Rotation**, etc.) of an object can be precisely controlled.

Viewing a Timeline

If the Timeline is not visible:

• Select Timeline from the View menu. The Timeline is then displayed.

When a blank Canvas is opened, the **Timeline** contains **Object Timelines** for the default objects that are always part of a Lyric composition: Light 1; Global Light and Camera. The length of the animation is determined by the **Default Animation Length** set in the **Config Menu > Preferences > Animation Settings**. Note that the highlighted object name in the **Object Timeline** is the same as the highlighted object name in the **Scene Graph**. When an object is highlighted, it is the active object on the Canvas. Any modification is applied to that object.



Timeline for a Blank Canvas

Adding an Object

Each time a new object is added to the Canvas, an **Object Timeline** displaying the object name and a set of **Attribute Timelines** for the object are added to the **Timeline**. The object name is also added to the **Scene Graph**.

Deleting an Object

An **Object Timeline(s)**, and therefore its object, can be deleted. The only objects that cannot be deleted are the **Global Light** and the **Camera**. To delete an **Object Timeline**:

• Highlight the **Object Timeline**, then press **Ctrl + Delete**, select the **Delete** icon K from the **Windows** toolbar, or select **Delete** from the **Edit** menu.

Expanding/Contracting an Object Timeline to View/Hide Its Attributes Timelines

To expand an Object Timeline to view its Attributes Timelines:

• Click the + symbol to the left of the **Object Timeline**. For this example, expand the **Light 1** object. The **Attribute Timelines** for the **Light 1** object are displayed. Note that the **Object Timelines** are dark gray in color; the **Attribute Timelines** are light gray.

The number of **Attribute Timelines** varies depending on the type of object. While **Light** objects have only four **Attribute Timelines**, other types of objects, such as bitmap graphics, have many more.

Tim	eline		-	2002]
	01:00	02:00	03:00	04:00	05:00	
1.						-
	Light 1					
1	XPosition					
-						
-	rposition					
	ZPosition					
	RGBADiffuse					
a 🚺	Global Light					
	Camera					

Expanded Timeline

To contract an Object Timeline, i.e. view only the Object Timeline and hide the Attributes Timelines:

• Click the - symbol to the left of the **Object Timeline**.

Selecting an Object or Attribute Timeline

To select an **Object** or **Attribute Timeline**, use one of the following methods:

- Click on the Object or Attribute Timeline.
- Scroll to the **Object** or **Attribute Timeline** by clicking in the **Timeline** area (the area below the **Timeline Scale**), then press ↑ or ↓.
- Click on or scroll to the object name in the Scene Graph.

The Time Indicator

A small slider, the **Time Indicator Total** that moves along the top of the **Timeline Scale**, indicates the time of currently displayed frame in the animation. The **Timeline Scale** on the **Timeline** corresponds to the **Timeline Scale** on the **Keyframe Graph**. The **Time Indicator** can be moved using any of the following methods to show any frame in the animation.

- Click and drag the Time Indicator to the new position.
- Press ← to advance the **Time Indicator**, or → to move the **Time Indicator** back through the animation.
- Click the Timeline Scale, then press ← or ↑ to advance the Time Indicator, or → or ↓ to move the Time Indicator back through the animation.
- Press Alt + ← to advance the Time Indicator in 1-second intervals, or Alt + → to move the Time Indicator in 1-second intervals back through the animation.
- Use the **Transport Controls**, except for the **Play** button to advance the **Time Indicator**, or to move the **Time Indicator** back through the animation.
- Enter a new value into the **Frame Counter** to display the frame at the specified time.

Zooming In and Out of the Timeline

For additional precision, the **Timeline** can be magnified:

• Right-click on the **Timeline Scale**, then select one of the four zoom options from the context menu: **Zoom Timeline 2x**; **Zoom Timeline 4x**; **Zoom Timeline 8x**; **Reset Zoom**.



Adjusting Zoom on the Timeline Scale

Modifying the Duration of an Animation

Modify Animation Length is accessed by right-clicking the **Timeline Scale** and selecting **Modify Animation Length** from the context menu shown directly above, then setting the parameters in the **Modify Animation Length** dialog box. *Refer to Modify Animation Length* for details.

The length of the **Timelines** of individual objects can also be changed. See **Changing the Length of a** *Timeline below.*

Adding a Keyframe

A **Keyframe** is a point where the an object and its attributes, and therefore its **Object/Attribute Timelines**, can be modified. These attributes can include **XPosition**, **YPosition**, **ZRotation**, **XScale** and many others. For example, a **Keyframe** would be added at the point where an animated object would change direction or start to rotate.

The figure below shows **Keyframes** at the beginning of the animation for all objects, and **Keyframes** in the middle and at the end for the object named **3D element x**. There are two ways in which a **Keyframe** is marked on a **Object** or **Attribute Timeline**.

- Image indicates a Keyframe positioned between the beginning and the end of an Object or Attribute Timeline.
- Indicates a **Keyframe** positioned at the exact beginning or end of an **Object** or **Attribute Timeline**.

A Keyframe can be added to an Object Timeline or Timeline.

- When a **Keyframe** is added to an **Object Timeline**, corresponding **Keyframes** are added to all **Attribute Timelines**.
- When a **Keyframe** is added to an **Attribute Timeline**, a corresponding **Keyframe** is added to its **Object Timeline**.

To add a Keyframe to an Object or Attribute Timeline:

- 1. Move the **Time Indicator** to the desired frame.
- 2. Right-click on the **Object** or **Attribute Timeline** to which the **Keyframe** is to be added.
- 3. Select Add Keyframe from the context menu. A Keyframe appears at the specified position on the Object or Attribute Timeline.

	Timeline	
•	0:00 01:00 02:00 03:00 04:00	
Ŧ	2D Text 2	
+	Light 1 Global Light	
÷	Camera	

Timeline

Keyframe Selected Objects

Edit Menu > Keyframe Selected Objects

Keyframe Selected Objects adds a **Keyframe** to all *selected* objects and their attributes at the *current time* on the **Timeline**. Remember that elements on the **Timeline** are also represented on the **Keyframe Graph** and on the **Scene Graph**. The addition of a **Keyframe** to an object does not in itself modify the object's movement. The object's element on the **Timeline** must be expanded to reveal its **Position**, **Rotation**, **Scale** and **Center** values on the **X**, **Y** and **Z** axes. The **Keyframe** for the selected property of the object can then be moved on the **Keyframe Graph**.

To Keyframe Selected Objects:

- 1. Press and hold the **Ctrl** key and click on all **Timelines** of objects to which the **Keyframes** are to be added. You can also press and hold the **Shift** key and click on two **Timelines** to select the two **Timelines** and all of **Timelines** between them.
- 2. Use the mouse to drag the time indicator on the **Timeline** to the time at which the objects should be **Keyframed**. In the figure below, it is at 3 seconds.

🔲 Timelin	e				
• 0:00 • 1111111	01:00 01:00	02:00 0101110000	03:00	04:00 111111111111111	•
+ Chy	ron logo E	lections			
E Chy	ron logo s	mall			
	ext 2				
+ 2D T	ext 1				
	t 1				
+ Glob	al Light				
E Cam	iera				

Timeline - Objects Selected for Keyframing

 Select Keyframe Selected Objects from the Edit menu. Keyframe indicators are placed on the Timelines of the selected visible and non-visible objects. The Timeline that remains highlighted is the one that was selected last before the objects were Keyframed.

0:00	01:00	02:00	03:00	04:00
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Chy	ton logo l	ections		
Chy	ron logo :	small	~	
2D T	ext 2		*	
1 2D T	ext 1		•	
	nt 1			
Glot	bal Light			
Сап	nera			

Timeline - Selected Objects Keyframed at Three Seconds

Keyframe All Objects

Edit Menu > Keyframe All Objects

Keyframe All Objects adds a **Keyframe** to all objects and their attributes at the *current time* on the **Timeline** and **Keyframe Graph**. The addition of a **Keyframe** to an object does not in itself modify the object's movement. Change to an attribute(s) of an object do modify movement. The **Object Timeline** can be expanded to reveal its **Position**, **Rotation**, **Scale** and **Center** values on the **X**, **Y** and **Z** axes. These values can be adjusted. The **Keyframe** for the selected property of the object can then be moved on the **Keyframe Graph**.

To Keyframe All Objects:

1. Use the mouse to drag the time indicator on the **Timeline** to the time at which the objects should be **Keyframed**. In the figure below, it is at 3 seconds.

	Fimeline					
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÷.	Chyro	on logo s	mall			
+	2D Te	xt 2				
+	2D Te	xt 1				
.	Light	1				
+	Globa	l Light				
	Carne	ra				

Timeline - No Keyframes Added

2. Select **Keyframe All Objects** from the **Edit** menu. **Keyframe** indicators are placed on the **Timelines** of all visible and non-visible objects.

0:00 01:00 02:00	03:00 04:00	
Chyron logo Elections	~	
Chyron logo small	~	
2D Text 2	<u> </u>	
2D Text 1	▼	
Light 1	×	
Global Light	<u> </u>	
Camera	*	

Timeline - All Objects Keyframed at Three Seconds

Timeline Entries

Right-click on the **Timeline Entry** to display a context menu with information about the object:

2D TypeOn 1		-
Flipbookchyron		
XPosition		
YPosition	XPosition of Flipbookchyron	
ZPosition	Ends 06:00 Duration 06:00	
XRotation	Keyframe List 🕨	Initial value: 2.076 at 0:00
YRotation	Modify Keyframe Attributes	Keyframe #1: 0.676 at 0:2
ZRotation	Save Keyframe File	
XScale		
YScale	Copy Selected Keyframe(s) Copy Timeline	
ZScale	Reverse Keyframes	
XCenter	Copy Node Paste	
YCenter	Add Keyframe	
ZCenter		

Timeline and Object-Specific Context Menu

Adjusting and Aligning Timelines

You may move and adjust **Timeline** elements individually or in groups, using the mouse.

Selecting Timeline(s)

Left-click a Timeline element to select it for adjustment; selected Timeline elements are titled in white.



Timeline

To select multiple **Timeline** elements, hold the **Shift** key while clicking additional timeline elements. **Please Note:** You may also select **Timeline(s)** via the **Scene Graph**.

Changing the Position of a Timeline Element

An individual **Timeline** element may be moved within the duration of the animation without changing the length of that element. To move a **Timeline** element, drag it with the mouse. A **Move** cursor is displayed, as shown:



Changing a Position of a Timeline

You may also select an individual **Timeline** element and move it forward or back one frame with the key combination **Ctrl**; + \leftarrow → keys. **Ctrl** + **Shift** + \leftarrow → moves the selected timeline ten frames forward or back.

Changing the Length of a Timeline Element

You may change the length of a **Timeline** element (it's "lifetime" within the animation) by clicking and dragging at either end. A horizontal resize cursor is displayed, as shown:

	Timelin	e				
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	1					
	30	etter b				

Changing the Length of a Timeline

The end keyframe on the main **Timeline** can be moved as well.

Aligning Timeline Elements

The Alignment buttons we them to align selected Timeline elements. Note that only the Align Left, Align Right and Make Same Width buttons are available when Timeline elements (as opposed to text Templates) are selected.

The alignment "anchor" is determined by which **Timeline** element was selected last.

	Timelin	•										
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+ +	20	Text 1	1			_	3404					
	Glob	al Light										
÷.	Cam	era										
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		lignment 1 ⊡+ +□ ₹	Tools ∓tati _⊑	× T								

Aligning Timelines: Selecting an Anchor

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		Align Lef	E									

Aligning Timelines to the Same Side

Clicking **Make Same Width** will adjust the selected **Timelines** to both the length and start/end time of the **Timeline** element selected last.

T	imeline										_ 0	×
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				비 먂 낢								
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Making Timelines the Same Length

Scaling the Timeline

Timeline > Click-and-Drag (Proportional) ; Ctrl Click-and-Drag (Non-Proportional) Timeline > Right-Click > Modify Animation Length

	Timeline											×
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+	Globa	1 I Light	.			-						
	Timeline	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	
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+	Light	1				posit thou	tions. The gh the ele	action will ment now	still stop "lives" to	at 5:00, e a duration	ven of 7:00,	
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	Timeline											×
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ŧ	9	~			~			Here,	Proportio	nal Scalin	g is	-
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	GIUDa	Light						21		2.1		-

Proportional and Non-Proportional Scaling

Proportional Scaling is also available from the **Modify Animation Length** dialog box, accessible by rightclicking on the **Timeline**. Accessing the feature from that dialog offers an additional option:

If **Proportional Scaling** is not selected, a prompt is displayed asking if will ask it the final keyframe(s) of the selected element(s) should be extended to match the animation's overall duration.



Extend End Keyframe Query

- Extending the final keyframe(s) to the end of the animation has the effect of scaling the duration of all of the selected element's properties.
- Not extending the final keyframes extends the "lifetime" of an element on the **Timeline** and the **Canvas**. Its final keyframe, however, remains unchanged. The element reaches the end of its programmed movement and move no further until the animation is over.

The option of extending the end keyframe to match the new animation length is **NOT** available from the **Animation Control Properties** tab.

Saving the Timeline - Scene, Object

Saving the Scene Timeline

The animation settings of the entire composition can be saved and applied to a different set of objects. To save the **Scene** settings:

- 1. From the File menu., select Save As. The Save Animation dialog box opens.
- 2. Optional: Reset the Start Frame and/or End Frame.
- 3. Navigate to the directory to which the file is to be saved. It is recommended that it be saved to the **Default Effects Directory**, making it accessible for **Read Effects** execution.
- 4. In the Save as Type field, select Lyric Effects (*.efx).
- 5. In the File Name field, enter a Name.
- 6. Click Save. Only the animation settings are saved, not the objects themselves.

A quick method for performing the same operation is as follows:

- 1. Press **Ctrl + Record**. The **Record Only:** dialog box opens.
- 2. Select Scene (.efx).
- 3. Click **Record**. The scene animation settings are saved to the current **Message Number** in the **Default Effects Directory**.

A Hotkey combination can also be used to record the Scene settings:

• Press Ctrl + Record S Enter. The scene animation settings are saved to the current Message Number in the Default Effects Directory.

Saving the Object Timeline

The animation settings from an individual object can be saved and applied to a different object. To save **Object** settings:

- 1. On the Timeline or the Scene Graph, select the object.
- 2. Right-click on the Timeline for that object.
- 3. From the context menu, select **Save Keyframe File**. The **Select a Keyframe file to save** dialog box opens.
- 4. The Save In: field should have the Default Effects Directory selected. The Save as Type field, select Keyframe File (.kyf). In the File Name field, enter a file name.
- 5. Click **Record**. The **Keyframe** file is saved.

A quick method for performing the same operation is as follows:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Object (.kyf).
- 3. Click **Record**. The object animation settings are saved to the current **Message Number** in the **Default Effects Directory**.

A Hotkey combination can also be used to record the Scene settings:

• Press Ctrl + Record O Enter. The object animation settings are saved to the current Message Number in the Default Effects Directory.

Additional Notes Regarding Specific Objects and Timelines

- A Clip with a Start Time of 0, 1 or 2 frames always starts at Frame 0 when the animation is executed. A Clip with a Start Time of 0 or higher executes at the specified frame.
- Pauses can reside within Mix objects on Duet SD. This requires Duet Drivers Version 3.2 Build 137.
- **Timeout** pauses can now reside within **Squeezeback** objects on Duet SD. This requires Duet Drivers Version 3.2 Build 137 or later.
- Lyric supports frame-accurate synchronization of VGE animations, Mix objects, and Squeezeback objects on Duet SD, both at the beginning of the animation and after every Paused for Keypress/GPI Pause. This requires Duet Drivers Version 3.2 Build 137 or later.

Modifying the Duration of an Animation from the Timeline or Keyframe Graph

The Animation Length of selected objects or an that of an entire animation can be modified from the Default Animation Length as set in Config Menu > Preferences > Animation Settings. Animation Length can be modified from either the Timeline or the Keyframe Graph.

1. From the **Timeline**, right-click anywhere in the **Timeline** window, except on an individual **Timeline**.

OR

From the **Keyframe Graph**, right-click on the **Timeline Scale**, then select **Modify Animation Length** from the context menu shown below.



Selecting Modify Animation Length from the Keyframe Graph

2. The **Modify Animation Length** dialog box is displayed.

Modify Animation Length 🛛 🔀
Animation Length
00,00,05,00
Proportional Scaling
 Scale <u>Selected Objects</u> Scale <u>All Objects</u>
OK Cancel

Modify Animation Length Dialog Box

Modify parameters as described in the following table, and then select **OK** to execute the animation length change.

Parameter	Description
Animation Length	Adjust Animation Length to the desired value.
Proportional Scaling	Enable or disable Proportional Scaling to scale the Keyframe positions to the new animation length, or to leave them unmodified.
	 If Proportional Scaling is enabled (checked), the Keyframe position(s) of the object(s) is scaled proportionately to fit the new Animation Length.
	 If Proportional Scaling is disabled (unchecked), the Keyframe position(s) of the object(s) remain the same. Time is just added to or subtracted from the Animation Length of the selected objects. If, when changing Animation Length, Proportional Scaling is disabled, the following is displayed when OK is selected in the Modify Animation Length dialog box:
	Lyric
	Extend End Keyframe to Match Animation Length?
	<u>Yes</u> <u>N</u> o
	Extend End Keyframe to Match Animation Length?
	If Yes is selected, the end point of the animation is set to the modified length. In the instance of shortening the animation, Keyframes can be lost.
Scale Selected	Scale Selected Objects: Scale Selected Objects applies the Timeline length change to only the selected objects.
Scale All Objects	Scale All Objects: Scale All Objects applies the Timeline length change to the entire animation.

Example:

A 5-second animation contains two objects, where object A starts at 01:00s and ends at 02:00s, and object B starts at 02:00s and ends at 04:00s. Proportional Scaling is enabled, and Scale All Objects is selected. If the animation length is doubled from 5 seconds to 10 seconds, object A's Start time is now 01:00s and end time is 03:00s; its duration doubles from 1 second to 2 seconds, and object B starts at 02:00s and ends at 06:00s; its duration is also doubled.

Keyframe Graphs

View Menu > Keyframe Graph

The **Keyframe Graph** provides a detailed display of changes in the state of the selected **Timeline** object(s) over time. In addition, the **Keyframe Graph** provides the ability to add, delete, and accurately edit **Keyframes**.

Basic Operation

The **Keyframe Graph** displays information for one or more parameters of the selected object's **Timeline** element. The example below demonstrates the relationship between the animation on the Canvas and its representation on the **Keyframe Graph**.

<u>Example</u>

The object in this composition is a 3D character **W**. At time **00:00:00:00** it is at the upper-left corner of the Canvas; at time **00:00:02:15** (**2.5** seconds) it is at the lower-right corner of the Canvas, and then at **00:00:05:00** (5 seconds) it is back at its starting place:



Basic Animation - Same Start and End Positions

The expanded **Timeline** for this object appears as shown below. If only the main **Timeline** is displayed, click on the + symbol to the left of the **Timeline** to expand the **Timeline** and display the **Timelines** of the object's individual attributes. To display just the main **Timeline** for the object, click the - symbol to the left of the main **Timeline**.

limeline		_	
0 :00 01:00	02:00 🚽 03:00	04:00 05:00 CONTRACTOR OF CONTRACTOR OF	ii.
W	×		
XPosition	*		
YPosition			
ZPosition			
XRotation			
VRotation			
ZRotation			
XScale			
VScale			
ZScale			
XCenter			
YCenter			
ZCenter			
Light 1			
Global Light			
Camera			

Timeline

Note that since the animation is changing only two attributes, i.e. **XPosition** and **YPosition**, only the main **Timeline** for the object and the **XPosition** and **YPosition Timelines** display **Keyframes**. A change in another attribute adds a **Keyframe(s)** to that attribute and, depending upon the attribute that was modified, can add a **Keyframe(s)** to related attributes as well.

Now, select the X position attribute by clicking on it.

 w	▼	
XPosition	•	

Selecting a Timeline Attribute

Finally, from the View menu, select Keyframe Graph.



Selecting View > Keyframe Graph

Lyric displays a graph with X position as the vertical axis, and time as the horizontal axis; the change of the selected Object's X position is indicated with a white line, and keyframes (points of change) are shown as red boxes:



Keyframe Graph Showing XPosition

Now, switch back to the Timeline and select the Y position timeline. Switch back to the Keyframe Graph; the display changes to show how the object's Y position changes over time:



Keyframe Graph Showing YPosition

Navigating the Keyframe Graph

To step through an animation in forward or reverse, use one of the following methods:

- Click the left or right arrow button at either end of the **Timeline Scale**.
- Press the ← or → cursor keys.
- Click and drag the green time indicator.

To step through an animation in 1-second intervals:

 Click on the Timeline Scale running along the bottom of the Keyframe Graph, then press Page Down to go forward, or Page Up to go in reverse. The Timeline Scale on the Keyframe Graph corresponds to the Timeline Scale on the Timeline.

To navigate up the vertical scale of the Keyframe Graph, use one of the following methods:

- Click the up arrow at the top of the **Keyframe Graph**.
- Click anywhere on the **Keyframe Graph** area (where the graphs are displayed) or on the vertical scale at the left of the **Keyframe Graph**, then press the **Page Up** key.

To navigate down the vertical scale of the Keyframe Graph:

• Click anywhere on the **Keyframe Graph** area or on the vertical scale at the left of the **Keyframe Graph**, then press the **Page Down** key.

To page up or down through the Keyframe Graph:

• Click anywhere on the **Keyframe Graph** area or on the vertical scale at the left of the **Keyframe Graph**, then press **Ctrl + Page Up** or **Ctrl + Page Down**.

To zoom in or out of the **Timeline Scale**:

• Right-click on the **Timeline Scale**, then select one of the four zoom options from the context menu: **Zoom Timeline 2x**; **Zoom Timeline 4x**; **Zoom Timeline 8x**; **Reset Zoom**.



Adjusting Zoom on the Keyframe Graph Timeline Scale

Modify Animation Length

Modify Animation Length is accessed by right-clicking the **Timeline Scale** and selecting **Modify Animation Length** from the context menu shown directly above, then setting the parameters in the **Modify Animation Length** dialog box. *Refer to Modify Animation Length for details.*

Simultaneously Viewing More Than One Attribute

On the **Timeline** in its expanded state, select the first attribute you wish to display, and then press **Ctrl** while clicking the other attributes to be displayed. When the **Keyframe Graph** is viewed, all selected **Timeline** attributes are displayed. Note that the **Keyframe Graph** can only display attributes of the same type simultaneously! In other words, you may compare several **Position** attributes, but not a **Position** attribute and a **Rotation** attribute on the same **Keyframe Graph** display.

<u>Example</u>

In the following example, the object moves along the X and Y axes during a 5-second animation.



Basic Animation - Different Start and End Positions

To view the **Keyframe Graphs** for both **X** and **Y**, first select the **X** attribute on the **Timeline**, press and hold **Ctrl**, then select (click) the **Y** attribute. The text identifying the attributes turns white. Note that the text on the main **Timeline** for the object is also white.

<u>:00 01:00</u>	02:00	03:00	04:00	05:00
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w	~			
XPosition				
YPosition				
ZPosition				
- XRotation				
VRotation				
7Dotation				
				-
Ascale				-
YScale				_
ZScale				
XCenter				
YCenter				
ZCenter				
Light 1				
Global Light				
Camera				

Timeline

The Keyframe Graphs of both the X and Y attributes are now displayed.



Simultaneous Display of X- and Y-Positions

Using the Keyframe Graph to Edit Animations

The **Keyframe Graph** is a powerful editing tool for animation, enabling you to precisely adjust, add, and delete **Keyframes**.

Changing Keyframe Graph Attributes

The Keyframe Graph display can be customized for comfortable viewing:

• Right-click on the **Keyframe Graph** to display a context menu enabling you to change the **Background Color**, or to show/hide the **Keyframe Graph's** grid lines. Note that the **Palette** used to set the **Background** is the same as that used for setting the colors of light sources and 3D characters and objects.



Keyframe Graph

Adjusting Keyframes

A **Keyframe Graph** display shows how one component of an animated object changes over time. Therefore, a display has at least two **Keyframes** – one indicates the beginning condition, and the second indicates the ending condition. These **Keyframes** cannot be deleted!

To adjust a Keyframe on a Keyframe Graph:

• Click and drag it with the mouse.



Adjusting a Keyframe Position

To display information about the Keyframe

• Right-click on the Keyframe. Lyric displays a context menu which lists a variety of options:



Displaying Keyframe Information

Adding a Keyframe

In this example, the **Keyframe Graph** is displaying the **Y** position component of the current object **Timeline**. To add a new **Keyframe** to the current **Keyframe Graph**:

1. Right-click on the **Keyframe Graph** where the new **Keyframe** is to be positioned. Lyric displays a context menu:



Adding a Keyframe

2. Select Add Keyframe. A new Keyframe, indicated by a red box ■ appears on the Keyframe Graph, which may be adjusted ⁽¹⁾ as described above.

Interpolation Modes

Lyric provides a choice of **Interpolation Mode** settings which determine how an animation transitions through each **Keyframe**. *Refer to Interpolation Modes for details*.

Deleting a Keyframe

To delete a Keyframe:

• Right-click on the Keyframe, then select Delete Keyframe from the context menu.

Deleting an Object

The **Keyframe Graph(s)** of an object, and therefore the object itself, can be deleted from the **Scene**. The only objects that cannot be deleted are the **Global Light** and the **Camera**. To delete an the **Keyframe Graph** of an object:

Display the Keyframe Graph for the object(s), then press Ctrl + Delete, select the Delete icon from the Windows toolbar, or select Delete from the Edit menu.
Motion Paths

Object Context Menu > Motion Path > Show Path Keyframe, Control Point or Accelerator Control Context Menus > Show Path

Overview

A **Motion Path** is a visual representation of the path through **XYZ** space that an object follows as it progresses through an animation. A **Motion Path** can be displayed for any 2D bitmap (including a **Flipbook**), 3D character or 3D object that contains more than one keyframe. A **Motion Path** can be edited, keyframes added/deleted, and an **Interpolation Mode** can be applied to the entire **Motion Path** or individual segments of the **Motion Path**.

To demonstrate how a **Motion Path** works, create an animation where an object moves from one position on the **Canvas** to another. The following example shows a 3D character moving from the upper left corner to the lower right corner of the **Canvas**. Execute the animation to the end.



Simple Animation

Select the object, in this example, a 3D character E. Right-click to display the object context menu.



Object Context Menu

Select Motion Path to display the Motion Path menu, and then select Show Path.



Motion Path Menu

The menus close, and the **Motion Path** of the object is displayed on the **Canvas**. The **Motion Path** tracks the path of the object through the animation. It is represented by a line made up of individual dots, each of which represent one frame of the animation. In the following figure, the dots are so close together that they appear to run into each other. Figures later in this section show them more distinctly. The darker-blue-colored dots mark five-frame increments, and are a visual aid to help in locating specific frames on the **Motion Path**.



Motion Path

Lyric User Guide

Execute the animation. Observe how the object follows the Motion Path.

Y	nt View		

Animation Progression

The **Motion Path** is marked by an orange dot, representing the **Start Keyframe**, and a red dot, representing the **End Keyframe**. Additional **Intermediate Keyframes** that are added to the **Motion Path** are represented by red dots. When a frame or other component of the **Motion Path** is selected, its dot turns white. Using the mouse, any keyframe can be dragged to modify the shape of the **Motion Path**. Adding and deleting keyframes are covered later in this section.

The Motion Path tracks the movement of an object from the following point:

- The center of a 2D bitmap or **Flipbook**.
- The baseline of a 3D character, at the left edge.
- The center of a 3D object.

A Motion Path cannot be created for a 2D Text Window, an Individual or Global Light, the Camera. or an Lyric object such as that resulting from the creation of an Advanced Text Effect or Advanced Image Effect.

Turning On/Off Motion Paths

The **Motion Path** display can be turned on and off for an object. Turning the display off does not remove the **Motion Path** from the object; it only turns off the display of the **Motion Path**. To completely remove a **Motion Path**, it must be cleared. Additionally:

- When a **Motion Path** has been generated for an object, the **Keyframe Graph** can no longer be used to make adjustments to the keyframes and attributes of the object. To enable **Keyframe Graph** functionality for the object, the **Motion Path** must be cleared from the object. *Clearing a Motion Path* is covered at the end of this section.
- The **Timeline** should not be used to add a keyframe to a **Motion Path**. Keyframes should be added only from the **Motion Path**.
- The **Undo** function is not supported when working with a **Motion Path**.

The display of the **Motion Path** can also be also be toggled on and off by selecting/deselecting **Show Path** from the **Frame**, **Keyframe**, **Control Point** and **Acceleration Control** context menus. Accessing these menus is covered throughout this section.

Displaying Multiple and Grouped Object Motion Paths

Motion Paths can be displayed for more than one object at a time, and can be displayed and manipulated in all Canvas Views.



Displaying Multiple Objects in Multiple Canvas Views

When objects are grouped, the Motion Path is displayed as follows:

- If an object outside of the group is currently selected, only the **Motion Path** for the object that was currently selected when the **Motion Path** was generated is displayed.
- If an object in the group is currently selected, only the **Motion Path** for the selected object is displayed.



Individual and Group Motion Paths

Adding a Keyframe to a Motion Path

Additional keyframes can be added to a **Motion Path**. If the added keyframe is neither the first nor the last keyframe in an animation, it is referred to as an **Intermediate Keyframe**. To add a keyframe, click the point on the **Motion Path** where the keyframe is to be added. A white dot appears. Right-click on the white dot. The **Motion Path** context menu is displayed. Select **Insert Keyframe**. The menu closes and the white dot turns red.



Adding a Keyframe

The keyframe can be dragged to a new position to change the shape of the **Motion Path**. Additionally, **Interpolation** can be individually set for a keyframe. **Applying an Interpolation to an Individual Keyframe** *is covered later in this section.*

Selecting a Frame or Keyframe in a Motion Path

A frame or keyframe can be selected simply by clicking on it. If, however, the frames are close together and are overlapping, a keyframe can still be selected:

- 1. Click (select) a frame on a Motion Path that is behind the keyframe.
- 2. Hold the **Alt** key down, and then click the keyframe as many times as necessary to advance to the keyframe.

Interpolation

<u>Overview</u>

The transition of the animation as it progresses through a keyframe is controlled by the **Interpolation** setting. The **Motion Path** in the previous figure is set to **Linear Interpolation**, which is the default setting.

To access the **Interpolation** settings, select the object, and then right-click to display the context menu. Right-click to display the object context menu, select **Motion Path > Interpolation Mode** and then select **Linear**, **Jump** or **Spline**.

and the second	
Show Center of Rotation Paste	Path Spline

Interpolation Mode Menu

The Interpolation set for the object applies to all keyframes in its Motion Path.

NOTE

If working with a Motion Path that contains multiple Interpolations, be cautious about applying an Interpolation from the object context menu, as it will reset all keyframes to the selected Interpolation. *Refer to Applying an Interpolation to an Individual Keyframe, covered later in this section, for information on applying an Interpolation to an individual segment of a Motion Path.*

Linear Interpolation

When Linear Interpolation is specified for a Motion Path, the object moves at a constant speed in a straight line from keyframe to keyframe. The speed can vary in different keyframe-to-keyframe segments of the Motion Path, depending on the length of the segment and frame location of the keyframes, but is always constant between keyframes.



Linear Interpolation Showing Constant Speeds Between Keyframes

Jump Interpolation

When **Jump** is specified for the **Motion Path**, the object jumps to the next keyframe without following any path in between the two keyframes. The object remains in the same position until the animation reaches the next keyframe, at which point the object jumps to its new position.



Jump Interpolation

Spline Interpolation

When **Spline Interpolation** is specified, the **Motion Path** is mapped to a spline curve that is programmed in the Lyric software.



Spline Interpolation

Keyframes that have **Spline Interpolation** applied, have **Control Point** and **Acceleration** adjustment controls not present in **Linear** and **Jump Interpolation**.

- The Start Keyframe of a Spline Motion Path can be modified by adjusting its Leading Control Point. A Leading Control Point affects the Motion Path in the forward direction from the keyframe. The Leading Control Point also has an Acceleration Control which controls the velocity of the animation as it progresses from the keyframe to the next keyframe. The Start Keyframe has no Following Control Point, as it marks the first frame of the animation and there is no animation preceding it.
- The End Keyframe of a Spline Motion Path can be modified by adjusting its Following Control Point. A Following Control Point affects the Motion Path that precedes the keyframe. The End Keyframe has no Leading Control Point or Acceleration Control, as it marks the last frame of the animation and there is no animation succeeding it.
- An Intermediate Keyframe of a Spline Motion Path can be modified by adjusting its Leading and/or Following Control Points. The Leading Control Point also has an Acceleration Control which controls the velocity of the animation following the keyframe. Note that the Leading Control Point, the Keyframe and the Following Control Point lie on the same line, and that this line is tangent to the Spline curve. The Control Points can be set to move independently by breaking the tangent. Breaking the Tangent is covered later in this section.

Experiment with modifying the **Spline** curve. Use the mouse to move the **Acceleration Control** on the **Start** keyframe up and down. Observe how the **Motion Path** following the selected keyframe changes. The **Motion Path** is composed of dots representing individual frames. Changing the **Acceleration Control** position changes the density of the dots at different points along the **Motion Path** following the keyframe, although it does not change the shape of the curve itself.

- As the **Acceleration Control** is moved closer to the **Keyframe**, the density of the dots increases as it moves forward in the animation, away from the keyframe.
- As the **Acceleration Control** is moved away from the **Keyframe**, the density of the dots decreases as it moves forward in the animation, away from the keyframe.

When an animation executes, it progresses from one dot to the next in the same length of time. As a result, the physical distances between the dots affects the speed of the object through the animation. Setting the acceleration is similar to setting **Ease**.

- The closer together the dots, the more slowly the object moves through the **Motion Path**.
- The further apart the dots, the more quickly the object moves through the **Motion Path**.



Motion Path Acceleration and Deceleration

Execute the animation with the **Acceleration Control** set in different positions. Observe how the object accelerates where the dots are farther apart, and decelerates where they are closer together.

The acceleration can be reset to a point half-way between the keyframe and the **Leading Control Point**. Select the **Acceleration Control** so that it turns white. Right-click to display the **Acceleration Control** context menu, and then select **Reset Acceleration**. The acceleration is now reset.



Accelerator Context Menu

The shape and angle of the **Spline Motion Path** can be modified. Using the mouse, a **Control Point** or a keyframe can be dragged to a new position.



Modifying a Spline Motion Path

Applying an Interpolation to an Individual Keyframe

When a **Motion Path Interpolation** is set from the object context menu, the **Interpolation** is applied to the entire **Motion Path**. **Interpolation** can be individually applied to each segment of a **Motion Path** that lies between two keyframes. To do so:

- 1. Select a keyframe, its **Acceleration Control** or a frame on the **Motion Path** so that it turns white, and then right-click to display the respective context menu.
- 2. Select **Interpolation**, and then select the desired **Interpolation**. The selected **Interpolation** is applied to the keyframe and the segment of the **Motion Path** that it controls as follows:
 - If the selected element is either the Start keyframe, an Intermediate keyframe, or an Acceleration Control, the Interpolation is applied to the segment of the Motion Path following the keyframe or Accelerator Control through to the next keyframe on the Motion Path.
 - If the keyframe is the End keyframe, the Interpolation is applied to the segment of the Motion Path preceding the keyframe backwards to the next-to-last keyframe on the Motion Path. The Interpolation for the last segment of a Motion Path can be set from either the next-to-last or last keyframe in the Motion Path.
 - If a frame that is not a keyframe is selected, the Interpolation is applied to the segment of the Motion Path from the keyframe preceding the selected frame through to the keyframe following the selected frame.

The following figure shows how mixing **Interpolations** affects the presence of **Control Points** in the **Spline** segments.



Mixed Interpolations

To reapply a single **Interpolation** to an entire **Motion Path**:

- 1. Select the object, and then right-click to display the object context menu.
- 2. Select Motion Path > Interpolation, and then select the desired Interpolation.

Modifying/Deleting/Copying/Pasting a Keyframe

The **Interpolation** for a keyframe can be set individually from the **Keyframe** context menu. Additionally, attributes of the keyframe can be copied and pasted to other keyframes from this menu. To display the **Keyframe** context menu, select (click) the keyframe so that it turns white, and then right-click.



Keyframe Context Menu

This menu is almost the same as the **Control Point** context menu opened by right-clicking on a **Control Point** of a **Spline Motion Path**. The **Control Point** context menu does not offer the **Delete** and **Interpolation Mode** functions, but does offer the **Break Tangent** function, which is covered later in this section.

The following functions are available from this menu. Note that each **Paste** item is grayed out until its respective **Copy** operation is performed.

- Delete: Removes the selected keyframe from the Motion Path.
- Interpolation Mode: Opens the Interpolation Mode menu, from which Linear, Jump or Spline Interpolation can be selected and applied to the selected keyframe.
- **Copy X State:** Copies the **X**-position of the currently selected keyframe, which can then be pasted to a different keyframe in the same or a different **Motion Path**.
- **Copy Y State:** Copies the **Y**-position of the currently selected keyframe, which can then be pasted to a different keyframe in the same or a different **Motion Path**.
- **Copy Z State:** Copies the **Z**-position of the currently selected keyframe, which can then be pasted to a different keyframe in the same or a different **Motion Path**.
- **Copy All:** Copies the X-, Y-, and Z-positions of the currently selected keyframe, which can then be pasted to a different keyframe in the same or a different **Motion Path**.
- Copy Path: Copies the Motion Path on which the currently selected keyframe is situated, which can then be pasted to a different object. *Refer to Copying and Pasting a Motion Path later in this section for additional information.*

- **Paste X State:** Pastes the copied **X**-position to the currently selected keyframe. The **Motion Path** updates to reflect the change.
- **Paste Y State:** Pastes the copied **Y**-position to the currently selected keyframe. The **Motion Path** updates to reflect the change.
- **Paste Z State:** Pastes the copied **Z**-position to the currently selected keyframe. The **Motion Path** updates to reflect the change.
- **Paste All:** Pastes the copied X-, Y-, and Z-positions to the currently selected keyframe. The **Motion Path** updates to reflect the change.
- Paste Path: Pastes the copied Motion Path to the currently selected object. Refer to Copying and Pasting a Motion Path later in this section for additional information.
- Show Path: Toggles the Motion Path display on and off.

Copying and Pasting a Motion Path

A **Motion Path** can be copied from one object and pasted to another.

To copy a Motion Path from an object, use one of the following methods:

- Right-click on the object, and then select **Motion Path > Copy Path**.
- On a **Motion Path**, select any frame, keyframe, **Control Point** or **Acceleration Control** so that it turns white. Right-click to display its context menu. Select **Copy Path**.

To paste a Motion Path to an object use one of the following methods:

- Right-click on the object to which the **Motion Path** is to be pasted, and then select **Motion Path** from the object context menu. The **Motion Path** menu is displayed. Select **Paste Path**.
- On a **Motion Path**, select any frame, keyframe, **Control Point** or **Acceleration Control** so that it turns white. Right-click to display its context menu. Select **Paste Path**. The following prompt is displayed:



Discard Path Prompt

Click Yes to apply the copied Motion Path, or No to cancel the Paste operation.

When a **Motion Path** is pasted to an object, it then follows exactly the same path as the object from which the **Motion Path** was copied. To offset the path of an object, so that follows the same path shape, but at a different location:

- 1. Select the object.
- 2. Open the Lyric **Properties** window, and then click the **XYZ** tab to display **XYZ Properties**.

Properties	
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Position	
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Y -1.280 -	ㅋ
7 2000	3
2 1	<u> </u>
Scale	-
X 1.000	-
Y 1.000	3
z 1.000 -	3
Lock Aspect F	latio
Center	
× 0.000 -	-
Y 0.000 -	3
7 0.000	
[0.000]	<u> </u>
Relative to Po:	sition
Reset to Def	ault

XYZ Properties

3. Located at the bottom of the **Properties** tab is either the **Single** or **Global Keyframe Adjust** icon. Clicking the icon toggles the between the two icons.





Single Keyframe Adjust

Global Keyframe Adjust

- When the **Single Keyframe Adjust** icon is active, any change to the **XYZ** attributes are applied only to the selected keyframe for the object.
- When the **Global Keyframe Adjust** icon is active, any change to the **XYZ** attributes are applied to *all* keyframes for the object.

If necessary, click the icon so that the Global Keyframe Adjust icon is displayed.

- 4. Adjust the **X**, **Y** and/or **Z** attributes to reposition the object. Note that the **Motion Path** is transported as well.
- 5. Execute the animation. The object follows the same-shaped **Motion Path**, but now starts and ends in a different position.

Breaking/Unbreaking the Tangent - Spline Interpolation Only

When **Spline Interpolation** is set, the animation normally proceeds through keyframes following a smooth curve. When adjusted, the **Leading Control Point**, the keyframe and the **Following Control Point** remain in a straight line with each other, and the line remains tangent to the **Motion Path**. It may, however, be desirable to abruptly change the direction of the animation.

To do so, click either the **Following** or the **Leading Control Point** of a keyframe. Right-click to display the **Control Point** context menu, and then select **Break Tangent**. The menu closes and the selected **Control Point** turns white. If the menu is opened again, a check appears next to the **Break Tangent** item.



Breaking the Tangent

Move the selected **Control Point** to another position. Note that its partner **Control Point** does not automatically adjust, and that the **Motion Path** has taken an abrupt change of direction. Each **Control Point** vector is still tangent to the portion of the curve it controls, but the two vectors no longer lie on the same line. Because this example shows a change in the **Following Control Point**, the animation *preceding* the keyframe is modified. The animation following the keyframe remains unchanged.



Broken Tangent

The **Control Point** vectors can be locked together again. Click the **Control Point** to which the broken tangent has been applied. Right-click to display the **Control Point** context menu. Select **Break Tangent** from the menu. The menu closes. The **Motion Path** does not change until the **Control Point** is selected and modified again. When the **Control Point** is modified after restoring the tangent, the tangents of the partner **Control Points** again lie on the same line and move is equal, opposite directions when repositioned.

Clearing a Motion Path

A **Motion Path** can be cleared from an object. When a **Clear** operation is executed, the **Motion Path** is removed from the object. To clear the **Motion Path**:

- 1. Click on the object, and then right-click to display the object context menu.
- 2. Select Clear. The following prompt is displayed.



Destroy Motion Path Prompt

3. Click OK to remove the Motion Path from the object, or Cancel to cancel the operation.

When a **Motion Path** is cleared, it disappears from the **Canvas**. If the animation is then executed, the object still follows the same path. Keyframes are not removed.

If the message is recorded, and then read, the path of the object reverts to the **Default Interpolation**. at which it was recorded. The frame locations of the keyframes are kept intact, but their **Interpolations** may have changed.

Ease

Ease is an attribute that can soften the entrance into or exit from an Object, Attribute or Pause Keyframe, a Default Effect, Advanced Image Effect, Duet SD Multi FX or Playlist Effect. Ease can be applied to either the beginning or end of the event, or both. The length of the Ease can be set as well.

- Keyframe Set on an Object or Attribute Timeline: Ease can control the rate of change of an object's motion or other attributes through a Keyframe. Refer to Timelines and Keyframe Graphs for information on Object and Attribute Timelines.
- Animation: Ease can slow down an animation into a Keyframe Pause, or speed it up out of a Keyframe Pause. Refer to Properties: Loops and Pauses for information on setting Keyframe Pauses.
- Default Effect, Advanced Image Effect, Duet SD Multi FX, Playlist Effect: Ease can smooth out the start and/or end of an effect.

The **Ease** dialog box is accessed from a variety of areas in Lyric. *Refer to the sections mentioned above for details.*

ase Options
Ease Type
Ease In 💌
Ease Time
OK Cancel

Ease Options

There are four **Ease Types**:

- **No Ease: Ease** is not applied.
- Ease In: Ease is applied to the beginning of the change in an attribute, effect, etc.
- Ease Out: Ease is applied to the end of the change in an attribute, effect, etc.
- Ease In/Out: Ease is applied to both the beginning and end of the change in an attribute, effect, etc.

Ease Time indicates the duration of the **Ease** effect in frames. An **Ease** does not add time to the overall duration of the effect or animation, but rather is incorporated into the duration.

Ease Time is applied separately to the **In** and **Out** points. An **Ease Time** of **15** frames results in a **15**-frame **Ease** applied to the beginning of the effect, animation or transition, and a **15**-frame **Ease** applied to the end of a the effect, animation or transition. **Frame** rate is based on the currently active video standard.

To apply an **Ease**:

- 1. Select an **Ease Type** from the **Ease Type** drop-down list box.
- 2. Set a duration for the **Ease** in the **Ease Time** frame counter.
- 3. Click OK to apply the Ease, or Cancel to cancel the application/modification of the Ease settings.

Interpolation Modes

Timeline > Right-Click on Keyframe > Modify Keyframe Attributes Keyframe Graph > Right-Click on Keyframe > Interpolation Mode

Default Interpolation: Config Menu > Preferences > Animation Settings

Interpolation Mode determines how an animation transitions from one Keyframe to the next. There are four Interpolation Modes: Linear (the most commonly used), Spline, Jump (also known as None) and Ease. One of these Interpolation Modes always serves as a Default Interpolation, i.e. an Interpolation that is applied to every Keyframe in the animation unless otherwise changed individually in the Timeline or Keyframe Graph. The Default Interpolation is determined by the Default Interpolation setting in the Config Menu > Preferences > Animation Settings. Setting Interpolation Mode for an individual Keyframe via the Timeline or the Keyframe Graph allows for precision control of the animation path and speed through a Keyframe.

A **Timeline** or **Keyframe Graph** can contain a mix of individually set **Interpolation Modes**. A new keyframe added to the **Keyframe Graph** assumes the same **Interpolation Mode** as the previous **Keyframe**. Once a new **Keyframe** is added, its **Interpolation Mode** can be changed as described below.

Detailed descriptions of the Interpolation Modes and their specific settings follow Setting the Interpolation Mode.

Setting Interpolation Mode

To set or change the Interpolation Mode for a Keyframe:

• On the Timeline: Right-click on the Keyframe on the Timeline. The Keyframes are marked by inverted triangles on the Timeline. This example uses the Keyframe at 02:00 on the Timeline for the 3D character N in an animation. Select Modify Keyframe Attributes from the context menu. The Modify Keyframe Attributes dialog box is displayed. Both Keyframe Frame (i.e. position on the Timeline) and Interpolation can be set.



Setting Interpolation Mode from the Timeline

Note that in this example, the **Interpolation Mode** is applied to all attributes of the **Keyframe** at **02:00**. If the **Timeline** for **N** is expanded to show the **Timelines** for each of the attributes of **N**, the **Interpolation** can be set separately for each attribute at **Keyframe 02:00**. To view the **Timelines** for the individual attributes of an object, click the **+** symbol to the left of the **Timeline** for that object.

• On the Keyframe Graph: Right-click on the Keyframe on the Keyframe Graph. This example uses the Keyframe at 02:00 on the Keyframe Graph for the X-position of the 3D character N in an

animation. Select **Interpolation Mode** from the context menu, then select the **Interpolation** choice from the submenu.



Setting Interpolation Mode from the Keyframe Graph

Interpolation Modes

The following examples are based on an animation in which the letter **N** starts at the lower left corner of the screen, traveling clockwise from corner to corner. The **Keyframe Graph** shown is that of the **X** (horizontal dimension) attribute. **Keyframes** are positioned at 1-second intervals up to **04:00** seconds, and appear as red dots on the **Keyframe Graphs**.

Linear is the most commonly used type of interpolation. It progresses an object in an animation at constant speed from keyframe to keyframe. As shown in the Keyframe Graph below, when N is moving straight up from 00:00 seconds to 01:00 second, the X-position does not change. From 01:00 second to 02:00 seconds, N travels from left to right across the screen. This is reflected in the increasing X-value. on the Keyframe Graph. When N drops straight down, there is no change in X, and when it travels left to its starting point, the X-value decreases. All changes in the X value between two keyframes occur at a constant rate (no acceleration/deceleration).



Linear Interpolation Mode

Spline provides the ability to vary the speed and path the object follows during the animation. When a Spline Interpolation is specified, preset Spline attributes are automatically applied to the speed and path of the animation. From each Keyframe on the Keyframe Graph, extends a vector that can be adjusted for both angle and length. The two Keyframes that define a segment of a curve are used as control points from which the vectors can be adjusted. The illustration below shows the same animation as above, with a Spline Interpolation applied.

Note that the rate of change in **X**-position between two keyframes is no longer constant. A steeper slope in the curve results in a faster rate of change in **X**-position; a gentler slope in the curve results in a slower rate of change in **X**-position.

When applied to the **EffectPct** attribute in a **Roll**, **Crawl** or **Type On**, **Spline** adjustment can be used to vary the speed or even reverse the direction during execution.

If a **Spline** keyframe is positioned between two other **Spline** keyframes, the center keyframe will have two vectors: one that controls the transition from the preceding **Keyframe**, and one that controls the transition to the following **Keyframe**. Normally, the two vectors extending from a **Keyframe** form a straight line which is tangent to the curve. A change in angle and magnitude of one vector results in an equal, but opposite change in the other vector. Each vector can be individually set, however, by right-clicking either vector, then selecting **Break Tangent** from the context menu. The vectors can be realigned by right-clicking either vector, then selecting **Lock Tangent** from the context menu. The illustration below right shows a broken tangent.



Spline Interpolation Mode

Jump causes the animation to shift between Keyframes instantaneously, without following a continuous path from one Keyframe to the next. Jump is the same as None, which is a Default Interpolation setting found in the Config Menu > Preferences > Animation Settings.



Jump (None) Interpolation Mode

• Ease Interpolation smooths out the motion through the point of the Keyframe. The illustration below shows a one-second In/Out Ease applied to the same animation as pictured above. The path is essentially the same as that in a Linear Interpolation, but the change from one direction to the next is softened. Note that the Ease option is not available as a Default Interpolation.

When a **Keyframe** is assigned an **Ease Interpolation**, the **Ease Options** dialog box shown below is displayed. An **Ease Type** (**No Ease**, **Ease In**, **Ease Out**, **Ease In/Out**) can be selected from the drop-down list box. An **Ease Time**, which determines the duration of the **Ease**, can be set as well. To modify **Ease Options** at any time, right-click on the **Keyframe**, select **Interpolation Mode > Ease** then enter the modifications in the **Ease Options** dialog box.



Ease Interpolation Mode

Refer to Animation: Ease for additional information on Ease settings.

Loops/Pauses Properties

Properties > Loops/Pauses

Overview

A Lyric animation can contain **Pause** points which temporarily stop the animation, **Loops**, which are segments of the animation that can repeat a specified or indefinite number of times. This can provide instant control over the animation while it is executing to air, especially crucial for live broadcasts in which timing is not always precise. Parameters specifying how the **Loops** and **Pauses** execute are set in the **Properties > Loops/Pauses** tabs.

To access Loops/Pauses Properties, select the Loops/Pauses tab in the Properties window. When the tab is first selected, the Pause Options and Ease Options dialog boxes shown below to the right of the Loops/Pauses tab is not displayed. They are displayed as described later in this section when the Pauses Enabled checkbox in the Loops/Pauses tab is selected.



Loops/Pauses Properties

Loops Properties

When setting up a **Loop**, the **Time Indicator** can be at any position on the **Timeline**, although the **Frame** at which the **Time Indicator** is positioned becomes the default **Start Frame** for the **Loop**. This can be changed in the **Start Frame** field.

The following **Loops** parameters can be set:

Loops Properties	Description
Enabled	Select (check) the Enabled checkbox to enable Looping . A new Loops object is added to the Timeline , the Keyframe Graph and the Scene Graph .
	Each subsequent Loop that is added to the animation results in a new Keyframe added to the existing Loop Object Timeline/Keyframe Graph . There is only one Loop Object in any animation.
Start Frame	Start Frame defines the Start Time of the loop.
End Frame	End Frame defines the End Time of the loop.
Loops	Number of Loops to be executed. Range is 0 to 50 . Loops is disabled if Infinite is selected (<i>see below</i>).
Infinite	Selecting (checking) Infinite continually executes the Loop until stopped from Lyric.

To set up a Loop:

- 1. Set a Start Frame and an End Frame in the respective fields.
- 2. Enter the number of Loops in the Loops field, or select Infinite.
- 3. Select (check) **Enabled**. The **Loop** is now ready to execute. If this is the first **Loop** set in the animation, a new **Loops** object is added to the **Timeline**, the **Keyframe Graph** and the **Scene Graph**. A **Keyframe** is also added to the **Loops Timeline** at the **Start Frame** of the **Loop**. Each subsequent **Loop** added to the animation adds another **Keyframe** to the **Loops Timeline**.

To view and/or modify and existing Loop:

• Move the **Timeline** indicator to the **Start Frame** of the **Loop**. The **Loop** attributes are displayed in the **Properties > Loops/Pauses** tab, and can be modified.

To escape a **Loop** in progress and stop animation (all systems):

• Press **Esc** or click the button on the **Transport Controls**.

To escape a **Loop** in progress and play out the animation to its conclusion (Duet LE/LEX/PCI/PCI+ only):

• Press Esc.

The following conditions apply to **Loops**:

- Loops cannot overlap or nest. For example, if there is a Loop from 00:00:01:00 to 00:00:03:00, there cannot be a Loop starting at 00:00:02:15. The Loop must start and end before 00:00:01:00, or it must start and end after 00:00:03:00.
- On a Duet LE/LEX/PCI/PCI+, there is a limit of one Loop in an animation. Additionally, Loops can only be executed using Load-and-Play mode, not Transfer (Xfer) or Streaming Animation mode.

Pauses Properties

When a **Pause** is set in an animation, the animation stops temporarily at the **Frame** or event specified for the **Pause**, then restarts when manually or automatically triggered, as determined by the **Pauses** setup. Multiple **Pauses** can be set in an animation. There are two types of **Pauses**, both of which can be set in the same animation:

- A Keyframe Pause occurs at a set Keyframe in an animation. This type of Pause is set up from the Properties > Loops/Pauses tab (see figure above). Keyframe Pause setup is described below.
- An Event Pause is applied to an object that has a self-contained animation, such as a Roll, Crawl or Type On (Slow Reveal). The Event Pause occurs at a point where a certain event has occurred. For example, a Roll can be set to Pause after each Row is executed, or after a Roll window is full. Event Pause setup is described in the section on Properties > Animation.

To set up a Keyframe Pause:

- 1. Move the **Time** indicator on the **Timeline** to the position at which the **Pause** should occur. For example, use the time **00:00:03:03**.
- 2. Select **Enabled** in the **Properties > Loops/Pauses** tab. The **Pause Information** window (*see figure above*) now displays:

Pause for Keystroke (default Pause For setting)

After 00:00:03:03

3. Set Pauses Parameters as follows:

Description	Description
Enabled	Select (check) the Enabled checkbox to enable the creation of a Pause at the current position of the Time Indicator on the Timeline of an animation. When the first Pause is set in an animation, a Pause object is added to the Timeline , the Keyframe Graph and the Scene Graph . A Keyframe is also added to the Pause object at the specified Frame in the animation.
	Each subsequent Pause that is added to the animation results in a new Keyframe added to the existing Pause Object Timeline/Keyframe Graph . There is only one Pause Object in any animation.
Pause Information	Describes whether the Keyframe Pause at that Frame in the animation is programmed to be triggered by a keystroke, after a predetermined Timeout , or by a GPI . The Pause Information reflects the settings in the Pause Options dialog box.
Modify Pause	Selecting Modify Pause displays the Pause Options dialog box (<i>see figure above</i>).

Pause Options

Pause Options specify precisely how the **Pause** is to be applied and how the animation is to be triggered after the **Pause**. Set parameters, then select **OK** to apply, or **Cancel** to cancel the changes..

Parameter	Description
Pause At indicand how the Pa	ates which frame number at which the Pause Keyframe is positioned, ause is to be executed with regard to that Keyframe .
Keyframe In	Keyframe In: Pause for Keyframe In renders the animation through the Keyframe directly preceding the Pause Keyframe . When triggered, the animation continues at the start of the Keyframe . The Pause Information window would display:
	Pause for Keystroke (or Timeout, GPI or Replay)
	Before 00:00:03:03
Keyframe Out	Keyframe Out: Pause for Keyframe Out renders the animation through the Pause Keyframe. When triggered, the animation continues at the start of the frame directly following the Pause Keyframe. The Pause Information window would display:
	Pause for Keystroke (or Timeout, GPI or Replay)
	After 00:00:03:03
Pause Type	The Pause Type field (which is unlabeled) describes what defines the Pause , i.e. a Keyframe , a Row (as in a Roll), etc. In the Properties > Loops/Pauses tab, this is always set to Keyframe .
Pause Applied To	The Pause Applied To field (not labeled) specifies when the Pause is applied. In the Properties > Loops/Pauses tab, this is always set to Current . This indicates that the Pause applies only to the Keyframe at which it was set.
Ease	Selecting Ease displays the Ease Options dialog box (<i>shown at right in the figure above</i>). Four types of Ease are available: No Ease , Ease In, Ease Out and Ease In/Out . The Ease Time , which is the duration of time over which the Ease is applied, can also be set. <i>Refer to Ease, found in the section on animation, for additional information.</i>
Pause For indi Pause Keyfrar	cates what type of trigger is to be used to resume the animation after a ne .
Keystroke	The animation pauses at the specified Pause , then continues when triggered by a any keystroke except Esc .
Timeout	The animation pauses at the specified Pause , then continues after the specified Timeout .
GPI	The animation pauses at the specified Pause , then continues when triggered by the specified GPI .

Parameter	Description
Replay	Replay is a trigger type that is used for Multi FX execution. A Replay Pause point inserted into message divides the message into two segments. The first segment becomes the In Effect of the Multi FX execution; the second segment becomes the Out Effect of the Multi FX execution. Both segments are triggered by clicking the Play button in the Multi FX dialog box. Note that when using a Replay Pause, the In and Out Effects in the Multi FX Control dialog box should be set to Use Message.

To reset the settings in the **Pauses Options** dialog box:

• Select Reset.

Animation Properties

Properties > Animation

Various animation parameters of an object can be set in the **Animation** tab in the **Properties** window. These settings are used to adjust **Start Frame**, **End Frame**, **Duration** and other parameters of an object's animation. In the instances of **Rolls**, **Crawls** and **Type Ons** (**Slow Reveals**), **Speed Number** and **Rate** can be set as well. The **Animation** tab is shown here in four different states to show the dropdown menu which lists the animated elements on the Canvas, as well as the special options that are available for **Roll**, **Crawl** and **Type On**.

	Properties _UA	Properties _ 🗆 🗙
Animation Clock/Timer	Animation Clock/Timer	Animation Clock/Timer
Object 2D Roll 1 💌	Object 2D Crawl 1 💌	Object 2D TypeOn 1 💌
Modify Timeline	Modify Timeline	Modify Timeline
Start Frame	Start Frame	Start Frame
End Frame	End Frame	End Frame
C UUIUUIUSIUU		
Duration	Duration	Duration
Speed Number	Speed Number	Speed Number
Rate (scanlines/field)	Rate (pixels/field)	Rate (chars/sec)
C 1.320 ≟	○ ^{2.953} 🗄	
Proportional Scaling	Proportional Scaling	Proportional Scaling
Roll Options	Crawl Options	TypeOn Options
Pause Options	Pause Options	Pause Options
Pause for Keystroke	Pause for Keystroke	Pause for Keystroke
JAt Window Full	At Word Begin	At Row Begin
Soft E Random	Soft Random	I Soft I Randomi
Apply Apply All Reset	Apply Apply All Reset	Apply Apply All Reset
	Animation Clock/Timer ▲ ► Object 2D Roll 1 ▼ Modify Timeline Start Frame C 00:00:00:00 ⊕ End Frame C 00:00:05:00 ⊕ Duration C 00:00:05:00 ⊕ Duration C 00:00:05:00 ⊕ Rate (scanlines/field) C 1.320 ⊕ Pause for Keystroke At Window Full Soft Random Apply Apply All Reset	Animation Clock/Timer Animation Clock/Timer Animation Object 2D Roll 1 Object 2D Crawl 1 Object Modify Timeline Start Frame O0;00;00;00;00; O0;00;00;00; O0;00;00;00; End Frame 00;00;00;00; O0;00;00; O0;00;00; O0;00;00; O0;00;00; Duration O0;00;00; O0;00;00; O0;00;00; O0; O0;00; O0; Duration Ouration Speed Number Ouration Ouration Ouration Ouration Curation Curation

Animation Properties for 2D Text Animations

Parameter			Descrip	tion	
Object	The Object drop-down list box lists all of the objects in the animation. From this dropdown menu, the user can select an object (2D Text window, bitmaps, 3D text, individual light sources, Camera , etc.) and view and/or edit its Object Timeline parameters.				
Modify Timeline: When an Object Timeline parameter (Start Frame , End Frame , Duration , Speed Number , Rate) is set, fields for the object's other Object Timeline parameters are updated to reflect the change.					
Start Frame	Sets the Sta modified, the defaults to 0 a Speed Nu	e Duration a Duration a Uunless the Umber (see b	r the animat and Rate are updated Rat below).	ion. When e updated. :e matches	Start Frame is Speed Number a Rate assigned to
End Frame	Sets the End Frame for the animation. When End Frame is modified, the Duration and Rate are updated. Speed Number defaults to 0 unless the updated Rate matches a Rate assigned to a Speed Number (<i>see below</i>).				
Duration	Sets the duration of an Object Timeline . When Duration is modified, the End Frame and Rate are updated. Speed Number defaults to 0 unless the updated Rate matches a Rate assigned to a Speed Number (<i>see below</i>).				
Speed Number	Sets execution speed for Rolls, Crawls and Type Ons (Slow Reveals) only. Click the Speed Number radio button, then enter a whole number between 1 (slowest) and 9 (fastest) into the spin box or use the up/down arrows. 0 is a special case as described below. The Speed Numbers correspond to the following preset Rates. Units are Scanlines/Field for Rolls, Pixels/Field for Crawls and Characters/Second for Type Ons (Slow Reveals).				
	0: This is the default setting for any Rate value that does not match a Speed Number Rate . When the Rate matches one of the preset Speed Number Rates , the Speed Number field updates to the corresponding Speed Number .				
	1: 0.125	3: 0.500	5: 2.000	7: 6.000	9: 10.000
	2: 0.250	4: 1.000	6: 4.000	8: 8.000	10: 12.000
	When Spee are updated	d Number is	s modified, E	End Frame,	Duration and Rate
Rate	Sets execution speed for Rolls, Crawls and Type Ons (Slow Reveals) only. Click the Rate radio button, then input a Rate value. Units are Scanlines/Field for Rolls , Pixels/Field for Crawls and Characters/Second for Type Ons (Slow Reveals). Range is 0.000000 - 50.000000 .				
	When Rate Speed Num Rate assign	is modified, Iber defaults ed to a Spe	End Frame s to 0 unless ed Number	and Durati the update (see above	on are updated. d Rate matches a).

Parameter	Description
Proportional Scaling	Proportional Scaling determines how or if the Keyframes are redistributed when Start Frame , End Frame and/or Duration of an Object Timeline are changed.
	 When Proportional Scaling is enabled (checked), Keyframes are redistributed when the Start Frame, End Frame and/or Duration are changed, to retain their original relationship to the duration of the Object Timeline.
	 When Proportional Scaling is disabled (unchecked), Keyframes retain their positions when Start Frame, End Frame and/or Duration are changed.
	Refer to the chapter on Timelines for information on scaling.
Options	Options specifies precisely how an animation is to be applied. Options includes Pause Options, which determines how a Pause is applied and how the animation is to be triggered after the Pause. Options are available only to Rolls, Crawls and Type Ons (Slow Reveals). See Options below for details.
Apply	Applies the parameters to the selected object in the animation.
Apply All	Applies the parameters globally to all objects in the animation.
Reset	Resets the parameters to system defaults.

Options

Options specifies precisely how an animation is to be applied. **Options** includes **Pause Options**, which determines how a **Pause** is applied and how the animation is to be triggered after the **Pause**. **Options** are available only to **Rolls**, **Crawls** and **Type Ons** (**Slow Reveals**). The **Pauses** set in this tab are **Event Pauses**, and can be applied only to **Rolls**, **Crawls** and **Type Ons** (**Slow Reveals**).

If the object is a **Roll Window**, a **Crawl Window**, or a **Type On** (**Slow Reveal**) **Window**, the **Options** area is labeled **Roll Options**, **Crawl Options** or **Type On Options** respectively. Conditions specific to each are noted.

Parameter	Description
Pause Options	Pauses can be programmed into an animation. When a Pause is set in an animation, the animation stops temporarily at the Frame or event specified for the Pause , then restarts when manually or automatically triggered, as determined by the Pauses setup. See Pause Options below for details.
Soft	The Soft setting determines how a Roll , Crawl or Type On (Slow Reveal) enters and leaves its respective window.
	 When Soft is enabled (checked), a Roll, Crawl or Type On (Slow Reveal) fades in as it enters its respective window and fades off as it leaves its respective window.
	 When Soft is disabled (unchecked), a Roll, Crawl or Type On (Slow Reveal) displays at full video as it both enters and leaves its respective window.
Random	The Random setting determines how the characters in a Type On (Slow Reveal) enter the Type On window.
	 When Random is enabled (checked), the characters are displayed on the screen in random order, row by row.
	 When Random is disabled (unchecked), the characters are displayed from left to right, starting from the top row, and progressing through each subsequent row.

Pause Options

When a **Pause** is set in an animation, the animation stops temporarily at the **Frame** or event specified for the **Pause**, then restarts when manually or automatically triggered, as determined by the **Pauses** setup. Multiple **Pauses** can be set in an animation. There are two types of **Pauses**, both of which can be set in the same animation:

- A Keyframe Pause occurs at a set Keyframe in an animation. This type of Pause is set up from the Properties > Loops/Pauses tab. See Properties > Loops/Pauses for details.
- An Event Pause is applied to an 2D Text object that has a self-contained animation; a Roll, Crawl or Type On (Slow Reveal). The Event Pause occurs at a point where a certain event has occurred. For example, a Roll can be set to Pause after each Row is executed, or after a Roll window is full. This type of Pause is set up from the Properties > Animation tab (shown above).

To set up an Event Pause:

 In the Object drop-down list box in the Animation tab shown above, select the object to which to apply the Pause. To see how this works, create a Roll window, then select 2D Roll 1 as the object. The Information window (unlabeled) in the Roll Options area indicates that the object does not have a Pause applied. The Options button is grayed out.

Properties	- O ×
Loops/Pauses Animation (Clock/1
Object 2D Roll 1 💌	
Modify Timeline	:
Start Frame	
C 00:00:00:00	
End Frame	
C 00:00:05:00	
Duration	
00:00:05:00	
Speed Number	
C 0 ÷	
Rate (scanlines/field)	i.
C 1.567 ÷	
Proportional Scaling	
Roll Options	
Pause Options	
No Pause	
For 2D Roll 1	
Soft Random	
Apply Apply All Rese	t

Pause Setup - 2D Roll 1 Selected
2. In the **Roll Options** area, select (check) **Pause**. The **Information** window displays the default setting for a **Roll Pause**. The **Options** button becomes available.



Default Roll Pause Options

3. Select the **Options** button. The **Pause Options** dialog box is displayed.

Pause Options
Pause At
Row C Out
Every Ease
Pause For
Keystroke
C Timeout
00:00:00:00
C GPI
_
C Replay
OK Cancel

Pause Options Dialog Box Showing Roll Settings

4. The parameters for all types of **Event Pauses** are listed below. Set parameters, and then select **Apply** or **Apply All** (described above).

Parameter	Description
Pause At indic and how the Pa	ates which frame number at which the Pause Keyframe is positioned, ause is to be executed with regard to that Keyframe .
Keyframe In	Keyframe In is not applicable to Event Pauses.
Keyframe Out	Keyframe Out is not applicable to Event Pauses.
Pause Type	 The Pause Type field (which is unlabeled) describes what defines the Pause, i.e. a Keyframe, a Row (as in a Roll), etc. In the Properties > Animation tab, they can be set as follows. <trigger> specifies the Pause For selection, i.e. Keystroke, Timeout, GPI or Replay.</trigger> Row: The Roll pauses before each row, including the first, is executed. When the last few rows of the Roll fill the window, and no rows remain below the bottom of the Roll Window, the Roll then continues execution without pausing until the end. The Information Window would then display Pause for <trigger> At Row Begin.</trigger> Window: The Roll pauses after the Roll Window is full. The Information Window would then display Pause for <trigger> At Window Full.</trigger> Crawl Word: The Crawl pauses before each word, including the first, is executed. When the last few words of the Crawl fill the window, and no complete words remain beyond the right boundary of the Crawl Window, the Crawl then continues execution without pausing until the end. The Information Window, would then display Pause for <trigger> At Word Begin. Caution is advised when applying this type of Pause to a multi-row Crawl.</trigger> Window: The Crawl pauses after the Crawl Window is full. The Information Window would then display Pause for <trigger> At Window Full.</trigger>
	display Pause for <trigger> At Row Begin.</trigger>
Pause Applied To	The Pause Applied To field (not labeled) specifies when the Pause is applied. In the Properties > Animation tab, this is always set to Every . This indicates that the Pause applies every row or window as specified in Pause Type .
Ease	Ease is not applicable to Event Pauses.

Parameter	Description
Pause For indi Pause Keyfrai	icates what type of trigger is to be used to resume the animation after a me .
Keystroke	The animation pauses at the specified Pause , then continues when triggered by a any keystroke except Esc .
Timeout	The animation pauses at the specified Pause , then continues after the specified Timeout .
GPI	The animation pauses at the specified Pause , then continues when triggered by the specified GPI .
Replay	Note: Caution should be taken if specifying a Replay trigger with a Roll, Crawl or Type On (Slow Reveal). Replay is a trigger type that is used for Multi FX execution. A Replay Pause point inserted into message divides the message into two segments. The first segment becomes the In Effect of the Multi FX execution; the second segment becomes the Out Effect of the Multi FX execution. Both segments are triggered by clicking the Play button in the Multi FX dialog box. Note that when using a Replay Pause , the In and Out Effects in the Multi FX Control dialog box should be set to Use Message .

To reset the settings in the **Pauses Options** dialog box:

• Select Reset.

Read Effects

Read Effects provides a quick method for applying animation settings to objects currently on the Canvas or to objects in a file or series of files as they are read. The key feature of **Read Effects** is the ability to save an animation as an .*efx* message, allowing the animation data from that message to be applied to a new set of objects.

Refer to Read Effects - Duet SD/HD or Read Effects - Duet LE/LEX/PCI/PCI+ for setup information.

Read Effects - Duet SD/HD

Read Effects provides a quick method for applying animation settings to objects currently on the Canvas or to objects in a file or series of files as they are read. The key feature of **Read Effects** is the ability to save an animation as an .*efx* message, allowing the animation data from that message to be applied to a new set of objects.

Here's a quick exercise to demonstrate Read FX:

Before you do anything else, set the default path where Lyric will store the new file type you'll be creating. Pull down Lyric's **Config** menu, select **Preferences** and click on the **Default Paths** tab.

Preferences	×
CG Preferences Spelling Default Paths Animation Settings Browser Alignme	ent Windows
Messages C:\Program Files\Chyron\Lyric\Messages Images C:\Program Files\Chyron\Lyric\Images Playlists C:\Program Files\Chyron\Lyric\Playlists Effects C:\Program Files\Chyron\Lyric\Clip Files Clip Files C:\Program Files\Chyron\Lyric\Clip Files 3D. Objects C:\Program Files\Chyron\Lyric\SD. Objects	_
Create Project Hierarchy	
	OK Help

Preferences: Default Paths

Take note of the path specified for **Effects**; as with all of the other default paths, you may change the **Effects** file path here. You will see why this location is important in a moment.

- 1. Create a simple animation with any two objects. You may use imported graphics, **2D Text Windows**, 3D characters or 3D objects.
- 2. Pull down the **File** menu and select **Save As**. You may have to navigate manually to the desired file path where you wish to store *.efx* files; see the next step.

3. Instead of selecting the default format (".*lyr*" for complete Lyric messages), use the drop-down to select the ".*efx*" format. Name the file, then click **Save**.

ave Animati	on					? >
Start Frame 0	50	Image Width 720 Image Height 486	Save RGB	₽ Save Al ar Title	pha	
Save in: 🔂	Effects		•	+ 🗈 💣	:::: : +	
File name:	PracticeEF	⊠file.efx			Save	
File name: Save as type:	PracticeEF	Xfile.efx ts (*.efx)			Save Cancel	

Selecting Lyric Effects File Type

- 4. Erase the Canvas.
- 5. Import any other two objects and place them anywhere on the Canvas.
- 6. Next, right-click anywhere on the Canvas Toolbar, which consists of the Transport Controls, the Frame Counter Display, the Message Number Display and the Reset Scroll Position button.



Canvas Toolbar

The Read FX Toolbar appears.



Read FX Toolbar

- 7. Click the dropdown menu in the **Read FX Toolbar** and you will see the name of the *.efx* file you saved in Step 3. Select the file so that it appears in the window.
- 8. Press the **MAKE** button.
- 9. The objects in your new Canvas move to the starting position of each object in the previous animation and the animation properties (**Rotation**, **Position**, **Scale**, etc.) are immediately applied to the new objects. The animation plays out for the same duration as in the previous Canvas.
- 10. To play the animation again, press again. To go to the beginning of the animation, click the

Transport Controls Rewind button. You may also press **D**, but the animation will run only on your

system's VGA monitor and not on the video output, unless the university button on the Lyric interface is pressed.

- 11. To demonstrate another important characteristic of the **Read FX** feature, repeat the exercise described above, but in Step 5, import or create **3** or more objects in a blank Canvas. While you're adding objects to the Canvas, remember the order in which you do so.
- 12. Now, press button again, to apply the first animation you created, which contained two objects. Note that only two objects are now in the scene, regardless of how many you've just added. If you examine the **Scene Graph**, you will see that only these first two objects are 'checked'. The others are now 'unchecked'.

Rather than leave static objects in your scene when an *.efx* file contains no animation data for them, Lyric is designed not to render them. Note that these unchecked objects are still on the **Scene Graph** in case you wish to edit the current animation file or create a new one. You may also activate (check) them on the **Scene Graph**, in order to see them rendered.

Some things to remember about the Read Effects feature:

- **Read FX** is designed for on-air use, so when you are working on a Duet SD/HD, the southout always supersedes the Live, Xfer, Swap and Frame Buffer/Channel buttons. In other words, the current Canvas and Read FX animation plays to the active Frame Buffer.
- When an *.efx* file is selected in the **Read FX Toolbar**, it is automatically applied to any message subsequently recalled. Clear the entry in the **Read FX Toolbar** to apply the animation originally contained in the current message.
- If the **Read FX Toolbar** is hidden when Lyric is launched, right-click on the **Canvas Toolbar** to access it. This is a preference that will be saved when Lyric is closed, and in the next session, the **Read FX Toolbar** will be hidden or displayed as you select at this time.
- The dropdown menu in the **Read FX Toolbar** only 'sees' *.efx* files that have been saved in the default directory.

Read Effects - Duet LE/LEX/PCI/PCI+

Read Effects provides a quick method for applying animation settings to objects currently on the Canvas or to objects in a file or series of files as they are read. The key feature of **Read Effects** is the ability to save an animation as an .*efx* message, allowing the animation data from that message to be applied to a new set of objects.

To record an .efx file:

- 1. Create an animation.
- Execute a Save As to an .efx file. Make sure that the file is saved to the default Effects directory as set in the Config>Preferences>Default tab, or it will not be available to apply to other objects or messages.

To apply animation data to a new set of objects:

- 1. Place a new set of objects on the Canvas.
- 2. Select an *.efx* file from the **Read FX** drop-down list box (as seen below). This links an effects file with the objects on the screen.



To preview the animation:

Make sure that the button on the Duet LE/LEX/PCI/PCI+ toolbar is off, then click the **Read** Effects button or the button on the **Transport Controls**. The animation executes <u>on the</u> <u>Canvas only</u>.

To play the animation to air:

Click defined, then defined on the Duet LE/LEX/PCI/PCI+ toolbar. Note that there is a time restriction of six seconds on a Duet LE system.

OR

• Press the utton on the Duet LE/LEX/PCI/PCI+ toolbar, then the **Play** button on the **Transport Controls**.

NOTE:

Using the **second** button to play the Read Effect *to air* is not supported in this version of Lyric.

21. Advanced Image Effects

Advanced Image Effects

2D Text Window Context (Right-Click) Menu > Advanced Image Effects 2D Object Context (Right-Click) Menu > Advanced Image Effects Movie Object Context (Right-Click) Menu > Advanced Image Effects

Accessing and Applying Advanced Image Effects

IMPORTANT!

When applied to bitmaps on Duet HD, these effects should be previewed CAREFULLY before Air/Production! Advanced Image Effects applied to 2D Text Windows are not supported on Duet HD.

Lyric's **Advanced Image Effects** feature provides dynamic, customizable effects that can be applied to 2D bitmap objects, entire **2D Text Windows** or **Movie** objects. Note that on Duet SD systems, **Advanced Image Effects** which apply an effect to an entire page, are also available via **Multi FX**. The **Multi FX** feature is accessed from the **Tools and Canvas/Scene Graph Context Menus**.

To access Advanced Image Effects setup:

- 1. Click on the **2D Text Window**, 2D bitmap object or **Movie** object to which the effect is to be applied, or on its listing in the **Scene Graph**, and then right-click. The object's context menu is displayed.
- Select Advanced Image Effects from the menu. The Advanced Image Effects menu is displayed. This menu lists the effects available to the system. Bulge and Globe are available to Duet LE/LEX/PCI/PCI+ systems, but not Duet SD/HD systems. Select an effect from the menu. As shown in the following figure, the configuration dialog box for the effect is displayed.

	Effect Control
None	Effect: Wipe
Assemble Bulge Crumble Curtain	✓ Enable Reverse Play Fade Ease Options
Detonate Explosion	Effect Length
Flag	Wipe Page From Side
Flipboard	С Тор
Focus Globe	Left O 💿 Right
Leaf	C Bottom
Matrix	└── Softness
PageRoll PageTurn Rinnle	Size: 3 👗
Slide	Preview
Venetian	
Wipe	
Zoom	

Accessing Advanced Image Effects

- 3. Set the desired parameters. Drag the **Preview** slider to preview the effect. Adjust effect settings and preview the effect as many times as necessary.
- 4. Click **OK**. The dialog box closes. The effect is applied to the object for the duration specified in the configuration dialog box.

For effects in the forward direction:

- If the effect duration is shorter than the object duration on the **Timeline**, the effect begins at the frame calculated as follows: **End Frame Effect Duration**. For example, if the object duration is 3 seconds, and the effect duration is 1 second, the effect begins 2 seconds into the object's duration. The only exceptions are **Assemble**, **Bulge** and **Zoom**, which begin at the **Start Frame** of the object's duration and end at the effect's **End Frame**. The object remains on-screen until the **End Frame** of the object's duration on the **Timeline**.
- If the effect duration is longer than the object duration on the object's **Timeline** lengthens to accommodate the **Effect Duration**.

For effects in the reverse direction:

- If the effect duration is shorter than the object duration on the Timeline, the effect begins at the Start Frame of the object's duration and ends at the effect's End Frame. The object remains on-screen until the End Frame of the object's duration on the Timeline. The only exceptions are Assemble, Bulge and Zoom, where the effect begins at the frame calculated as follows: End Frame Effect Duration. For example, if the object duration is 3 seconds, and the effect duration is 1 second, the effect begins 2 seconds into the object's duration.
- If the effect duration is longer than the object duration on the object's **Timeline** lengthens to accommodate the **Effect Duration**.

The effect parameters can be edited by reopening the effect's configuration dialog box. Applying a different effect to the same object replaces the existing effect.

About Applying an Advanced Image Effect to a 2D Bitmap Object or Movie Object

An **Advanced Image Effect** applied to a 2D bitmap object or a **Movie** object effect can travel about the screen during an animation by repositioning the object the same as with an object that does not have an effect applied. Static and animated **Transparencies** (from **Properties > Surface**), however, must be applied after the **Advanced Image Effect** is applied.

About Applying an Advanced Image Effect to a 2D Text Window

When an Advanced Image Effect is applied to a 2D Text Window, a new object, ImgEffect.<2D Text Window Name>, is added to the Scene Graph.



Scene Graph Showing New Advanced Image Effect Object

The original **2D Text Window** still remains in the scene, although it is automatically set not to display. **ImgEffect.2D Text 1** cannot be used as a **Mask Object**. On the Duet LE/LEX/PCI/PCI+ it cannot be assigned to a **Mask Layer**, act as a **Mask Inside** element or an **Alpha Trim Mask**.

The **Transparency** of a **2D Text Window** can be adjusted in **Properties > Surface** *before* an **Advanced Image Effect** is applied, and can vary from keyframe to keyframe. If the text in the **2D Text Window** must be edited, the **Advanced Image Effect** must be reapplied. An **Advanced Image Effect** applied to a **2D Text Window** can travel about the screen during an animation by repositioning the **2D Text Window's ImgEffect** object.

NOTE

If applying both an Advanced Image Effect and Advanced Text Effect to a 2D Text window, the two resulting animations are not combined with each other and applied to one object. Each of the effects creates a separate animated object that is rendered and executed separately. Execution of the two effects can, however, be simultaneous.

Effect Parameters Common to All Effect Types

All **Advanced Image Effects** have a number of parameters in common, as well as parameters specific to the individual effect. The common parameters are as follows:

- **Enable:** On occasion, it may be advantageous to set up an effect, but not enable it to execute at a particular time. Enabling (checking) **Enable** allows the effect to execute; disabling (unchecking) **Enable** preserves the setup parameters, but does not allow the effect to execute.
- Fade: Enabling (checking) Fade fades the effect out; disabling (unchecking) Fade executes the effect at full video throughout the duration of the effect.
- **Reverse Play:** Enabling (checking) **Reverse Play** plays the effect in reverse; disabling **Reverse Play** executes the effect in the forward direction.
- Ease softens the transition into and/or out of an effect. When Ease is selected, the Ease Options dialog box opens, allowing the selection of Ease Type: No Ease, Ease In, Ease Out Ease In/Out. Additionally, the Ease can be executed over the time specified in the Ease Time. This dialog box can be accessed either by clicking the Ease checkbox to enable Ease, or by clicking the Options button once Ease is enabled.



Ease Options

- Effect Length determines the duration of effect execution. If the Effect Length is shorter than the
 duration of the object on the Timeline, the effect executes to the specified Effect Length, but the
 object remains on screen for the duration specified by its Timeline.
- **Preview Slider:** The effect can be previewed by dragging the **Preview** slider.
- Full Scene: The Full Scene setting allows the user to preview only the effect or the entire animation, including the effect.
 - o If **Full Scene** is enabled (checked), the entire animation is previewed.
 - o If **Full Scene** is disabled, only the effect is previewed.

Advanced Image Effects can be executed in the same manner as other Lyric animations by using the **Transport Controls**. These animations can be jumped ahead to the next or previous **Keyframe**, or advanced or rewound to the beginning or end of their duration. *Refer to Animation Playback - Transport Controls* for additional information.

Effect Types

The graphics shown in the following examples are based on effects applied to a Chyron logo: <u>None</u>

Selecting **None** removes the effect from the object.



No Effect Applied

Assemble (and Disassemble)

The **Assemble** effect reassembles an image from rectangular fragments. Enabling **Reverse Play** creates a **Disassemble** effect. **Fade** is not available to this effect.

Effect Control	
Effect:	Assemble
🔽 Enable	🗖 Reverse Play
🗖 Fade	Ease Options
Effect Length	
Effect Resolution	
Row: 20 +	Column: 20 🕂
	C From Far C From Near C Both
I Alpha Build	Synchronized
Fragment Rotation	
None None	
Preview	
1	
Frame: 0	🔽 Full Scene
	Cancel

Assemble Effect Configuration - Default Settings

Specialized attributes include:

- Effect Resolution: Specifies the number of fragments from which the object is reassembled, as determined by multiplying the **Row** value by the **Column** value.
- Method: Specifies on which axis or axes and from which direction(s) the object is reassembled.
 Method On X Axis, Method On Y Axis and/or Method On Z Axis cannot be applied in conjunction with Alpha Build.
- Alpha Build: When Alpha Build is enabled (checked), the fragments of the object do not move through 3D space to reassemble. The object, instead, starts the effect fully transparent, and the fragments fade in at different times. Fragment Rotation can be applied in conjunction with Alpha Build. Alpha Build cannot be applied in conjunction with Method - On X Axis, Method - On Y Axis and/or Method - On Z Axis enabled.



Alpha Build - No Fragment Rotation

To disable Alpha Build, click Method - On X Axis, Method - On Y Axis or Method - On Z Axis.

- **Synchronized:** When **Synchronized** is enabled (checked), the assembly occurs equally from both the negative and positive ends of each axis. When **Synchronized** is not enabled (unchecked), the assembly occurs randomly. When **Alpha Build** and **Synchronized** are enabled, the fragments fade in, in a more even distribution than if **Synchronized** is not enabled.
- **Fragment Rotation:** Specifies if and how the fragments rotate about their own axes.

The following figures show an **20-Row**, **20-Column**, **Assemble** effect. The **Assemble** executes along all axes and from all directions. The fragments rotate about all axes as well.

Effect	Anneh	2	100	П
Encol.	JAssembl	e	-	
🔽 Enable	1	Reve	rse Play	
📕 Fade		🗌 Ease	Optio	ns
Effect Length	<u>[</u>	0000	01 00-	÷
Effect Resolution	8		26	
Row: 20 🛨		Column:	20	-
vlethod	_	27 P		37
✓ On X-Axis J	✔ On Y-A	xis 🔽	On Z-A:	xis
From Left	From T	op C	From Fa	16
From Right	From B	ottom C	FIOM N	ear
• Both	• Both	(•	Both	
Alpha Build		∏ s	ynchroni	zec
Fragment Rotatio	n			
About X Axis				
About Y Axis				
About Z Axis				
None				
Preview				
Frame: 9		•	Full Sce	ne
0	К	Can	cel	



Assemble Effect

Bulge - Duet LE/LEX/PCI/PCI+ Only

The **Bulge** effect employs a spherical wireframe to travel across the image, bulging it out or in.

Effect Control	
Enable Reverse Play Fade Ease Options	
Bulge Key Frame Setup Set Attributes for: C First Frame C Last Frame Position: C T. Left C Top C T. Right C Left C Center C Right B. Left C Bottom C B. Right Bulge Inward	Church
Preview Frame: 0 Full Scene Disable Wireframe *Wireframe appears only during preview Embed Effect Data on Save OK Cancel	

Bulge - Default Configuration with Wireframe

Specialized attributes include:

- Set Attributes For: Select First Frame to set attributes for the first frame of the effect. Select Last Frame to set attributes for the last frame of the effect. When the effect executes, the object transformation progresses from the settings for the first frame to the settings for the last frame.
- Radius: Specifies the radius of the wireframe, which determines the size of the bulge.
- Position: Specifies the Start and End positions of the bulge.
- Bulge Inward: Specifies if the object bulges inward or outward.
- Embed Effect Data on Save: Specifies that the rendering information is saved with the effect. Enabling Embed Effect Data on Save eliminates the time needed to rebuild the effect each time the message containing the effect is read. Enabling Embed Effect Data on Save, however, can add approximately 2MB per effect to the message size.

When the **Bulge** effect is selected, the wireframe sphere is displayed on the **Canvas**. A separate set of **First Frame** and **Last Frame** attributes for the sphere can be set.

The following figures show a 2-second Bulge Effect Preview with the First Frame Radius at 20, Position Center, and the Last Frame Radius at 100, Position Center.



Frame 25



Frame 43



Frame 60

When the **Bulge** effect executes from outside of the **Bulge Effect Configuration** dialog box, the wireframe is no longer visible.



Bulge Execution

Crumble

Applying the **Crumble** effect to an object causes it to fall apart into rectangular pieces either all at one time or progressively.

Effect: C	iruml	ble	-
🔽 Enable		T Rev	erse Play
🔽 Fade		₩ Ease	e Options
Effect Lengtł	r	00 00	01 00
Effect Resolu	ition	-	
Row: 30	÷	Columr	n 30 ÷
Crumble Cont	rol –		
C T Left	6	Тор	C T Righ
C Left	C	Center	C Right
C B Left	C	Bottom	C B Righ
🗖 Prog	gress	sive Crum	ble
Preview			
Frame: 0		F	Full Scene

Crumble Effect Configuration

Specialized attributes include:

- Effect Resolution: Specifies the number of fragments into which the object crumbles, as determined by multiplying the **Row** value by the **Column** value.
- **Progressive Crumble, Crumble Control:** When a **Crumble** effect executes, the entire object normally falls apart at one time. When **Progressive Crumble** is selected (checked), the **Crumble** can progress through the object, starting from a specified point. The start point settings become active only when **Progressive Crumble** is selected.

The following figures show a **60-Row**, **60-Column**, **Progressive Crumble** originating from the center of the object.

Crumble Effect Configuration	
Effect Control	
Fade ✓ Ease Options Effect Length 00000100 ÷	
Row: 60 Column: 60	
C T Left C Top C T Right C Left © Center C Right	
C B Left C Bottom C B Right	
Frame: 30 Full Scene	
OK Cancel	

Crumble Execution

Curtain

When a **Curtain** effect is applied, the object appears to be drawn to the top, bottom, left, right or center, as in opening a curtain.

Effect:	Curtain 💌
I✓ Enable	I Reverse Play
🗖 Fade	Ease Options
Effect Leng	th 00000100÷
Effect Reso	lution
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp	Column: 10 🛨
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow	Column: 10 -
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov	Column: 10 🔆 Dle Size Amplitude: 6 🛟 Dle Speed Medium Fast ving To
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov	Column: 10 🔆 De Size Amplitude: 6 ÷ De Speed Medium Fast ring To C Top
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov	Column: 10
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov Left O	Column: 10 + ole Size Amplitude: 6 + ole Speed Medium Fast ving To Conter © Righ C Bottom
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov Left O Preview	Column: 10 ÷ ole Size Amplitude: 6 ÷ Medium Fast Ving To C Top C Center © Righ C Bottom
Row: 10 Curtain Ripp Cycles: 4 Curtain Ripp Slow Curtain Mov Left O Preview	Column: 10 -

Curtain Effect Configuration

Specialized attributes include the following:

- Effect Resolution: Specifies the number of Row (horizontal) ripples and Column (vertical) ripples are applied to the object.
- Curtain Ripple Size Cycles: Increasing/decreasing the Cycles value increases/decreases the number of peaks and valleys in the curtain.
- Curtain Ripple Size Amplitude: Specifies the depth of the ripples.
- Curtain Ripple Speed: Specifies the speed at which the ripples travel.
- Curtain Moving To: Specifies the location to which the object is drawn.

The following figure shows a **12-Row**, **12-Column Curtain Effect** with **Curtain Ripple Size Cycles** set to **9**, **Amplitude** set to **8**, **Ripple Speed Fast** and **Curtain Moving to Top**.

Effect:	Curtain
Ellect.	
🔽 Enable	🗖 Reverse Play
Fade	Ease Options
Effect Leng	th 00000300
Effect Reso	lution
Row: 12	Column: 12 +
Curtain Ripp	le Size
Cycles: 9	Amplitude: 8 🛨
Cycles: 9 Curtain Ripp	Amplitude: 8 😫
Cycles: 9 Curtain Ripp	Amplitude: 8 🛃
Cycles: 9 Curtain Ripp Slow	Amplitude: 8 😫
Cycles: 9 Curtain Ripp Slow Curtain Mov	Amplitude: 8 😫
Cycles: 9 Curtain Ripp Slow Curtain Mov	Amplitude: 8 🔄
Cycles: 9 Curtain Ripp Slow Curtain Mov Left C	Amplitude: 8
Cycles: 9 Curtain Ripp Slow Curtain Mov Left C	Amplitude: 8
Cycles: 9 Curtain Ripp Slow Curtain Mov Left C Preview	Amplitude: 8
Cycles: 9 Curtain Ripp Slow Curtain Mov Left C Preview	Amplitude: 8
Cycles: 9 Curtain Ripp Slow Curtain Mov Left C Preview Frame: 51	Amplitude: 8



Curtain Effect

Detonate

When the **Detonate** effect is applied, the object flies apart, with rectangular fragments rotating along their axes.

Effect: Det	onate 💌
🔽 Enable	🗖 Reverse Play
🔽 Fade	Ease Options
Effect Length	00 00 01 00 ÷
Effect Resolutio	n Column: 18 💌
Preview	
J	Eull Scene

Detonate Effect Configuration

Its specialized attribute is as follows:

• Effect Resolution: Specifies the number of fragments into which the object breaks, as determined by multiplying the **Row** value by the **Column** value.

The following figure shows a 10-Row, 10-Column Detonate Effect.

Detonate Effect (Configuration 🔀
Effect Control-	
Effect: Det	onate 💌
🔽 Enable	🔲 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 03 00 ÷
Effect Resolutio	n Column: 10 🕂
Preview	
	(i)
Frame: 19	🔽 Full Scene
OK	Cancel



Detonate Effect

Explosion

When the **Explosion** effect is applied, the object flies apart, in concentric layers, into triangular fragments. Additionally, the fragments rotate within the layers as the effect progresses.

Explosion Effec	ct Configuration	n 🗵
Effect Contro	l	1
Effect:	xplosion	-
🔽 Enable	🗖 Reverse	e Play
🔽 Fade	🗖 Ease	Options
Effect Lengt	n 00000	1 00 -
Explosion Po	lygons Sections peed	18 🛨
Slow	Medium	Fast
Rotation Spe	ed	
Slow	Medium	Fast
Preview		
J Frame: 0	F F	ull Scene
OK	Cano	el

Explosion Effect Configuration

Specialized attributes include:

- **Explosion Polygons Layers:** Specifies the number of concentric rings of fragments.
- Explosion Polygons Sections: Specifies the number of sections into which each layer is broken.
- Translation Speed: Not currently implemented.
- Rotation Speed: Specifies the speed at which the layers rotate.

The following figure shows a **9-Layer**, **20-Section**-per-layer **Explosion**, with **Translation Speed Fast** and **Rotation Speed Medium**.

Effect.		
Effect. [E	xpiosion	
🔽 Enable	🗖 Reverse	Play
Fade	🗖 Ease	Options
Effect Length	00 00 03	<u> 00</u>
Explosion Pol	lygons	
Layers 5	Sections	20 🛨
Translation S	peed	
Translation S	peed	1
Translation S	peed Medium	J Fast
Translation S Slow Rotation Spe	peed Medium ed	Fast
Translation S Slow Rotation Spe Slow	peed Medium ed J Medium	Fast
Translation S Slow Rotation Spe Slow Preview	peed Medium ed J Medium	Fast
Translation S Slow Rotation Spe Slow Preview	peed Medium ed J Medium	Fast



Explosion Effect

<u>Flag</u>

Applying a Flag effect gives an object the appearance of waving like a flag in the wind.

E1000 11 [0]	•
Tues Ind	
🔽 Enable	Reverse Play
🗌 Fade	Ease Options
Effect Length	00 00 01 00 -
Wind Speed —	
 Lipino 	Wundu Monsoon
Calli	windy monsoon
Wind direction:	Horizontal C Vertic
Wind direction:	Horizontal C Vertic
Vind direction: Flag Control — Flag waves on:	Horizontal C Vertic X-Axis
Vind direction: Flag Control Flag waves on:	Horizontal C Vertic X-Axis Y-Axis
Vind direction: Flag Control — Flag waves on:	Horizontal C Vertic X-Axis Y-Axis Z-Axis
Vind direction: Flag Control Flag waves on: Preview	Horizontal C Vertic X-Axis Y-Axis Z-Axis
Vind direction: Flag Control — Flag waves on: Preview	Horizontal C Vertic X-Axis Y-Axis Z-Axis

Flag Effect Configuration

Specialized attributes include:

- Wind Speed: Specifies the speed at which the wind blows.
- Wind Direction: Specifies the direction of the wind.
- Flag Control: Specifies the axis or axes on which the flag waves.

The following figure shows a Flag effect with a Calm Wind Speed, Horizontal Wind Direction and waving on the Y-Axis and Z-Axis.

Effect: Elac	
Ellect Inag	
🔽 Enable	🔲 Reverse Play
🗌 Fade	Ease Options
Effect Length	00 00 03 00 ÷
Wind Speed	
Calm	Windy Monsoon
In the second state of	
Wind direction:	Horizontal Vertical
Wind direction: Flag Control	Horizontal C Vertical
Wind direction: Flag Control Flag waves on:	Horizontal C Vertical X-Axis
Wind direction: Flag Control Flag waves on:	 ↔ Horizontal C Vertical ✓ X-Axis ✓ Y-Axis
Wind direction: Flag Control Flag waves on:	 Horizontal C Vertical X-Axis Y-Axis Z-Axis
Wind direction: Flag Control Flag waves on: Preview	 ✓ Horizontal C Vertical ✓ X-Axis ✓ Y-Axis ✓ Z-Axis
Wind direction: Flag Control Flag waves on: Preview	 ↔ Horizontal C Vertical ✓ X-Axis ✓ Y-Axis ✓ Z-Axis



Flag Effect

Flipboard

The **Flipboard** effect splits the image into columns and/or columns, and flips the pieces over. The image can flip and disappear, or it can flip to another image.

Flipboard Effect Configuration	×
Effect Control	-
Effect: Flipboard	
🔽 Enable 🔲 Reverse Play	
Fade Ease Options	
Effect Length 00 00 01 00 -	
Effect Resolution Row: 10 - Column: 10 -	
Back Image	
None O	
C Object	
- Flip From	
C Upper left C Top C Upper right	
● Left C Center C Right	
C Lower left C Bottom C Lower right C All at once	
- Orientation	
 ● Horizontal ○ Vertical ○ Random I Synchronized 	
Preview	
Frame: 0 🔽 Full Scene	
OK Cancel	

Flipboard Effect Configuration

Specialized attributes include:

- Effect Resolution: Specifies the number of pieces into which the image is split, as determined by multiplying the Row value by the Column value.
 - Note that if Horizontal, Synchronized Orientation and Flip from Left, Flip from Right or All at Once are selected, Rows are not visible when the effect is executed.
 - If Vertical, Synchronized Orientation and Flip from Top, Flip from Bottom or All at Once are selected, Columns are not visible when the effect is executed.

- **Back Image:** Specifies the image that is applied to the back of the flipped image. It becomes visible as the image flips over. The following are available:
 - None: The image disappears as it flips.
 - Graphic: The image flips to a new image. To apply a graphic, click the Image Chip or select the Graphic radio button. The Select a Texture Source dialog box opens. Navigate to and select a 2D graphic file, and then click Open. The selected image is displayed in the Image Chip. When the Flipboard effect executes, the image flips to the selected Object Texture. If the selected Object Texture is the same as the image to which it is applied, then the image flips to itself. Note that any texture that is applied is resized to the dimensions of the flipping image, which may include transparent areas.
 - Object: The image flips to the image of an object that is on the current Canvas. The object can be placed out of the visible boundaries of the Canvas, but must be set to visible (checked) in the Scene Graph in order to be applied to the flipping image. To apply an object:
 - a. Select the **Object** radio button. The **Select Object Texture** dialog box is displayed.

g

Select an Object Texture

- b. All available objects in the Lyric scene are listed. 3D characters/objects do not appear in this list. Click the name of the object which is to be applied to the image, and then click OK. When the Flipboard effect executes, the image flips to the selected Object Texture. If the selected Object Texture is the same as the image to which it is applied, then the image flips to itself. Note that the texture that is applied is resized to the dimensions of the flipping image, which may include transparent areas.
- Flip From: Specifies point from which the Flip starts. The Flip can also start from all points.
- **Orientation:** Specifies if the flip progresses horizontally, vertically or randomly. The pieces of the image can flip synchronously or asynchronously.

The following figure shows a **Flipboard** effect **Synchronized Horizontally**, **Flipping from the Left**, and with a graphic of an arrow applied to the back.

pboard Effect C	onfiguration
Effect Control	
Effect: Flipb	oard 💌
🔽 Enable	🗖 Reverse Play
🗖 Fade	Ease Options
Effect Length	00000200÷
Effect Resolution Row: 10 🐳	Column: 10 🕂
Back Image	C North
	C None
	C Object
Flip From C Upper left C C Left C C Lower left C C	Top C Upper right Center C Right Bottom C Lower right All at once
Orientation	
 Horizontal Horizontal 	Vertical C Random
Preview	
Frame: 34	ren scene
ОК	Cancel

Flipboard Effect

Frames 34, 43 and 49 of the effect show how the flip progresses through the effect.



34 Frames



43 Frames



49 Frames

Focus

When a **Focus** effect is applied, the camera appears to zoom in and object goes out of focus as the effect progresses. If **Reverse Play** is enabled, the object starts the effect out of focus, and becomes focused as the effect progresses.

Eff	ect: F	ocus		_
◄	Enable		Rever	se Play
☑	Fade		🗖 Ease	Options
Effe	ect Length	ו ו	00 00	01 00
Foc	us Aspec Leng	t gth:	10 🕂	
Foc	us Aspec Leng us From-	t	10 📑	C PT
Foc Foc LT Left	us Aspec Leng us From- C	t pth: 0 0	10 🔆 Top Center	C BT
Foc Foc LT Left LB	us Aspec Leng us From- C C	t pth: 0 0	10 💼 Top Center Bottom	C RT C Righ C RB
Foc LT Left LB	us Aspec Leng us From- C C	t gth: 0 0	10 ÷ Top Center Bottom	C RT C Righ C RB

Focus Effect Configuration

Specialized attributes include:

- Focus Aspect Length: A shorter Focus Aspect Length results in a shorter zoom and less defocusing. A longer Focus Aspect Length results in a longer zoom and more defocusing.
- Focus From: Specifies the point from where the camera is zooming and focusing.

The following figure shows a **Zoom** effect with a **Focal Aspect Length** of **40** and originating from the **Center**.

- Effect	fect Cor Control	nfiguration	2
Effec	t Fo	cus	•
🔽 Er	nable	T Rever	se Play
🗖 Fa	ade	🗖 Ease	Options
Effect	: Length	00 00	03 <u>00</u> ÷
-rocus	Lengt	th: 40 🛨	
	From	~ -	C.PT
-Focus	G	LOD	NO DI
Focus LT (Left (с с	C Top	C Right
Focus LT (Left (LB (Top Center Bottom 	C Right



Focus Effect

Globe - Duet LE/LEX/PCI/PCI+ Only

The **Globe** effect applies the selected object to a globe. The globe can be set to rotate about the X-, Y-, or Z-axis.

lobe Effect Conf	iguration	
-Effect Control		
Effect: Glob)e	-
🔽 Enable	🗖 Reverse Pla	y
🔽 Fade	Ease Options	
Effect Length	00 00 01 00	Ð
Globe Size		
Radius: 8	Ð	
Rotation		
Speed: 1		XIS
Clockwise	⊙ Y C Z	
-Formation / Defo	rmation	
🔲 Enable Cullin	ıg	
Preview		
1		
Frame: 0	💌 Full S	cene
ОК	Cancel	1

Globe Effect Configuration

Specialized attributes include the following:

- Globe Size: The radius of the globe can be increased or decreased.
- Rotation Speed: The speed of the rotation can be adjusted.
- Rotation Clockwise: If Clockwise is selected (checked), the rotation executes in the clockwise direction. If Clockwise is not selected (not checked), the rotation executes in the counter-clockwise direction.
- Rotation About Axis: The globe can rotate about the X-, Y-, or Z-axis.
- Formation/Deformation Enable Culling: When the object is applied to the globe, it is, in effect, "wrapped" around the globe, much as an orange would be wrapped in cellophane. Depending on the shape, size and orientation of the object that is "wrapped" around the globe, there may be overlapping. If Enable Culling is selected (checked), overlapping portions of the graphic are removed (culled). If Enable Culling is not selected (not checked), overlapping portions of the graphic are not removed. The following figure shows an unculled and a culled globe.



Unculled and Culled Globes

The following figure shows a bitmap applied to a globe, with a **Radius** of **8**, **Rotation** of **1**, counter-clockwise direction, rotating about the **Z**-axis and culled.

Globe Effect Configuration Effect Control Effect: Globe ▼ ✓ Enable ■ Reverse Play ■ Fade ■ Ease ■ ptions Effect Length 00 00 03 00 ▲	
Globe Size Radius: 8 Rotation Speed: 1 Clockwise Formation / Deformation	
Preview Frame: 32 Full Scene	

Globe Effect

Leaf

The Leaf effect splits the image into four segments which are peeled back as the effect progresses.

🗖 Reverse Play	
Ease Options	
00 00 01 00	
artial Ful	

Leaf Effect Configuration

Leaf Coverage determines to what degree the four leaves overlap each other before peeling open. Leaf Coverage can be set to a value that ranges from None to Full.

The following figure shows a Leaf effect set between Partial and Full Coverage.

eaf Effect Configuration	
Effect: Leaf	
✓ Enable □ Reverse Play □ Fade □ Ease Options Effect Length 00 00 02 00 •	
None Partial Full Preview	
Frame: 29 🔽 Full Scene	
OK Cancel	

Leaf Effect

Matrix

The Matrix effect splits the image as determined by number of Rows and Columns in the Matrix.

atrix Effect C - Effect Control	Configuration	>
Effect:	1atrix	•
🔽 Enable	🗖 Reverse	Play
🔽 Fade	🗖 Ease 🛛	Options
Effect Lengt	00 00 01	<u>00</u> ÷
Add Rot Matrix Size Row: 5	ation 🗖 Rando	im E
Effect Speed	j Medium	 Fast
Preview		
J Frame: 0	🔽 Fu	ull Scene
2 2000		

Matrix Effect Configuration

Specialized attributes include the following:

- Matrix Motion Add Rotation: Not currently implemented.
- Matrix Motion Random: Not currently implemented.
- Matrix Size: Specifies the number of pieces into which the image is split, as determined by multiplying the Row value by the Column value.
- Effect Speed: Specifies how quickly the effect executes within the set Effect Length.
The following shows a Matrix effect set to split into 20 Rows and 20 Columns.

latrix Effect Cor	nfiguration	<
-Effect Control -		1
Effect: Mat	trix 💌	
🔽 Enable	🔲 Reverse Play	
🔽 Fade	Ease Options	
Effect Length	00 00 01 00 ÷	100 M
– Matrix Motion –		-
🗖 Add Rotati	on 🔲 Random	
Matrix Size Row: 20	Column: 20	Contract.
Effect Speed	п	
Slow	Medium Fast	333
Preview		1
Frame: 5	🔽 Full Scene	1
OK	Cancel	



Matrix Effect

PageRoll

The **PageRoll** effect rolls an image as if to uncover an image lying below it.

ageRoll Effect C	onfiguration
Effect: Pag	jeRoll 🗾
🔽 Enable	🗖 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00 -
Roll Page From	Side
Left O	C Top
Roll Size Radius: 3	-
Preview	
OK	Cancel

PageRoll Effect Configuration

Specialized attributes include the following:

- Roll Page from Side: Specifies the side from which the image rolls.
- **Roll Size:** Specifies the size of the roll.

The following shows a **PageRoll** set to at a **Radius of 10**, and rolling up from the bottom.

geRoll Effect C	onfiguration 🔀
Effect Control	
Effect: Pag	eRoll 🗾
🔽 Enable	🗖 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00 ÷
Roll Page From	Side
	С Тор
Left C	C Right
	Bottom
Roll Size	
Radius: 10	÷
Preview	
Frame: 10	🔽 Full Scene
ОК	Cancel



PageRoll Effect

<u>PageTurn</u>

The **PageTurn** effect peels an image off the screen, as if turning a page.

Effect: PageTu	um 🗾
🔽 Enable 🛛 🖡	Reverse Play
🗖 Fade 🛛 🗍	Ease Options
Effect Length	00 00 01 00 ÷
Lift Corner of Page	2
CLTop CT	op C RTop
C Left	C Right
C LBottom C B	ottom 💿 RBotton
Turn Orientation —	
C Inside	Outside
Preview	
J	
Frame: 0	🔽 Full Scene

PageTurn Effect Configuration

Specialized attributes include the following:

- Lift Corner of Page: Specifies the corner of the image that is lifted to execute the PageTurn.
- **Turn Orientation:** Specifies whether the corner of the image is lifted over (outside) or under (inside) the image.

The following shows a **PageTurn**, lifting from the bottom left corner of the image, over (outside) the image.

Effect: PageTur	n 💌
🔽 Enable 🗌	Reverse Play
🗆 Fade 🖉	Ease Options
Effect Length	0 00 01 00 ÷
Lift Corner of Page —	
CLTop C Top	p C RTop
C Left	C Right
LBottom C Bo	ttom C RBottom
Turn Orientation	
O Inside	 Outside
Preview	
Frame: 11	🔽 Full Scene



PageTurn Effect

Ripple

The **Ripple** effect ripples the image as if it is reflected in water.

Effect: E	linnle	-
Lucov II	пррю	
🔽 Enable	🗖 Reverse	Play
🔽 Fade	🗖 Ease	Options
Effect Lengt	00 00 01	00-
Effect Resolu	Ition	
Row: 10	Column:	10 🕂
Ripple Size -		
Cycles: 4	Amplitude:	4 🛨
Ripple Speed	I	
Slow	Medium	Fast
Preview		
-		

Ripple Effect Configuration

Specialized attributes include the following:

- Effect Resolution: Specifies the number of Row (horizontal) ripples and Column (vertical) ripples are applied to the object.
- **Ripple Size Cycles:** Increasing/decreasing the **Cycles** value increases/decreases the number of peaks and valleys in the curtain.
- Ripple Size Amplitude: Specifies the depth of the ripples.
- Ripple Speed: Specifies the speed at which the ripples travel.

The following shows a **Ripple** effect set at **8 Rows**, **8 Columns**, **10 Cycles**, **10 Amplitude** and **Medium Speed**.

Effect: Ri	pple 🔻
I Enable	Reverse Play
Fade	Ease Options
Effect Length	00 00 02 00
Effect Resolut	ion Column: 8
Ripple Size	Amplitude: 10
Ripple Speed	
Slow	Medium Fast
Preview	



Ripple Effect

<u>Slide</u>

The **Slide** effect slides the image off of the screen.

Effect: Slide	е	•
🔽 Enable	🗖 Reve	rse Play
🗖 Fade	🗖 Ease	Options
Effect Length	00 00	01 <u>00</u> ÷
Slide To		~~~~
LT C	О Тор	O RT
Left O		Right
LB O	C Bottom	C RB
Preview		
J		(
Frame: 0	~	Full Scene

Slide Effect Configuration

The image can be slid to a side or corner of the screen.

The following shows a **Slide** set to slide the image off the screen at the upper right corner.

Effect: Slide	в	•
🔽 Enable	🗖 Reve	rse Play
🗌 Fade	🗖 Ease	Options
Effect Length	00 00	01 <u>00</u>
Slide To		
T C	С Тор	• BT
.eft C		C Right
B C	C Bottom	C RB
Preview		
ł		
Frame: 11		Full Scene



Slide Effect

Venetian

The Venetian effect applies a "Venetian blinds" effect to the image.

Effect: Mar	
Effect: Ven	etian 🔟
🔽 Enable	🔲 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00 ÷
Orientation of F	olds
Vertical	C Horizontal
Number of Fold:	8
Folds 10	÷
Preview	
1	£
Frame: 0	🔽 Full Scene

Venetian Effect Configuration

Specialized attributes include the following:

- Orientation of Fields: Specifies whether the blinds are vertical or horizontal.
- Number of Folds: Specifies the number of blinds into which the image is split.

The following shows a horizontal, 6-fold **Venetian** effect.

enetian Effect C	onfiguration
Effect Control	
Effect: Ven	etian 🗾
🔽 Enable	🗖 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00
Number of Folds	
Preview ——	
Frame: 19	J I Full Scene
ОК	Cancel



Venetian Effect

Wipe

The Wipe effect wipes the image from the screen.

Effect: Win	. .
Lucor Twip	
🔽 Enable	🔲 Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00 :
Wipe Page Fron	n Side
	C Top
Left C	Bight
Leit	C Bottom
Softness	
Size: 3	×
Preview	
1	
⊐ Frame: 0	🔽 Full Scene

Wipe Effect Configuration

Specialized attributes include the following:

- Wipe from Side: Specifies the side from which the wipe starts.
- Softness: Specifies the softness of the edge of the Wipe.

The following shows a **Wipe**, originating from the **Right**, with an edge **Softness** of **14**.

/ipe Effect Confi	guration X
Effect Control – Effect: Wip	e 💌
🔽 Enable	Reverse Play
🗖 Fade	Ease Options
Effect Length	00 00 01 00 ÷
Wipe Page From	n Side
Left C	C Top C Right C Bottom
Softness Size: 14	
Preview J Frame: 0	Full Scene
ОК	Cancel



Wipe Effect

<u>Zoom</u>

The **Zoom** effect emulates a camera zoom out from an object.

▼ Enable	E Bever	se Plau
Fade	E Ease	Options
Effect Leng	th 00 00	01 00 ÷
Zoom Out F	rom	
LT C	🔿 Тор	C BT
.eft C	Center	C Right
LB C	C Bottom	C RB
Preview J Frame: 0	Bottom	Full Scene

Zoom Effect Configuration

Zoom out from specifies which from point the Zoom originates.

The following shows a **Zoom** originating from the upper right corner.

Zoom Effect Config	uration	×
Effect Control		
Effect: Zoom	ý.	•
🔽 Enable	Revers	e Play
Fade	🗖 Ease	Options
Effect Length	00 00 0	100
Zoom Out From-		
LT C C	Тор	• RT
Left C C	Center	C Right
LB C C	Bottom	C RB
- Preview		
3		
Frame: 20	▼ 1	Full Scene
ОК	Can	cel

Zoom Effect

22. Transition Effects

Default Effect Configuration

Config Menu > Default Effect

The **Default Effect** is the effect used to transition from one message to the next when executing messages to output. **Cut** and **Wipe** are just two of a wide variety effects available to **Default Effect**. **Playlists** executed on Duet SD and LE/LEX/PCI/PCI+ systems can also use the effects available to **Default Effect** to transition from one message to the next. The effects available to **Default Effect** are also available to **Advanced Image Effects**, although they are applied directly to graphics or text, rather than transitions between messages. **Default Effect** setup varies among systems.

Default Effect Configuration - Duet SD

Config Menu > Default Effect

Default Effect Setup

An effect such as a **Wipe**, **Push**, **Fade**, **Dissolve**, etc. can be set up as a **Default Effect**, which is then automatically applied to transitions in and out of graphics displays. These effects can be used on all system configurations, with or without a mixer board. To access **Default Effect** setup:

• From the **Config** menu, select **Default Effect**. The **Default Effect** dialog box is displayed.

Effect	Split Wipe	•
Direction	Vertical	•
Reverse		
Speed	60	<u>.</u>
Mixer Mode	None	-

Default Effect Dialog Box

Default Effects include Cut, Dissolve, Slide Wipe/Reverse Slide Wipe (Right, Left, Bottom, Top), Split Wipe/Reverse Split Wipe (Vertical, Horizontal), Box Wipe/Reverse Box Wipe (Center, Top Left, Top Right, Bottom Right, Bottom Left), Blind Wipe/Reverse Blind Wipe (Vertical, Horizontal), Pixel Wipe. Note that in order to use Pixel Wipe as a Default Effect, Duet Drivers Build 138 or later is required.

Mixer Mode can be set to None or Composite.

A **Default Effect** can be used on a single VGE within a Duet containing multiple VGEs and the SD Video Mixer board required by multiple VGEs. Such a situation might arise where the Duet was required to execute manually-controlled Lyric message effects on one output, while the other VGEs performed CAL-driven tasks on another output.

The controls, however, work a little differently when the system includes a Video Mixer; these differences are called out where appropriate.

- Standard Definition Duet systems offer two separate outputs, each fed by dedicated Frame Buffer • portions of the Video Graphics Engine (VGE) hardware. The Swap function switches channels between Duet outputs; three Default Effects are available for such transitions.
- On single-VGE Duets, the effect is executed on the **inactive** channel when the **Swap** button • is clicked.
- On Duets with multiple VGEs and a Mixer, the effect is executed when the Transfer button is • clicked. On these systems, the effect is also executed when Lyric receives a Read command with the Duet "Render" use button active.

	<u> </u>			
Default Effect		×	Default Effect	×
Default Effect-	None	-	Default Effect <u>E</u> ffect	Wipe 💌
<u>D</u> irection	Left To Right	-	<u>D</u> irection	Left To Right 💌
<u>S</u> peed	60	a.	<u>S</u> peed	None Left To Right Right To Left
<u>M</u> ixer Mode	Composite None		<u>M</u> ixer Mode	Bottom To Top
OK	Cancel]	ОК	Cancel

Several of the Default Effect menu's settings are shown in the following figures.

Default Effect Settings

The Default Effect menu's **Mixer Mode** (not to be confused with the presence of a separate video mixer board) enables an SD Duet to route the contents of both internal Frame Buffers on a single VGE to a single output channel. This feature allows for the display of compositions that demand more processing power than a single Frame Buffer can provide.

ltem	Description
Effect	Selects from a choice of Cut, Dissolve, Slide Wipe/Reverse Slide Wipe (Right, Left, Bottom, Top), Split Wipe/Reverse Split Wipe (Vertical, Horizontal), Box Wipe/Reverse Box Wipe (Center, Top Left, Top Right, Bottom Right, Bottom Left), Blind Wipe/Reverse Blind Wipe (Vertical, Horizontal), Pixel Wipe. Note that in order to use Pixel Wipe as a Default Effect, Duet Drivers Build 138 or later is required.
Direction	Choose one of four: Left to Right, Right to Left, Top to Bottom, Bottom to Top.
Speed	Sets the Speed (in Frames) of Wipe or Dissolve effects.



For example, with different compositions in each of the two Frame Buffers available on one VGE, you might wish to combine the compositions on one of Duet's outputs.



2D Text in Frame Buffer 1



2D Text in Frame Buffer 2

A Composite output, seen on Duet's Video Out 1, would look like this:



Composite Output of Frame Buffers 1 and 2

Using Default Effects in a Playlist

Default Effects can be used in a **Playlist** on Duet SD systems containing a mixer board. Default Effects in the Playlist include **Cut**, **Dissolve**, **Wipe Right**, **Wipe Left**, **Wipe Down**, **Wipe Up**, **HSplit**, **VSplit**, **HBlind**, **VBlind**, **Box**, **BoxNW**, **BoxNE**, **BoxSE**, **BoxSW**, **Pixel**, **Rev HSplit**, **Rev VSplit**, **Rev HBlind**, **RevVBlind**, **Rev Box**, **Rev BoxNW**, **RevBoxNE**, **Rev BoxSE** and **Rev BoxSW**. Note that in order to use **Pixel Wipe** as a **Default Effect**, Duet Drivers Build 138 or later is required.

Default Effect Configuration - Duet HD

Config Menu > Default Effect

The following **Default Effects** are available to Duet HD:

None, Cut, Dissolve, Slide Wipe, Split Wipe, Box Wipe, Blind Wipe, Pixel Wipe

To access **Default Effect** setup:

• Select **Default Effect** from the **Config** menu, then refer to **Advanced Image Effects** for specifics on setting up each type of effect.

Message Effects Configuration - Duet LE/LEX/PCI/PCI+

Config Menu > Default Effect From **Playlist**: Select Effect, then press X

NOTE

As of Lyric 4.0, Duet LE(x) Message FX has been moved from the Tools menu to the Config menu, and has been renamed Default Effect.

An effect such as a **Wipe**, **Push**, **Fade**, **Dissolve**, etc. can be set up as a **Default Effect**, which is then automatically applied to transitions in and out of graphics displays. A **Default Effect** can also be saved as a **Message Effects** file, which can be applied to a single Lyric message or a series of messages. Because a **Message Effects** message is stored as a *.lyr* message, a number of them can be placed in a sequence of Lyric messages in **Read Next** or **Read-Xfer** operations. A **Message Effects** message is applied to the subsequent Lyric message(s) that is read, until a new **Message Effects** message is loaded.

NOTE

Message Effect messages are not recognized by Playlists. The effects set in the Playlist override the effects set in the Message Effects messages, as well as overriding the Default Effect. Refer to the section on Playlists for additional details.

Comparing Default Effects on Various Duet Systems

An important difference between Lyric for Duet LE/LEX/PCI/PCI+ and other versions of Lyric is that this version does not save effects settings in the message files containing on-screen content. Rather, effects settings are saved in separate message files, which also use the *.lyr* extension.

The effects available to Duet LE/PCI are also available to Duet LEX/PCI+. There is also an additional set of effects available to Duet LEX/PCI+ only. **Only the effects shown** in the **Primary Message Effect Setup** and **Secondary Message Effect Setup** dialog boxes (*described below*) are available for Duet LE/PCI. Other effects exclusive to Duet LEX/PCI+ execute as **Cuts** on a Duet LE/PCI.

Message Effect Setup and Execution

Selecting Default Effect in the Config menu opens the Default Effect dialog box, in which effects can be set

for transitions into and out of a Lyric message on a Duet LE/LEX/PCI/PCI+. The <u>Setup</u> buttons for the **IN** or **OUT** effects open the **Primary Message Effect Setup** and **Secondary Message Effect Setup** dialog boxes respectively, in which parameters specific to a selected effect can be set. The figure below shows the **Default Effect** dialog box, as it appears on opening, and also with the **IN** effect drop-down list displayed.

Default Effect		Default Effect	<u> </u>
IN Dissolve	▼ Setup	IN Dissolve	▼ Setup
OUT No Effect	▼ Setup	OUT Cover Cut	▲ Setup
Save	Close	Fade Hide Matrix Wipe	

Default Effect Dialog Box Showing IN Drop-Down Effect List

A single Duet LE/LEX/PCI/PCI+ VPB or PCI-Squeezeback board is capable of producing transition effects. Transition effects for single as well as multi-board systems can be set:

• When executing the effect on a single VPB or PCI-Squeezeback board that is not linked to another board, set the **OUT** effect to **No Effect** to transition directly from the current graphic using the selected **IN** effect.

If in this configuration, and the **OUT** effect is set to an effect other than **No Effect**, the current graphic transitions out using the selected **OUT** effect, *followed* by the new graphic appearing using the **IN** effect.

• To transition the **OUT** effect and **IN** effect simultaneously, two VPBs/PCI-Squeezeback boards must be linked to the single channel on which the effects will execute.

The **Primary Message Effect Setup** dialog box shows the available effects for setting up an **IN** effect.

C Cover	C Cut	Start
Dissolve	C Fade	
C Hide	C Matrix Wipe	Weave Size
C Peel	C Pour	Effect Direction
C Push	C Reveal	C Up Matrix X-size
C Split	C Weave	C Down
		C Left
00 - random orde	· ·	C Right

Primary Message Effect Setup Dialog Box

The Secondary Message Effect Setup dialog box shows the available effects for setting up an OUT effect. The Primary and Secondary Message Effect Setup dialog boxes are identical, except for the presence of NONE as an effect choice in the Secondary Message Effect Setup dialog box. Note that although Pour is available, it executes as a Cut when used as an OUT effect.

C Cover	C Cut	Start
C Dissolve	C Fade	End Tuu
C Hide	C Matrix Wipe	Weave Size
O Peel	C Pour	Effect Direction
O Push	C Reveal	C Up Matrix X-size-
🔿 Split	C Weave	C Down 1782
NONE		C Left
01 - top to bottom		C Right
1		

Secondary Message Effect Setup Dialog Box

When an effect is selected via one of the radio buttons in the **Effect** area of the menu, available parameters for that effect, such as **Speed**, **Effect Direction** and **Ease** options become active. Set **Speed** or **Frames** values in the upper right corner of this dialog box using the numbers on the alphabetical keyboard of the Duet LE/LEX/PCI/PCI+. Note that depending on the effect, the units for **Speed** may be specified in the dialog box as a percentage of the rendering time, or in frames. A lower percentage setting results in a slower transition. The table below lists the effects and the parameters that can be applied to them.

N indicates that the variation is not applicable to an effect. **Y** indicates that the variation is applicable to an effect. **Up**, **Down**, **Left** and **Right** indicate which directions are available for the movement of an effect.

Effect	Ease	Effect Direction	Speed - % of Maximum Duration (except Dissolve)
Cover	Y	Up & Down	Speed
Dissolve	N	N	Frames
Hide	Y	Up & Down	Speed
Peel	Y	Up & Down	Speed
Push	Y	Up, Down, Left, Right	Speed
Split	Y	Up & Down	Speed
Cut	N	N	Ν
Fade	N	N	Speed
Matrix Wipe	N	N	N. Matrix X-size set in pixels, Matrix Y- size set in scanlines. See below for Matrix Wipe pattern options.
Pour	N	N	Speed
Reveal	Y	Up & Down	Speed
Weave	Y	Left & Right	Speed; also Weave Size, set in scanlines; see below

Matrix Wipe: Selecting the **Matrix Wipe** effect activates a dropdown list of 30 patterns that may be applied to the effect. Larger **Matrix X-size** and **Matrix Y-size** values generate larger blocks, which speed the execution of the effect.

The available **Matrix Wipe** pattern selections are pictured below. The drop-down menu that you see in Lyric has been expanded here so that you can see all of the available choices in one view without scrolling.

Effect	
	0.04
C Divelue	
Ulissolve	O Fade
C Hide	 Matrix Wipe
C Peel	C Pour
🔿 Push	C Reveal
O Split	C Weave
01 - top to bottom	-
 01 - top to bottom 	
02 - middle to top an	d bottom
03 - top and bottom I	to middle
04 - left to right	
05 - middle to left an	d right
06 - left and right to r	middle _
07 - spiral-out	
U8 - left to right with	a line
10 discover lines to	ith a line
10 - diagonal from to	p-ient to bottom-light
12 - diagonal from bo	pright to ton-left
13 - diagonal from bo	ottom-right to top-left
14 - multi-diagonal to	p-left to bottom-right
15 - multi-diagonal to	p-right to bottom-left
16 - multi-diagonal be	ottom-left to top-right
17 - multi-diagonal bo	ottom-right to top-left
18 - snake from top-l	eft to bottom-right
19 - snake from top-i	ight to hottom
20 - snake from top-r	ight to left-bottom
22 - snake from bott	om-left to top-right
23 - snake from botto	om-left to right-top
24 - snake from botto	om-right to top-left
25 - snake from botto	om-right to left-top
26 - spiral-in	
27 - clockwise radar	sweep
28 - counterciockwis	e radar sweep
30 - vertical blinds	

Message Effect Matrix Drop-Down List

Executing a Message Effect

To execute a Message Effect:

- 1. Make sure that the use button is turned off.
- 2. Use the **Read Next** function to read a Lyric **Message Effects** message, then use **Read Next** to read the graphics files.

OR

Set up a **Message Effect**, then use **Xfer** to transfer the graphic to the output screen. The **IN** and **OUT** effects are applied to the transition.

3. Repeat Step 2 to display each subsequent available message in ascending **Message ID** number order.

NOTE

Do not use Read Previous if the message sequence contains one or more Effects Messages, as the system automatically increments, rather than decrements, the Message ID number when it encounters an Effects message.

Functions Specific to Duet LEX/PCI+

Message Effects Specific to Duet LEX/PCI+

There is a set of **Message Effects** available only to Duet LEX/PCI+. These effects, which can be applied only to **IN** transitions, can be selected from the **Default Effect IN** drop-down menu. Clicking on an effect name opens an effect-specific dialog box for setting the effect. **Enable**, **Fade**, **Reverse Play**, **Ease** and **Effect Length** are available to all of these effects. Effect-specific parameters, listed below, can also be set for each effect.

Effect	Effect-Specific Parameters
Explosion	Explosion Polygon, Translation and Rotation Speeds
Leaf	Enable, Leaf Coverage
Matrix	Effect Speed, Matrix Size
Ripple	Effect Resolution, Ripple Size, Ripple Speed
PageRoll	Roll Page from Side, Roll Size
PageTurn	Lift Corner of Page, Turn Orientation
Venetian	Orientation of Folds, Number of Folds
Zoom	Zoom From
Focus	Focus Aspect, Focus From
Slide	Slide From
Curtain	Effect Resolution, Curtain Ripple Size, Curtain Ripple Speed, Curtain Moving From

To execute a **Message Effect** specific to Duet LEX/PCI+:

- 1. Make sure that the **under started** button is turned off.
- 2. Use the **Read Next** function to cue up and execute each effect.

NOTES

- Effects specific to Duet LEX/PCI+ are only executed using Read Next. Pressing Xfer or activating the Live button and pressing the Read key will execute the effect as a Cut.
- Do not use Read Previous if the message sequence contains one or more Effects Messages, as the system automatically increments, rather than decrements, the Message ID number when it encounters an Effects message.

Saving a Message Effect on Duet LEX/PCI+ to Apply to a Lyric Message

Once **IN** and **OUT** effects are set, the effects may be saved and then applied to specific Lyric messages or a sequence of Lyric messages in **Read Next** or **Read-Xfer** operations on Duet LEX/PCI+ systems. To save a **Message Effects** message:

- 1. Set the effect **Message Effect** parameters in the **Primary Message Effect Setup** dialog box. Click **OK**. Lyric returns to the **Default Effect** dialog box.
- 2. Using the numeric keypad, enter a **Message ID** number. This number appears in the **Message Number** display customarily found at the bottom of the Canvas.
- 3. Click the **Save** button. The message is saved, in a message file with the *.lyr* extension, to the specified **Message ID** number. The **Message Number** display advances.

Multi FX - Duet SD

Tools Menu > Multi FX; Alt + X

Multi FX Setup

Lyric's **Multi FX** capability allows Duet SD's **frame buffers** to perform transitions between Lyric messages using **Advanced Image Effects**. On Duet SD systems outfitted with multiple VGEs and a **Video Mixer** board, effects occur simultaneously by default. In this situation, it may be helpful to remember that although the effects are being executed simultaneously, only the "newer" of two pages is being called up at a given time. Using the **Multi FX** menu's **Offset** controls allows overlapping effects to be moved apart in time, so that the "out" effect of a given message is in progress before the "in" effect of the next message begins.

Note that a **Multi FX** transition can be set up on just a single VGE board, but that there can be no simultaneous execution of **In** and **Out** effects.

Multi FX include Curtain, Explosion, Focus, Leaf, Matrix, PageRoll, PageTurn, Ripple, Slide, Venetian, Zoom and Wipe. These are the same types of Advanced Image Effects which can also be applied to bitmaps and 2D Text windows.

Take note that all of the settings on this menu may be saved and recalled (more about that later), but the combination of effects you select will be repeated for each transition unless changed manually. Different combinations of effects are not available for each transition between any two messages.

For the following exercise, the Duet SD should be equipped with 2 VGEs and a Video Mixer board.

1. First, Duet's **Video Mixer** must be set up appropriately. Use Lyric's **Tools** menu to access the mixer.

NOTE

It is essential that Output 1 be set to Mix in the Output Router area of the menu at bottom left.

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Recall Timeline Update OK		

Multi FX Setup - SD Mixer Control

 Next, use the **Tools** menu again to access **Multi FX**. By default, what appears initially is the **Multi FX** 'setup' mode. When composition and programming are complete, you may switch to this menu's **Playback Mode** by clicking **Exit Setup** in the lower left corner.

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Multi FX Control - Default Settings

All of the **In** and **Out** effects come up **Use Message** by default when this menu is opened. This option means that **Multi FX** will not execute any of its own effects between messages; Lyric simply calls up the message and plays out whatever animations (**Rolls**, **Crawls**, three-dimensional movement, etc.) were originally recorded in that message before displaying the next message.

The easiest way to begin using **Multi FX** is to manually enter a message into each frame buffer. This is a good time to note that the **Multi FX** menu draws from messages with numerical file names stored in the default message directory (See Default Paths in Online **Help**).

- 1. In **FB1**, enter the numeric file name of a Lyric message that you know is present in the default message directory.
- Press Read to call up the message and then Play to send it to the frame buffer's output. Note that in all Multi FX operations, you *will not* be clicking the Live button on the Lyric interface to send images from the Canvas to the video outputs.

3. In **FB2**, enter the numeric file name of a Lyric message that you know is present in the default message directory.

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Multi FX Control - Multi FX Setup

4. Again, press **Read** to call up the message. Now, when you press **Play**, the second message is sent to the video output.

At any time in **Multi FX** operation, it's a good idea to keep an eye on the arrowheads that indicate which frame buffer (and its message) are currently on air, as in the illustration below. We've added the white arrow to the illustration to emphasize that **Message Number 1** is currently on-air in **Frame Buffer 2**. **Frame Buffer 2**'s message number field is grayed out because it is currently on-air and any action taken next will be in the other frame buffer. Note also that the **Transport Controls** have turned red, indicating that a **Multi FX** operation is in progress.



Multi FX - Execution

Again, **Frame Buffer 2**, as marked by the green tally arrow is on air. The frame buffer indicated by the red arrowhead is next.

Multi FX Types

All of Lyric's **Advanced Image Effects** types are available for use with **Multi FX**. There are two additional effects, **Static** and **Use Message**, as shown below. These effects are covered later in this section.





Multi FX Control - Advanced Image Effects Menu

Static and Use Message are described following the bulleted items.

Right-click on any effect that has been selected (except for Use Message), and this context menu appears:



Multi FX Effects Context-Sensitive Menu

- **Parameters** opens each individual effect's dialog for controlling speed, duration, geometry and other variables. *Refer to the section on* **Advanced Image Effects** view effect-specific dialog boxes and illustrations of the same types of effects applied to bitmaps.
- Effect On Top places the selected effect "in front of" another effect when any two effects are occurring at the same time.
- Use First Frame causes Lyric to ignore any animation recorded into a message called up by the Multi FX facility. Only the first frame of the message is shown. To show only the last frame of a message, uncheck this option.

<u>Static</u>

Static allows the user to display only the first or last frame of an animated message that is displayed during a Multi FX operation.

Multi FX Control Effects In Static FB1 Out Use Mess	Parameters Effect on <u>T</u> op Use <u>First Frame</u>	
	Static Effect Con	figuration D
	Effect Control	Ease Options
	Effect Length	
	OK	Cancel

Multi FX Control Showing Static Effect Setup

Use Message

There is no context (right-click) menu for the Use Message option. This option does not use any VGEoriginated transition effects between Lyric messages. Any animation in a message called up in this mode is allowed to play out before Lyric displays the next message.

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Message FX Control Showing Use Message

Message Sequences

Another means of handling message files is to assemble a sequence of messages and set the effects that will transition between them.

Enter a message number into the field next to the Add button, and then click the Add button. That
message number is moved to the larger window in the Message List area. Alternately, you may
press either Enter key on the keyboard instead of clicking the Add button.

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Multi FX Control - Assembling a Message Sequence

- 2. Repeat this action with the desired message numbers until the sequence of messages is complete.
 - Use the **Remove** button to delete a highlighted item from the **Message List**.
 - Use the Clear button to delete all entries from the Message List.
- Next, click the Use List checkbox. If no entry is highlighted in the large Message List window, the number 1 appears in the FB1 message number field. If another number is highlighted in the Message List at the time Use List is checked, that number appears in the FB1 message number field.

Take note that using the **Message List** feature eliminates the need to manually designate the next message in the other frame buffer.

Now is also a good time to experiment with the **Auto Load** option. **Auto Load** eliminates the need to press the **Read** button before playing a message to Duet's video outputs.

4. Next, set the transition effects as discussed above.

Test and Scrub

Whichever method you use to load messages into Duet's frame buffers, Lyric offers two ways to preview your transitions **before** sending them to Duet's video outputs.

- Use the **Test** button to play a preview of the transition in real time on Duet's VGA monitor.
- **Scrub** allows you to move through a preview of the transition (also on the VGA monitor) by dragging the slider back and forth through the effect's duration.

Editing In Multi FX

Lyric offers a convenient means to escape from **Multi FX** mode for last-minute edits that may become necessary in the course of a production or live broadcast. **Multi FX** is a little different than other modes of Lyric operation, and doesn't allow direct editing of a message on the Canvas that is ready for playout in **Multi FX** mode. Follow the example below to see that last-minute edits are however, easy, and that the process incorporates a sensible safeguard.

1. A pre-programmed sequence of messages is loaded just before the first of the messages is needed on air. A mistake is discovered in message #2.



Message Showing a Mistake

 Press the Esc key on the Duet keyboard (upper left corner, below the Mode Select key) to enable editing. Click the 2D text region or other object to select it for editing. In the case of 2D text regions, the title bar turns light gray. 3. Perform the needed edits.



Message with Changes

4. Click the **Play** button on the **Multi FX Control** dialog box. The following Lyric prompt appears:



Prompt to Reload Current Scene

This prompt confirms that the **amended** scene is what you intend to use.

5. Press **Enter** on the keyboard or click **OK** to load the amended message (Canvas contents) for playout.

To return to the message as it was originally read from disk:

• Click the **Cancel** button in this dialog, or press **Esc** on the keyboard.

Saving a Multi FX Message

Any information entered into the **Multi FX** menu can be saved for quick recall; such messages are saved with the familiar *.lyr* extension. The usefulness of this option is not limited to message sequences. Since a saved **Multi FX** message includes *everything* on the menu at the time of saving, it can be used to put a desired combination of effects in place for use with messages that are called up manually rather than originating from a list.

Also, when a **Multi FX** message is saved, it records the status of the **Video Mixer**; remember the importance of setting the mixer properly for use of **Multi FX**, as mentioned at the beginning of this topic. The **Save** and **Recall** buttons open standard Windows dialog boxes for locating **Multi FX** message files. **Default Paths** are used for **Multi FX** message files.
A quick method for recording a **Multi FX** file is as follows:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Multi FX.
- 3. Click **Record**. The **Multi FX** settings are saved to the current **Message Number** in the **Default Message Directory**.

A Hotkey combination can also be used to record the Multi FX settings:

• Press Ctrl + Record F Enter. The Multi FX settings are saved to the current Message Number in the Default Message Directory.

23. Masks

Overview

The term **Mask** has a number of uses in Lyric. Each of the **Mask** terms are described below along with their availability in various systems.

Mask Objects

Mask Objects are supported by Duet systems, as well as for offline graphics creation. There are differences between how **Mask Objects** operate in Duet SD/HD/offline systems versus how they operate on Duet LE/LEX/PCI/PCI+ systems. **Mask Objects** can be animated.

- **Duet SD/HD/Offline:** An image specified as a **Mask Object** displays at 100% video, and cuts through the elements over which it is positioned and the background. Built-in transparent areas of a **Mask Object** allow video input to show through.
- Duet LE/LEX/PCI/PCI+: An image specified as a Mask Object displays at the transparency set in Properties > Surface combined with built-in transparency, and covers the object over which it is positioned. Mask Layers, Mask Inside and Alpha Trim Mask are supported on Duet LE/LEX/PCI/PCI+ systems. Transparent areas of a Mask Object allow video input to show through.
 Mask Layers: A Mask Object assigned to a layer interacts only with the other elements assigned to the same layer. A Mask Object can mask other graphic elements, including other Mask Objects, that are assigned to the same layer and over which it is positioned. A Mask Object behaves as a normal graphic element with regard to graphic elements not assigned to the same layer. Layer number has no bearing on display priority. It simply identifies the how Mask Objects and elements are grouped to interact with each other. Mask Layers are not supported on Duet SD/HD/Offline systems.

Mask Inside: When an element is designated **Mask Inside**, it causes the **Mask Object** in the same layer to act as a reverse **Mask**. Instead of covering the element over which it is positioned, it reveals it. Any time the **Mask Object** is not positioned on top of the element, the element is not visible. **Mask Inside** is not supported on Duet SD/HD/Offline systems.

Alpha Trim Mask: Some Mask Objects may display a transparent narrow border that you may wish to remove. Alpha Trim Mask removes this border. Alpha Trim Mask can be applied only to Mask Objects. Alpha Trim Mask is not supported on Duet SD/HD/Offline systems.

Soft Mask: A **Soft Mask** provides a soft-edged border into which a static or moving element (such as a **Crawl**) can fade. **Soft Mask** can only be applied to **Mask Objects**. **Alpha Trim Mask** is not supported on Duet SD/HD/Offline systems.

Mask Characters

Mask Characters are RGB font characters that function in a similar fashion as Mask Objects. Where a Mask Object cannot be present in a 2D Text Window, an RGB font character acting as a Mask Character must be typed into a 2D Text Window. An image specified as a Mask Character displays at 100% video, and cuts through the elements over which it is positioned and the background. Built-in transparent areas on a Mask Character allow video input to show through. Mask Characters are not supported on Duet LE/LEX/PCI/PCI+ systems.

Mask Scene

Mask Scene masks the entire screen. The Key component(s) of a character(s) and/or image(s) placed on the Canvas before the Scene Mask is created cuts a hole(s) in the input video after the Scene Mask is created, revealing the video that is underneath the Scene Mask. Characters and/or images in a Scene Mask cannot be animated. Other characters/and/or images on the screen, however, can be animated. A Scene Mask differs from a Mask Object, in that a Mask Object itself masks the video under it. Mask Scene is accessed from Tools>Masks>Mask Scene. Mask Scene is not supported on Duet LE/LEX/PCI/PCI+ systems.

Masked

The term **Masked** is used to describe a bitmap, live video or texture which can be revealed by the **Surface**, **Bevels** and/or **Sides** of 3D characters. This function is found in the **Properties > Surface** tab. **Masked** is available on all systems.

Mask Scene - Duet SD

Tools Menu > Mask Scene

There are several Lyric function names that contain the word "Mask." Refer to Masks: An Introduction for an overview of the different types of Masks.

The **Mask Scene** function provides the ability to create "cut-outs," which form a **Scene Mask**. A **Scene Mask** can reveal background, video input or other static or animated Lyric images. A **Scene Mask** takes its shape from the combination of any 2D text, 2D bitmaps, 3D characters and/or 3D objects that are on the **Canvas** when the **Scene Mask** is created. The position, edge hardness/softness and transparency of the cut-outs depends on the attributes of the objects. A **Scene Mask** cannot be animated.

To create a Scene Mask:

1. Create a simple 2D text message, using a large font.

2D Text 1	
Chyron	

Scene Mask Creation

2. From the Tools menu, select Mask Scene. The Mask Scene menu opens.



Mask Scene Menu

- From the Mask Scene menu, select Create Mask. The Canvas and the Scene Graph are cleared of all objects, and the alpha information from the object(s) is moved into the Mask Buffer. The Mask icon on the Chyron toolbar becomes active (selected).
- 4. Use the **Background [11]** tool to apply a colored or graphic background.

5. Click the Live icon, and the Scene Mask appears on the VGE output. Note that the Scene Mask is not visible on the Canvas as seen on the VGA output.



Scene Mask Viewed on VGE Output

Once the **Mask** is on the **VGE** output, it may be toggled on and off by clicking the **Mask** icon **Mask**, located on the **Chyron** toolbar.

In the preceding example, the **Scene Mask** was created from 2D text, and the image behind the mask was a static background. **Scene Masks**, however, can be created from a combination of 2D text, 2D bitmaps, 3D characters and/or 3D objects, and may be placed over animated Lyric objects and/or input video. A Lyric message can be read and executed behind a **Scene Mask**.

A background can be used to create a **Scene Mask** as well. For example, background with ramped transparency can be placed on the **Canvas**, and other objects can be positioned to cut soft-edged holes into the background. A Lyric animation can then be executed behind the transparent **Scene Mask**.

Other Mask functions in the Mask Scene menu include the following:

• Selecting/deselecting Use Mask toggles the Mask on and off, and performs the same function as

clicking the **Mask** icon When **Use Mask** is not selected (unchecked), only the non-mask image(s) is visible on the **VGE** output.

- Delete Mask removes the Mask from the scene. This is not a toggle function. The Mask is deleted, not turned off. If the Mask is to be used again, use the Save Mask function to save the Mask before deletion.
- Edit Mask restores to the Canvas the original image(s) from which the cutout(s) was made, so that it
 may be edited.
- Save Mask saves the Scene Mask to a *.*lyr* file. Any objects, as well as any the background, that are on the Canvas are included as part of the Scene Mask when it is saved. If there are objects or background that are on the Lyric Canvas that should not be included in the Scene Mask when it is saved, then turn them off (deselect) in the Scene Graph or delete them before saving. Note that the objects are not saved along with the Scene Mask and cannot be turned back on when the Scene Mask is recalled.
- Recall Mask opens the Open File dialog box. When a Lyric file is selected and then opened, the Scene Mask is automatically enabled for the message. In addition, any Lyric message that is opened using the Recall Mask function is displayed as a Scene Mask.

Mask Character (Duet SD/HD/Offline)

There are several Lyric function names that contain the word "Mask." Refer to Mask Overview for an overview of the different types of Masks.

An RGB font character typed in a **2D Text Window** can act as a **Mask Character** on a Duet SD/HD/Offline system, masking any elements, including the background, that are rendered below it. Note that a 2D bitmap that is placed in a **2D Text Window** using a method other than typing cannot act as a **Mask Character**. **Mask Characters** are not supported on Duet LE/LEX/PCI/PCI+.

For a **Mask Character** to work, it is necessary to place the **2D Text Window** containing the **Mask Character** on top of the element(s) that it is masking, or the **Mask Character** will not work properly. Display priority is set using the **Scene Graph** or by adjusting the **Z** position in **Properties>XYZ**.

An image specified as a **Mask Character** displays at 100% video, although built-in transparent areas of the **Mask Character** allow video input to show through. If transparency of a **Mask Object** is desired to allow video input to show through, the transparency must be set during graphic creation, before it is introduced to the **Canvas**. Adjusting the **Transparency** setting in the **Properties>Surface** tab has no effect on the transparency of the **Mask Character**.

Transparent areas of a RGB font character display as transparent on the **Canvas**, until the RGB font character is designated a **Mask Character**. When a transparent RGB font character is designated a **Mask Character**, the transparent areas display as opaque on the **Canvas**. On the output monitor however, you will see that the **Mask Character** cuts a rectangular area through all graphic layers so that video input is visible wherever there is transparency.

To set up a Mask Character:

- 1. Open a **2D Text Window** and type the RGB font character that is to be used as the **Mask Character**. *For information on creating RGB fonts and RGB font characters, refer to RGB Fonts.*
- 2. Use **Shift + ←** or → to highlight the RGB font character, or check the **Status Bar** to make sure that the cursor is positioned on the RGB font character. Do *not* use the mouse to highlight.
- 3. Right-click the RGB font character to display the context-sensitive menu, then select **Mask Character**.

The character now masks, or completely covers, any image that is positioned under it, and also cuts through the background. On the output, the **Mask Character** allows video input to be displayed wherever there is transparency. Additionally, the **Mask Character** item on the context-sensitive menu is now checked.

To remove Mask Character functionality from an RGB character:

• Repeat Steps 2 and 3. The RGB character is no longer a **Mask Character**, and the **Mask Character** item on the context-sensitive menu is now unchecked.

For details on using a 2D bitmap outside of a **2D Text Window** as a similarly-behaving **Mask Object**, refer to either the **Mask Objects on Duet SD/HD/Offline** or **Mask Objects on Duet LE/LEX/PCI/PCI+**.

Mask Objects - Duet SD/HD/Offline

There are several Lyric function names that contain the word "Mask." Refer to Masks: An Introduction for an overview of the different types of Masks.

Mask Objects are supported by Duet SD and HD systems, as well as for offline graphics creation. Any bitmap object including a Flipbook, that is placed *outside* of a 2D Text Window, can be designated a Mask Object, masking any elements, including the background, that are rendered below it. 3D objects, 3D characters and any graphics, including 2D text, inside of a 2D Text Window cannot act as Mask Objects. Since a Mask Object is generally used to allow live video to show through, only 32-bit TIFF files or 32-bit TARGA files should be used as Mask Objects.

For details on using an **RGB Font** character inside of a **2D Text Window** as a similarly-behaving **Mask Character**, refer to **Mask Characters**. For an overview of the different types of **Masks**, refer to **Mask Terminology**.

For a **Mask Object** to work, it is necessary to place the **Mask Object** on top of the element(s) that it is masking, or the **Mask** will not work properly. Display priority is set using the **Scene Graph** or by adjusting the **Z** position in **Properties > XYZ**.

An image specified as a **Mask Object** displays at 100% video, although built-in transparent areas of the **Mask Object** allow video input to show through. If transparency of a **Mask Object** is desired to allow video input to show through, the transparency must be set during graphic creation, before it is introduced to the **Canvas**. Adjusting the **Transparency** setting in the **Properties > Surface** tab has no effect on the transparency of the **Mask Object**.

Transparent areas of a bitmap on a Duet SD/HD/Off-line system display as transparent on the **Canvas**, until the bitmap is designated a **Mask Object**. When a transparent bitmap is designated a **Mask Object**, the transparent areas display as opaque on the **Canvas**. On the output monitor however, you will see that the **Mask Object** cuts a rectangular area through all graphic layers so that video input is visible wherever there is transparency.

To set up a Mask Object:

- 1. On the Scene Graph, select (highlight) the object that will act as the Mask Object.
- 2. Right-click on the Scene Graph or the Canvas to display the context-sensitive menu.
- 3. Select Mask Object. The menu closes. A check mark indicate that the object is now a Mask Object.

NOTE

In order for an object to be used as a Mask, it must be selected as a Mask Object. If the selected element is not appropriate for use as a Mask, the Mask Object selection on the context-sensitive menu will not be available.

Mask Objects - Duet LE/LEX/PCI/PCI+

Introduction

There are several Lyric function names that contain the word "Mask." Refer to Masks: An Introduction for an overview of the different types of Masks.

Mask Objects are supported by Duet LE/LEX/PCI/PCI+ systems. Any 2D map object including a Flipbook, that is placed *outside* of a 2D Text Window, can be designated a Mask Object and therefore mask any elements rendered below it. Since a Mask Object is often used to allow live video to show through, it is recommended that 32-bit TIFF files or 32-bit TARGA files be used as Mask Objects. Transparency of a Mask Object can be set in Properties > Surface, but results in the changing the Transparency of the entire Mask Object (see NOTE in the section on Mask Inside, below, for additional information on transparency). 3D objects, 3D characters and any graphics, including 2D text, inside a 2D Text Window cannot act as Mask Objects.

Duet LE/LEX/PCI/PCI+ support multi-layer masking. **Mask Objects** can be assigned to mask certain objects, but not others. Objects that are to interact with each other with regard to this type of masking must be assigned to the same layer. This layer has no significance with regard to display priority, i.e., which image displays on top of another. It is simply a way to group images which are affected by a **Mask Object**. Remember, however, that it is necessary to place the **Mask** object on top of the object(s) that it is masking, or the **Mask** will not work properly. Display priority is set using the **Scene Graph** or by adjusting the **Z** position in **Properties > XYZ**.

Elements not assigned to the same layer as a Mask Object are not affected by the Mask Object.

For details on using an RGB font character *inside* of a **2D Text Window** as a similarly-behaving **Mask Character**, refer to **Mask Characters**. For an overview of the different types of **Masks**, refer to **Masks: An Introduction**.

Mask Object Setup

To set up a Mask Object:

- 1. On the **Scene Graph** or **Canvas**, select the object that will act as the **Mask Object**. Note that it is generally easier and sometimes necessary to select objects or elements from the **Scene Graph**, especially when they are already positioned one on top of the other on the **Canvas**.
- 2. Right-click on the object on the **Scene Graph** or **Canvas** to display the context-sensitive menu. The illustration below shows this procedure performed from the **Scene Graph**.



Setting a Mask Object

 Select Mask Object. The menu closes. A check mark indicates that the object is now a Mask Object.

NOTE

If the selected element is not appropriate for use as a Mask Object, the Mask Object selection on the context-sensitive menu will not be available.

Assigning a Mask Object or Element to a Layer

A **Mask Object** not assigned to a layer will cut through the background if the **Mask Object** has the lowest display priority on the **Canvas**, i.e., it is at the bottom of the element list (except for **Lights**, **Global Light** and **Camera**) on the **Scene Graph**, or if the **Z** position set in **Properties>XYZ** places it behind the other graphic elements. The background cannot be assigned to a layer.

A **Mask Object** assigned to a layer does not cut through the background, but interacts only with the other elements assigned to its layer. A **Mask Object** can mask other graphic elements, including other **Mask Objects**, that are assigned to the same layer and over which it is positioned. A **Mask Object** behaves as a normal graphic element with regard to graphic elements not assigned to the same layer.

To assign a Mask Object or other element to a layer:

- 1. On the **Scene Graph** or **Canvas**, select the element that will be masked. This element can be 2D or 3D text, or another type of object.
- 2. Right-click on the **Scene Graph** or **Canvas** to display the context-sensitive menu. The illustration below shows this procedure performed from the **Scene Graph**.



Assigning a Mask Object or Element to a Layer

- 3. Cursor or scroll to **Mask-To Layer** to display the list of layers.
- 4. Select a layer. Keep in mind that if you do not want this Mask Object or element to interact with other Mask Objects or elements already assigned to the layer, select an unused layer. Once a layer is selected, the menu closes. A check mark now indicates which layer has been selected. Remember that layer number has no effect on display priority, i.e. elements assigned to layer 1 do not automatically display on top of Mask Objects/elements assigned to layer 7, or vice versa.

Mask Inside

In addition to using the **Mask Object** to simply cover another image, a **Mask Object** can be used instead to reveal another image.

When an element is designated **Mask Inside**, it causes the **Mask Object** in the same layer to reveal the element over which it passes instead of covering it. Any time the **Mask Object** is not positioned on top of the element, the element is not visible. A **Mask Object** can also be designated **Mask Inside**. When another **Mask Object** in the same layer passes over it, the **Mask Object** behaves in the same manner as an **Mask Inside** element, as well as acting as a **Mask Object** for elements in the same layer that are below it.

To set up a Mask Inside:

1. Set up a **Mask Object** as described above.

NOTE

When applying Mask Inside to 2D text (including RGB font characters or bitmaps, the Mask Object must have either built-in transparency or transparency as applied in Properties > Surface > Transparency, or the element(s) designated as Mask Inside will not be revealed as the Mask object passes over it.

- 2. On the **Scene Graph** or **Canvas**, select the element that will revealed by the **Mask Object**. This element can be 2D text (including RGB font characters), a 3D character, a bitmap, a 3D object or Flipbook.
- 3. Right-click on the Scene Graph or Canvas to display the context-sensitive menu.
- 4. Cursor or scroll to **Mask-To Layer** to display the list of layers, then select a layer. Once a layer is selected, the menu closes. A check mark now indicates which layer has been selected.
- 5. Right-click again on the **Scene Graph** or **Canvas** to redisplay the context-sensitive menu.
- 6. Cursor or scroll to **Mask Inside** (*see above figure*), then select. The menu closes. A check mark indicates that **Mask Inside** has been activated.

Mask Inside setup is now complete. The element designated as Mask Inside remains invisible until a Mask Object assigned to the same layer passes over it.

NOTE

To work with a Mask object that is completely transparent or contains completely transparent areas, for example, to reveal a Mask Inside element, it is recommended that the Mask Object be created with transparency in whichever graphics creation program you are using. Remember also to create and save the alpha information with the graphic. The saved graphic format should be 32-bit TIFF or 32-bit TARGA.

If, however, the graphic does not contain alpha information, set the Transparency in the Surface tab of the Properties dialog box to 100. Note that this makes the entire graphic completely transparent. If some type of a graphic frame is needed to enclose this transparent area, it can be created separately and animated in lockstep with the transparent graphic.

Alpha Trim Mask

Some Mask Objects may display a transparent narrow border that you may wish to remove. Alpha Trim Mask removes this border. Alpha Trim Mask can be applied only to Mask Objects. To apply an Alpha Trim Mask:

- 1. On the Scene Graph or Canvas, select the Mask Object.
- 2. Right-click on the Scene Graph or Canvas to display the context-sensitive menu.
- 3. Cursor or scroll to Alpha Trim Mask (see above figure), then select. The menu closes. A check mark indicates that the Mask is an Alpha Trim Mask. Note that this feature can be selected in conjunction with Mask Inside.

NOTE

While Alpha Trim Mask can remove the unwanted transparent border of a Mask, it may also affect other transparent regions of the Mask.

Mask Object Tutorial

Many interesting effects can be created using **Masks**. The following simple example demonstrates how to use an animated window to highlight text in a contrasting color as it moves over it.

- 1. Create a completely transparent, rectangular bitmap image.
- 2. On a new Lyric **Canvas**, open a **2D Text Window**. An element named **2D Text 1** appears in the **Scene Graph** list. Type a line of white text in the **2D Text Window**.



6

passes over it.

3. Select 2D Text 1 on the Scene Graph, and assign it to Layer 1.

- 4. Select (highlight) all of the text in the 2D Text Window, then perform a Copy (Edit>Copy or Ctrl + C) operation.
- 5. While the text in **2D Text 1** is still selected, apply a color other than white.
- 6. Create a second 2D Text Window. It appears in the Scene Graph as 2D Text 2.
- Perform a Paste in Place (Edit>Paste in Place or Ctrl + I) operation. This pastes the white text into 2D Text 2 directly on top of the newly colored text in 2D Text 1.
- 8. Assign **2D Text 2** to **Layer 1**, then select **Mask Inside**. The white text now disappears. The colored text from **2D Text 1** is displayed from behind the now-invisible text from **2D Text 2**.



9. Place the transparent rectangle bitmap onto the **Canvas**. Set the bitmap as a **Mask Object**, and assign it to **Layer 1**. Make sure it has higher display priority than the text elements.

NOTE

In order to see the transparent bitmap, click the Set Default Background Color button

in the toolbar to change the background color of the Canvas to gray. This affects only the Canvas, and not the output. To change the color back to black, click the Set Default Background Color button again.



The area under the Mask reveals the Mask Inside text from the 2D Text 2 window. The text from 2D Text 1 is visible only outside the boundary of the Mask Object.

- 10. Create an animation to move the rectangle over the text.
- 11. Execute the animation. As the "invisible" rectangle (outlined in the above illustration using a gray box) travels over the text, the white text inside of the rectangle is revealed (**Mask Inside**) and masked outside; and the colored text is masked inside of the rectangle, but is visible outside.

Soft Mask

A **Soft Mask** provides a soft-edged border into which a static or moving element (such as a **Crawl**) can fade. *For information on* **Soft Mask** creation and use, refer to the section in this chapter covering **Soft Masks**.

Removing Mask or Layer Functionality

To remove Mask Object, Mask Inside, Alpha Trim Mask or layer assignment from any Mask Object or element:

- 1. Select the object on the **Canvas** or the **Scene Graph**, then right-click to display the context-sensitive menu.
- 2. Select whichever attribute that is to be removed. The menu closes. The item is now unchecked, and the functionality has been removed.

Soft Masks - Duet LE/LEX/PCI/PCI+ Only

2D Bitmap Object Context (Right-Click) Menu > Select Mask Object, then Soft Mask

Mask Objects are hard-edged regions which mask objects which lie under them and can allow input video to show through. A **Soft Mask** provides a soft-edged border into which a static or moving element (such as a **Crawl**) can fade. To understand how a **Soft Mask** works, the following example will demonstrate the creation of a simple **Soft Mask Object** in Adobe[®] Photoshop[®], and its importation and use in Lyric.

Refer to Mask Objects - Duet LE/LEX/PCI/PCI+ for additional information on Mask Objects.

Creating a Graphic to Use as a Soft Mask

To create the graphic:

- 1. In Photoshop, set the size of the **Canvas** to slightly larger than 400 pixels wide by 150 pixels high if working in **4:3** aspect ratio, or to slightly larger that the pixel dimensions of the screen if working in a different aspect ratio.
- 2. Set Image Menu > Mode to RGB Color.
- 3. Fill the entire image completely with black.



Image Filled with Black

4. Click the Channels tab to display the channels that comprise the graphic.



Channel Display for Black Graphic

5. Click the **Create new channel** icon.



Create New Channel

6. A new channel is **Alpha** channel is created. Click the eye icons to turn off the **RGB**, **R**, **G** and **B** channels.

Layers	Channels Pa	aths	0
	RGB	Ctrl+∾	1
	Red	Ctrl+1	
	Green	Ctrl+2	
	Blue	Ctrl+3	
9	Alpha 1	Ctrl+4	
	AS 1281		-

New Alpha Channel Created

- 7. In the **Channels** tab, make sure that only the **Alpha** channel is selected. This ensures that only **Alpha** is modified.
- 8. Select the Rectangular Marquee tool. Set it to feather at about 15 pixels.

9. On the **Canvas**, use the **Rectangular Marquee** tool to outline an area on the right side of the graphic. This is the area through which a **Roll** is to run. Use the **Paint Bucket** tool to fill the outlined area with white.



Alpha Channel Modified

The **Alpha** channel should appear as follows:

Layers	Channels (F	Paths U
	RGB	Ctrl+~
	Red	Ctrl+1
	Green	Ctrl+2
	Blue	Ctrl+3
	Alpha 1	Ctrl+4
	0 0	J H

Alpha Channel Modified - Reflects Change on Canvas

10. Save the graphic as a Photoshop (*.PSD) file, and then perform a Save As to the Targa (*.TGA) format. When prompted, select 32-bits/pixel, or the Alpha information will not be saved. The graphic is now ready to use as a Soft Mask Object.

Using a Soft Mask Object in Lyric

The goal in this exercise is to set up a **2D Roll** up the right side of the screen, which fades in at the bottom and out at the top.

- 1. Click the **Set the Default Background Color** icon **So that the Canvas** turns gray for easier viewing. This does not affect output.
- 2. Import the graphic that was just created. Note that the outer edges should lie beyond the boundaries of the screen. It appears as follows.



Placing the Mask Graphic on the Canvas

3. Right-click to display the context menu for the graphic, and then select **Mask Object**. The graphic changes appearance to reflect its function as a **Mask Object**.



Mask Object Specified

4. Right-click to display the context menu for the graphic, and then select **Mask Object**. The graphic again changes appearance to reflect that a **Soft Mask** has been applied.



Soft Mask Applied

- 5. Add a **2D Roll Window** so that it lies underneath the cutout of the **Mask Object**. The left and right margins of the **2D Roll Window** should not extend to the edges of the **Mask Object**. Add text to the **Roll**. In this instance, a weather forecast was created. Note that the **2D Roll Window** frame is still displayed on top of the **Mask Object**, even though the text that makes up the **Roll** is positioned below it.
- 6. If desired, add a graphic as the top layer, positioned outside of the cutout.

7. Add a Clip to the Timeline. For this example, a clip of flowers is used. It is not visible on the Canvas. From top to bottom, the graphic elements should be listed in the Scene Graph as follows: Graphic element (forecast bar); Soft Mask Object; and then 2D Roll Window. The clip can be placed anywhere. The Lyric composition should appear as follows:



Lyric Composition with Soft Mask

8. Save the composition as a Lyric message. Read and play back the message. The mask should apply a soft edge to both the top and bottom edges of the roll.



Soft Mask on Output

Note that a separate opaque or transparent background and/or graphics can also be applied to the **2D Roll Window** and/or to the **Canvas**.

Hints on Creating Soft Masks

A 2D bitmap is always rectangular. 2D bitmaps which appear to be circles, ovals or other shapes are rectangular even though they do not appear to be. The portions that cannot be seen are still present as transparent pixels. When a 2D bitmap object is specified as a **Mask Object**, the entire rectangle becomes the mask. As a result, when a **Soft Mask** is applied, the hard edges of the transparent portions of the rectangle can still be visible.

The trick to getting around this is to size the graphic so that the hard edges lie off-screen, as demonstrated with the **Soft Mask** that was just created. The **Soft Mask** "cutout" can be any shape, with any transition in opacity, and there can be more than one cutout in the same **Mask Object**.

24. Duet Tools - Playout to Output

Duet Tools

Duet Tools and **Duet LE/LEX/PCI/PCI+ Tools** control playback and display of Lyric messages. There are operations common to both Duet SD/HD Tools and **Duet LE/LEX/PCI/PCI+ Tools**, but there are functional differences as well. **Duet LE/LEX/PCI/PCI+ Tools** also provides additional animation playback tools. **Duet Tools** are available only when Lyric is running on a Duet system. They are grayed out in an offline environment. Additionally, a grayed out **FB** icon (Duet SD/HD)s, as shown below, or a **Frame Buffer** number icon (Duet LE/LEX/PCI/PCI+) indicates an unavailable or uninstalled **VPB** (all systems) or **PCI-Squeezeback** board (Duet LE/LEX/PCI/PCI+ only). There are also a number of **Duet Tools** that do not have icons. They are covered in the sections specific to Duet **SD/HD Tools** or **Duet LE/LEX/PCI/PCI+ Tools**.



Duet SD/HD Tools



Duet LE/LEX/PCI/PCI+ Tools

Duet SD/HD Tools

Duet SD/HD Tools provide a variety of animation playback and static graphic display methods. They also provide information on active/inactive buffer status. **Duet SD/HD Tools** are often used in conjunction with **Transport Controls**, the **Play** key on the Duet keyboard and **Read** operations.



Duet SD/HD Tools

Duet Tools are grayed out if Lyric is running on a PC.

Refer to **Preferences:** Animation Settings for information on how animation execution settings can be tailored for specific playout situations.

Outputs

Each VGE installed in a Duet SD not containing an **SD Video Mixer** board provides two frame buffers. The contents of the frame buffer, displayed on the **Canvas**, can be sent to one or both of Duet's video outputs, via the Video I/O Board or the **Video Mixer**. Most commonly, Duet SD systems are outfitted with two or more VGEs and a **Video Mixer**. In this instance, the processing power within *each* VGE is summed to offer one Frame Buffer. Each **VGE** and its frame buffer can then be routed to the **Video Mixer**, the Video I/O board, or both.

Each VGE installed in a Duet HD provides one frame buffer, regardless of the presence of an **HD Video Mixer** board. The contents of the frame buffer, displayed on the **Canvas**, can be sent to one or both of Duet's video outputs, via the Video I/O Board or the **HD Mixer**.

Note that the grayed-out icon is reserved for a third frame buffer.

The **FB** icons **GED** display the active/inactive status for each frame buffer in the system. Clicking an **FB** icon selects a **VGE** or **MPx** output for composition/editing and display on Duet's VGA monitor. An additional **Frame Buffer** icon appears for each **Frame Buffer** available on a Duet SD system that does not contain a **Video Mixer**.

- A blue **FB** icon indicates that the frame buffer is active.
- A gray **FB** icon indicates that the frame buffer is inactive.

By default, **FB 1** (**VGE 1**) is selected upon Lyric startup. Other frame buffers may be selected (made active) for editing by clicking the appropriate **FB** icon. Icons representing VGEs that are installed, but not available to Lyric are grayed out.

Each time an **FB** icon is clicked, the graphics on the **Canvas** are replaced with the contents of the newlyactive frame buffer. If there are no graphics in the frame buffer, the **Canvas** is blank, with only the default **Camera**, **Global Light** and one **Individual Light** present in the scene. Note that changes to the composition

in the active frame buffer are not immediately reflected on output unless the icon is active.

Lyric can be set to display the active frame buffer only or all frame buffers on the VGA monitor.

- 1. From the **Config** menu, select **Preferences**, then click the **Windows** tab.
- 2. In the **Canvas** area, select (check) the **Display All Frame Buffers** check box to show all frame buffers on the VGA monitor, or leave the check box blank (unchecked) to display only the active frame buffer.
- Click OK. In both instances, a full-sized Canvas for displays the contents of the active frame buffer. When Display All Frame Buffers is selected (checked), the smaller Canvases display the contents of the inactive frame buffers.

One or two clip players can be installed in a Duet system. When **Frame Buffer 1** in a Duet system is selected as active, the **Clip Control Panel** automatically displays the settings for **Internal Clip Player 1**. When **Frame Buffer 2** in a Duet system is selected as active, the **Clip Control Panel** automatically displays the settings for **Internal Clip Player 2**. This occurs regardless of how the clip players are connected to the various boards in the Duet system.

Live

NOTE

As of Lyric Version 4.0, the Duet icon was replaced by the Live icon Functionality was not changed.

Live currently activates Lyric's Duet Render Mode. Clicking the currently active frame buffer on the Duet's video output(s). Any text/objects placed on the active **Canvas** are rendered simultaneously on the video output(s) in real time. In this manner, composition and editing may be previewed in true WYSIWYG fashion.

- When the Live icon is active performing a Read displays the last or Preview frame of the animation on the VGE (output), with the current Default Effect applied to it. Refer to Preferences: Animation Settings for information on message Read options, and Config Menu: Default Effect (Duet SD) or Config Menu: Default Effect (Duet HD) for additional information on Default Effect setup.
- When the Live icon is inactive , performing a **Read** displays the last or **Preview** frame of the animation on the **VGA** (**Canvas**). The contents of the **Canvas** can be transferred to the selected

Duet video output by clicking the Xfer (Transfer) icon

The active or inactive status of the **Live** icon determines which methods can be used to play the animation to air or to the **Canvas**.

To toggle the **Live** icon on and off:

• Click the live icon, or press Ctrl + Fn + F6 (Duet keyboard) or Ctrl + F11 (PC keyboard).

Xfer to Frame Buffer

To transfer the contents of the current **Frame Buffer** to the currently inactive channel. This operation transfers **Output 1** to **Output 2** using the **Mixer** effect defined in the **SD Mixer Control Panel**.

• Press Alt + Xfer (Duet keyboard) or the Alt + / key on the numeric keypad (PC keyboard).

The current Frame Buffer remains active, and its contents remain intact.

Swap

The **Swap** function exchanges the contents of Duet's two video outputs. This operation can be used as a change between **Preview** and **Air** signals. **NOTE: As this exchange of signals occurs, Duet executes a transition between the video outputs!** The video output channel designated as active displays the transition. The type of transition is specified by the **Default Effect** set from the **Config** menu. The inactive video output channel simply switches one image for the other. *Note that* **Swap** *is disabled when playout of an animation is in progress.*

To perform a Swap:

Click _____, or press Swap (Duet keyboard) or Ctrl + / on the numeric keyboard (PC keyboard).

Change

There is no icon for this frame buffer function. To select (make active) the next available frame buffer:

• Press Change (Duet keyboard) or the * (PC keyboard).

Xfer

The Xfer function plays transfers the contents of the Canvas. If an animation is present, it is executed to air.

This function works only if the live icon is inactive **Live**. To execute **Xfer**:

• Press Xfer (Duet keyboard) / on the numeric keypad (PC keyboard).

Two Xfer modes are available:

• **Basic:** Once a composition has been transferred to the video output, it can no longer be modified in real time. Further changes must be made on the **Canvas**, and then rendered to the video output

executing an Xfer again, or by clicking the Live icon

• Swap VGE with VGA: This option allows the Xfer operation to be executed repeatedly, in order to switch the composition on the Canvas (VGA) with the signal on the output. This may be used as a type of Air/Preview operation.

To set Xfer mode:

- 1. From the **Config** menu, select **Preferences**. It opens to the **CG** tab.
- 2. In the Xfer Mode area, click either the Basic or Swap VGE with VGA radio button. Click OK to close Preferences.

Refer to the section on **Preferences: CG** for additional information on setting **Preferences**.

Changing the Speed of an Animation During Execution

The speed of an animation can be changed during execution:

Press the up cursor key ↑ to speed up the animation, or the down cursor key ↓ to slow down the animation.

This operation can be performed regardless of the method used to trigger the animation.

Duet LE/LEX/PCI/PCI+ Tools

Duet LE/LEX/PCI/PCI+ Tools provide a variety of animation playback and static graphic display methods. They also provide information on active/inactive buffer status and the nature of each available buffer (VPB or PCI-Squeezeback board). **Duet LE/LEX/PCI/PCI+ Tools** are often used in conjunction with **Transport Controls**, the **Play** key on the Duet keyboard and **Read** operations.



Duet LE/LEX/PCI/PCI+ Tools

NOTE

As of Lyric v5.0, the Load , Quick Load , Stop and Play icons have been removed from the Duet Toolbar. Their functions are still accessible by using the following keystroke combinations:

- Load: Alt + L
- Quick Load: Alt + Q
- Play: Alt + Y
- Stop: Esc

The Save seen removed from Lyric.

Duet Tools are grayed out if Lyric is running on a PC.

Refer to **Preferences:** Animation Settings for information on how animation execution settings can be tailored for specific playout situations.

Outputs

Each VGE installed in a Duet LE/LEX/PCI/PCI+ provides one frame buffer. The contents of the active frame buffer, displayed on the **Canvas**, appears at the output of the specified frame buffer.

The **Output** icons represent the VPBs and PCI-Squeezeback boards assigned to **Air** or **Preview** in the **Configuration** dialog box. There can be up to four **Output** icons displayed in the **Duet LE/LEX/PCI/PCI+ Toolbar**. Only those VPBs and PCI-Squeezeback boards assigned to **Air** or **Preview** are displayed. When an icon is selected, that VPB or PCI-Squeezeback board is available for composition/editing, and its **Canvas** is displayed on the VGA monitor. Each VPB or PCI-Squeezeback board Use for additional information.

- An Output icon that is not selected is black/gray, and indicates that the corresponding board is a VPB assigned to Preview or Air, but not active for editing.
- An **Output** icon that is blue/gray indicates that the corresponding board is a VPB active for editing.
- An Output icon that is green/gray indicates that the corresponding board is a PCI-Squeezeback board, enabling Squeezeback effect setup and execution. When the icon is highlighted, its graphics plane is also active for editing. Note that the icon need not be selected in order to set up a Squeezeback effect. See Duet LE/LEX/PCI/PCI+ Squeezeback for more details.
- A linked board(s) that is upstream to the last board in the link chain does not display a corresponding **Output** icon. Only the last board in the link chain displays an **Output** icon.

By default, **Frame Buffer 1** is selected upon Lyric startup. Other frame buffers may be selected (made active) for editing by clicking the appropriate output icon. Icons representing VGEs that are installed, but not available to Lyric are grayed out.

Each time an output icon is clicked, the graphics on the **Canvas** are replaced with the contents of the newlyactive frame buffer. If there are no graphics in the frame buffer, the **Canvas** is blank, with only the default **Camera**, **Global Light** and one **Individual Light** present in the scene. Note that changes to the composition

in the active frame buffer are not immediately reflected on output unless the university icon is active.

Lyric can be set to display the active frame buffer only or all frame buffers on the VGA monitor.

- 1. From the **Config** menu, select **Preferences**, then click the **Windows** tab.
- In the Canvas area, select (check) the Display All Frame Buffers check box to show all frame buffers on the VGA monitor, or leave the check box blank (unchecked) to display only the active frame buffer.
- Click OK. In both instances, a full-sized Canvas for displays the contents of the active frame buffer. When Display All Frame Buffers is selected (checked), the smaller Canvases display the contents of the inactive frame buffers.

One or two clip players can be installed in a Duet system. When **Frame Buffer 1** in a Duet system is selected as active, the **Clip Control Panel** automatically displays the settings for **Internal Clip Player 1**. When **Frame Buffer 2** in a Duet system is selected as active, the **Clip Control Panel** automatically displays the settings for **Internal Clip Player 2**. This occurs regardless of how the clip players are connected to the various boards in the Duet system.

Live

NOTE

As of Lyric Version 4.0, the LE icon was replaced by the Live icon Functionality has not changed.

Live contents of the currently active frame buffer on the Duet's video output(s). Any text/objects placed on the active **Canvas** are rendered simultaneously on the video output(s) in real time. In this manner, composition and editing may be previewed in true WYSIWYG fashion.

- When the Live icon is active • performing a Read displays the last or Preview frame of the animation on the VGE (output), with the current LE/LEX/PCI/PCI+ Message Effect applied to it. Refer to Preferences: Animation Settings for information on message Read options, and Config Menu: Default Effects (Duet LE/LEX/PCI/PCI+ Message Effects) for additional information on Message Effect setup.
- When the Live icon is inactive , performing a Read displays the last or Preview frame of the animation on the VGA (Canvas). The contents of the Canvas can be transferred to the selected

Duet video output by clicking the Xfer (Transfer) icon

The active or inactive status of the **Live** icon determines which methods can be used to play the animation to air or to the **Canvas**. *Refer to Play later in this section for details on animation playback.*

To toggle the Live icon on and off:

• Click the live icon, or press Ctrl + Fn + F6 (Duet keyboard) or Ctrl + F11 (PC keyboard).

Xfer to Frame Buffer

To transfer the contents of the current Frame Buffer to the next available Frame Buffer:

• Press Alt + Xfer (Duet keyboard) or the Alt + / key on the numeric keypad (PC keyboard).

The current Frame Buffer remains active, and its contents remain intact.

Swap

The **Swap** function exchanges the contents of the active graphics buffer with that of any other available board in the system. To perform a **Swap**:

1. Click or press Swap or Ctrl + Xfer (Duet keyboard) or Ctrl + / on the numeric keypad (PC keyboard). In a system with two available boards (i.e., not designated as Unused or Linked in the

Config > Duet Hardware > Configure Board Use tab), clicking **See** immediately performs the swap operation. If the system has more than two active boards, continue to the following step.

2. The following is displayed:

hoose Destination					
1	2	3	4		
	Car	ncel			

Choose Destination Buttons

Click a **Destination** button to swap the contents of the active buffer and the selected buffer.

The contents of the selected buffers are swapped. The active video output channel displays the transition using the **OUT** setting specified in the Duet LE/LEX/PCI/PCI+ **Message Effects** dialog, available from the **Tools** drop-down menu. The **OUT** transition is applied to both the exiting and entering graphic.

Remember that each VPB and PCI-Squeezeback board has its own output connector to external devices such as keyers and switchers. A board output can also be connected to another board in the Duet system. How the system is configured affects where the swapped graphics display.

Swap does not trigger execution of a swapped animation or a **Video Squeezeback** effect. Additionally, **Video Squeezeback** execution is independent of **Swap** operations, although the contents of the graphics buffer of a PCI-Squeezeback board can be swapped with that of another board.

NOTES

- Unlike Duet SD/HD, Swap exchanges the contents of the graphics buffers of the two VPBs or PCI-Squeezeback boards involved. After the swap, the active VPB or PCI-Squeezeback board does not change as it would on Duet SD/HD.
- Swap is not accessible to upstream linked boards. It can only execute on the last board, i.e. the output board, in a link chain.
- When CMix software is installed, the normal Duet Tools Swap function is disabled, whether or not a CMix system is connected, and/or whether or not the CMix Control dialog box is open. To restore normal Swap function, move the *CMix.ocx* file from the Lyric *Plugins* directory to another location. To restore CMix functionality, move the *CMix.ocx* back to the Lyric *Plugins* directory.

To execute an animation after a swap, make sure that the buffer containing the animation is active, then use the appropriate playout method.

Change (Change)

There is no icon for this frame buffer function. To select (make active) the next available frame buffer:

 Press Chng (Duet keyboard) or the * (PC keyboard). For example, if there are three frame buffers in the Duet system, and Frame Buffer 2 is active, performing a Change operation makes Frame Buffer 3 active.

Xfer to Output

In **Transfer Mode**, the VPB or PCI-Squeezeback board processes and executes the animation, freeing up system resources for other Lyric operations. The six-second limitation on animation duration does not apply in **Xfer Mode**, as it does in **Render (Load and Play) Mode** on Duet LE/PCI systems. Animation length is limited only by the memory available on the VPB or PCI-Squeezeback board.

Transfer Mode is most appropriate for playout of animations such as **Rolls**, **Crawls**, **Clocks**, **Timers** and **Flipbooks**. A VPB or PCI Squeezeback board operating in **Transfer Mode** allows display and accurate update of a continuous **Clock** or **Timer**, such as a time-of-day display. Certain other animations may only execute using **Load-and-Play** or **Streaming Animation Mode**.

Note that **Rolls**, **Crawls**, **Flipbooks** and **Clocks/Timers** may be displayed on each of the outputs in a multi-VPB system. However, messages requiring **Streaming Animation** or **Load-and-Play** execution can be displayed on only one VPB or PCI-Squeezeback board at a time.

The following conditions apply to Transfer Mode execution:

- The **Roll** function accommodates a maximum of 1000 rows of text.
- Only one **Roll** or **Crawl** may be used in a page.
- On single-channel systems, **Flipbooks** or **Clocks/Timers** may not be used in the same page as a **Roll** or **Crawl**. This type of composition is only supported by two-channel systems.
- On single-channel systems, **Flipbooks** and **Clocks/Timers** may not be used in the same page.
- Crawl windows greater than 280 scanlines in height should be previewed before on-air use.
- If a message containing a **Flipbook** animation is loaded into the video processor board by executing a **Xfer**, the total size of the **Flipbook** is limited to 15MB for the Lantern 32 board and PCI-Squeezeback boards. Lantern 64 boards are limited to no more than 45MB. Total **Flipbook** size is the animated image's **Height x Width x Total Number of Frames x 4**.

NOTES

- The Live icon must be inactive when executing Xfer.
- Pressing the Xfer key (Duet keyboard) or the / key on the numeric keypad (PC

keyboard) performs the same function as clicking ²²² on the Duet Toolbar.

Using the Xfer function, the contents of the active frame buffer are transferred to Duet LE/LEX/PCI/PCI+'s output. The active video output channel displays the transition using the settings specified in the Duet LE/LEX/PCI/PCI+ **Message Effects** dialog, available from the **Tools** drop-down menu. The **OUT** and **IN** transitions are applied to the exiting and entering graphics respectively. *Refer to* **Default Effect** for additional information on setting up **Message Effects**.

Once a composition has been transferred to the video output, it can no longer be modified in real time.

Further changes must be made on the **Canvas**, then rendered to the video output by clicking is pressing the **Xfer** key.

To execute an animation in Transfer Mode:

Click I or press Xfer (Duet keyboard) or the *I* key on the numeric keypad (PC keyboard). The animation executes. If, however, Config > Preferences > Animation Settings > Prompt to play on Duet is selected (checked), a prompt requesting an OK to trigger the animation is displayed after loading.

Refer to **Play - Animation Playback**, covered later in this section for information on additional playback methods.

Load, Quick Load

To execute an animation using **Load-and-Play Mode**, the animation must first be loaded into system memory before execution. The process is field-based, playing back two fields per frame.

Quick Load loads an animation more quickly than **Load**. This process is frame-based as opposed to fieldbased, yielding playback that is somewhat less smooth than the **Load** playback. To quick-load an animation for playback:

- 1. Read the animation message
- 2. Press Alt + L (Load) or Alt + Q (Quick Load) to load the animation into memory.
- 3. Click **Xfer** for press **Xfer** (Duet keyboard) or the *I* key on the numeric keypad (PC keyboard) to transfer the animation to output and execute it.
 - If **Prompt to Play on Duet** is enabled in the **Animation Settings Preferences** tab, then the **Preview Frame** of the animation (as set in the **Show Preview Frame** setting in **Animation Settings Preferences**) appears on the output, and the system displays a prompt requesting the **OK** to play the animation. When the user clicks **OK**, the animation executes to output using the **Default Effect**.
 - If **Prompt to Play** is not enabled in the **Animation Settings Preferences** tab, then the animation executes to output using the **Default Effect**.

Free

Free removes a loaded animation from system memory. The **Free** function can be used to release system resources for other background activities. This function is available only when an animation is already loaded into memory. To free system memory resources:

• Click Free

Play - Animation Playback

There are a variety of ways to execute an animation.

NOTE

The following actions have the same function:

- Pressing Play on the Duet keyboard
- Pressing Alt + Page Up on a PC keyboard.
- Clicking **D** on the Transport Controls.
- Xfer Mode: Refer to Xfer to Output, covered earlier in this section, for details.

Play to Output

To play the animation to the VGE (output):

With the Live icon active, press Play (Duet keyboard), Alt + Page Up or click the Play icon
 on the Transport Controls. On a Duet LE/PCI, this loads and plays the animation to output. On

a Duet LEX/PCI+, the animation streams to output (*refer to Streaming Animation* later in this section).

With the Live icon either active or inactive , press Ctrl + Play (Duet keyboard), Ctrl + Alt
 + Page Up or hold Ctrl and click the Play icon on the Transport Controls. On a Duet LE/PCI,

CAUTION - DUET LEX/PCI+ SYSTEMS!

If an animation is already loaded into the Load-and-Play buffer using the Load or Quick Load function (Alt + L or Alt + Q), and another animation is read for streaming, do *not* press Alt + Y to execute the new animation. The animation that is currently stored in the Load-and-Play buffer will execute instead! If the currently displayed animation is to be executed instead using Load-and-Play mode, make sure that the animation is first loaded into the Load-and-Play buffer using Load or Quick Load (Alt + L or Alt + Q)! To erase a

loaded animation from system memory, click the Free icon

Load-and-Play

Refer to the paragraphs on Load, Quick Load earlier in this section.

Play to the Canvas

To play the animation to the VGA (**Canvas**) only:

• With the icon inactive, press Play (Duet keyboard), Alt + Page Up or click the Play icon on the Transport Controls.

Stop

The **Stop** function is used to escape a **Loop** in progress, and continue the execution of any remaining keyframes in the Lyric message containing the **Loop**. To execute **Stop**:

• Press Esc.

Changing the Speed of an Animation During Execution

The speed of an animation can be changed during execution:

Press the up cursor key ↑ to speed up the animation, or the down cursor key ↓ to slow down the animation.

This operation can be performed regardless of the method used to trigger the animation.

Streaming Animation - Duet LEX/PCI+

Setup and Playout

In Duet LE/PCI, an animation must be loaded (pre-rendered) and stored in RAM before playout can begin. The Duet LE/PCI hardware's resources limit the duration of an animation to six seconds, although this limitation does not apply to **Rolls**, **Crawls** and **Type Ons** (**Slow Reveals**) that execute in **Transfer Mode**.

The Duet LEX/PCI+'s larger memory and faster processes allow playout to occur while an animation is still rendering, hence the term **Streaming Animation**. Some amount of 'head start' on the loading/rendering process is always necessary before playout begins. The Duet LEX/PCI+ calculates the **Streaming Preload** necessary for proper execution. Animations containing **Loops** cannot be executed using **Streaming Animation**; they must be executed using **Load-and-Play**.

When a Load-and-Play animation executes, the entire animation first loads, then executes. Streaming Animation enables an animation to continuously preload and execute, allowing longer animations. The Duet LEX Streaming setting defines the default length of preload time allocated to streaming operations. If the animation is not executing properly, then lengthen the Duet LEX Streaming time. Note that the Duet LEX Streaming time cannot be longer than the Default Animation Length.

Message-Specific Preload Setting

The **Duet LEX/PCI+** automatically calculates a preload for **Streaming Animations.** If, however, the animation does not execute properly because of a short preload, a higher preload value can be stored with the specific message.

If too short a **preload** time is set either by the system or in the **Set Message Preload Value** dialog box (**see below**), one of the following can occur:

- When the animation is played on the VPB or PCI Squeezeback **Air** output, the image disappears before playout is complete.
- During VPB or PCI-Squeezeback playout, a portion of a previously-used animation appears abruptly at the end of the current animation.

From **Tools > Set Message Preload Time**, the operator can select a preload value to be applied to an individual Lyric message. This value, set in the **Set Message Preload Value** dialog box, is saved as a component of the Lyric message, and activated on playout of the message.

The advantage of customizing a **Message Preload Value** is that if a message requires a longer preload, the larger required system resources will be dedicated only for playout of the individual message, and would not be tied up when other functions are performed.

Set Message Preload Value				
00:00:0	01 00 ÷			
ΟΚ	Cancel			

Set Message Preload Value

It is suggested that you experiment with individual messages prior to air/production to determine the minimum time required for the **preload** operation, and then set this variable appropriately.

The point at which a **Message Preload** is set affects whether or not the **Message Preload** information is saved with the message:

- When the **Message Preload** is set for a message that is open on the Canvas, it becomes an attribute that is retained when the message is saved.
- If **Message Preload** is not set on a given individual message, the system attempts to load the message based on a preload calculated by the system.

Streaming Animation Execution

There are a variety of methods available to play a streaming animation. Read the animation, then:

- With the Live icon active use, press Alt + Page Up to stream the animation to the output.
- With the Live icon either active or inactive , press Ctrl + Alt + Page Up to stream the animation to the output.
- With the Live icon either active or inactive me, press Ctrl, then click on the Transport Control or press the Play key on the Duet keyboard to stream the animation to output.

CAUTION!

If an animation is already loaded into the Load-and-Play buffer using the Load or Quick Load function (Alt + L or Alt + Q), and another animation is read for streaming, do *not* press Alt + Y to execute the new animation. The animation that is currently stored in the Load-and-Play buffer will execute instead! If the currently displayed animation is to be executed instead using Load-and-Play mode, make sure that the animation is first loaded into the Load-and-Play buffer using Load or Quick Load (Alt + L or Alt + Q)! To erase a

loaded animation from system memory, click the Free icon Free.

To play the animation only to the VGA (Canvas):

• With the icon inactive _____, press Alt + Page Up to execute the animation to the Canvas (VGA).

25. Playlists

Playlists

Tools Menu > Playlist; File Menu > New > Playlist File Menu > Open > Files of Type > Playlists (*.ply)

NOTES

- It is strongly recommended that all Playlists be previewed prior to air.
- As of Lyric Version 4.0, the two button (formerly the Duet to or the button, depending upon the system) is now disabled during Playlist execution. This prevents the message that is cueing up from prematurely displaying on the output.

Creating and Opening a Playlist

The **Playlist** feature allows multiple Lyric messages to be compiled into an automated list and played out sequentially using preset transition effects. For example, a **Playlist** could be used to automatically play a dissolving sequence of graphics displaying sports statistics.

A **Playlist** can consist of up to **500** preset events which are numbered from **0 - 499**. Each event specifies the playout parameters of a Lyric message, including file name and transition effect. When a message completes playout, the **Playlist** proceeds to the next specified message. Simultaneous **In** and **Out** transition effects can be executed on Duet SD systems with multiple VGEs and a Duet SD **Video Mixer** installed.

When used in conjunction with the powerful **Chyron MOS** newsroom application, a **Playlist** can be remotely built and edited. Messages can be created on remote PCs and sent to the Duet system, where they are added to a **Playlist** for execution.

If necessary, **Playlist** execution can be manually overridden.

To create a new Playlist:

• Pull down the File menu and select New > Playlist.

File		
New	Ctrl+N 🔸	Canvas
Open	Ctrl+O	Browser
Close		Playlist 🔪
Save	Ctrl+S	\Z
Save As		

Creating a New Playlist

A blank **Playlist** is displayed.

Line	Control	Parameter	Effect	Speed	File Name	Channel	15:34:34:00
0							Play
1							
2							Take
3							Stop
4			1				TC Relative To
5							
6							-

New Playlist

Playlist files have the extension .ply. To open an existing Playlist, use one of the following two methods:

• From the **Tools** menu, select **Playlist**. A file **Open** dialog box is displayed. The **Files of Type** field specifies **Playlist Files (*.ply)** and displays the available **Playlist** files in the current directory. Select the file from that directory or browse to the file in another directory, then click **Open**. The **Playlist** is displayed.

Open			<u>?</u> ×
Look in: 🔁) playlists	- E C	* 💷 •
Playlist1.p Playlist2.p	ly ly		
File name:	Playlist1.ply		Open
Files of type:	Playlist Files (*.ply)		Cancel

Open Dialog Box

• Select **Open** from the **File** menu or click is on the **Windows Toolbar**. Select **Playlist Files (*.ply)** from the **Files of Type** dropdown list box, then browse for the file. Select the file, then click **Open**. The **Playlist** is displayed.
Playlist Layout

The **Playlist** is composed of a list of messages to be played out, and parameters that control the playout of each of them. To the right of the list are execution controls, as well as **Timecode** setup. **Playlists** can be composed on a PC for later use on a Duet system. The **Playlist** can be resized by dragging any corner or edge, and an individual column can also be resized by dragging the column separator in the heading.

Line	Control	Parameter	Effect	Speed	File Name	Channe		17:47:11:05
1	Timecode	18:00:00:00	Dissolve	30	1	2	-	Plau
2	Delay	00:00:02:00	Wipe Right	20	2	1		r iay
3	Wait For Key		Wipe Left	30	3	2		Take
4	Wait For Key		HSplit	20	4	1		Stop
5	Delay	00:00:02:00	HBlind	30	5	2		TC Relative To
6	GPI	4 - Input	Pixel	30 - Inț	6	1->2		
7	Wait For Key		Dissolve	30	8	1	-1	

Sample Playlist

Navigating the Playlist

Use the following methods to navigate through the Playlist:

- Press the cursor keys ↑↓ ← → to navigate up, down, left and right. Note that when using the ← → keys to navigate, that when cursor reaches a field that accepts text entry, the cursor steps through the text first before proceeding to the next field.
- When the cursor is in a Line, Control, Effect or Channel field, press Page Up or Page Down to navigate up or down in five-line increments. If the cursor is in the Line column, the entire line is highlighted.
- In the **Scroll Bar**, click above or below the scroll box to page backwards or forwards, respectively, through the **Playlist**.
- In the **Scroll Bar**, click the up or down arrow to scroll the **Playlist** one line up or one line down, respectively.
- Press End to move the cursor to the next instance of End or to the final line of the Playlist that contains an entry.

The **Playlist** scrolls based on a fixed number of lines or a percentage. This value is set in the **Playlist Configuration** dialog box.

Current Message on Output Indicator

The currently displayed message in the **Playlist** is indicated by the green square **l** located at the left side of the **Playlist**. During playout, the indicator proceeds line-by-line through the **Playlist**.

During Playlist execution, the Playlist automatically scrolls to display upcoming events.

Current Take Line Indicator

The **Current Take Line Indicator** identifies the **Playlist** line that will be executed next. When a step is executed, the **Current Message on Output** Indicator moves to the same line as the **Current Take Line Indicator**, and the two indicators are briefly positioned on the same line **I**. The **Current Take Line Indicator** then moves to the following line.

In the event that non-sequential execution of the **Playlist** is necessary, the **Current Take Line Indicator** can be moved to a different step using one of the following methods:

- Click to the left of a line to move the Current Take Line Indicator to the line.
- Press Ctrl + ↑ or Ctrl + ↓ to move the Current Take Line Indicator up or down in one-line increments.
- Press Ctrl + Page Up or Ctrl + Page Down to move the Current Take Line Indicator up or down in five-line increments.
- Press Ctrl + Home to move the Current Take Line Indicator to the first line of the Playlist.
- Press **Ctrl + End** to move the **Current Take Line Indicator** to the next instance of **End** or to the final line of the **Playlist** that contains an entry.
- Trigger a **GPI** to move the **Current Take Line Indicator** up or down in one-line increments. The **GPI** is set up in the **Playlist Configuration** dialog box. A **GPI** can also be used to execute a **Take**.

Line

The number in the Line column identifies the Line number for each event or **Step** on the **Playlist**. The terms Line and **Step** are used interchangeably in reference to **Playlists** in this documentation. A **Playlist** can contain up to **500** steps, numbered from **0 - 499**.

Control

Control determines how the step is triggered. This field cannot be set until a **File Name** field is entered. Once a file name is entered, the **Control** field displays the default setting, **Delay**, with **Parameter 00:00:00:00**. To select a **Control**, use one of the following methods:

- Click the **Control** field for the event to toggle through the **Control** choices.
- Press the first letter of the name of the **Control**. If there is more than one **Control** starting with the same letter, press the same key to scroll through the additional **Control** names.

Parameter/ Function	Description
Wait for Key	When a Wait for Key is encountered in a Playlist , execution pauses until the user presses any key except Esc on the system keyboard. The Status Bar displays the prompt, Waiting for Keypress , until a key is pressed to execute the message. Wait for Key does not use a Parameter setting. <i>Note that pressing the Esc key stops Playlist <i>execution!</i></i>

Parameter/ Function	Description							
Delay	When the Delay control is encountered in the Playlist , list execution pauses after the completion of the execution of the previous Line . The current step is executed after specified Delay duration. The Delay duration is entered in the Parameter field.							
	Playlist1 - Stopped Current Take Line: 3 (
	Line Control Parameter Effect							
	1 Timecode 18:00:00 Dissolve							
	2 Delay 00:00:02:00 Wipe Right							
	3 Wait For Key Wipe Left							
	Sotting a Dolay							
	Setting a Delay							
	The system reads the message during the delay and the message may appear on the system's VGA monitor, depending on the system							
	and its configuration. The message, however, does <i>not</i> play on the							
	Duet output until after the specified Delay has elapsed. In the figure above, Line 0 executes, then a delay of 2 seconds occurs after the							
	completion of the execution of Line 0, then, the message on Line 1							
	executes.							
Loop	Parameters field, for a specified number of iterations. Two values are entered in the Parameters field. The format of the field is 000,000 . Values are entered to the left of to the right of the comma.							
	• The Step (Line) number to which the Loop should return is entered in the three-digit area to the left of the comma.							
	• The iterations, or number of times the message should loop, is entered in the three-digit area to the right of the comma.							
	In the following figure, Step 8 loops to Step 6 , and repeats the loop 3 times, as specified by the Parameter setting 002,003 .							
	Playlist1 - Stopped Current Take Line: 8 Curre							
	Line Control Parameter Effect Soc							
	7 Wait For Key Split							
	8 Loop 006.003 Weave							
	9 Wait For Key Cover							
	Sotting a Loop							
	Setting a Loop							
	List execution resumes after the specified number of iterations has occurred.							
Timecode	The Timecode control specifies a Timecode at which to trigger the execution of the step. See Using Timecode in a Playlist below for details on setup.							

Parameter/ Function	Description			
Skip	A Skip control causes the Playlist to skip the Line /event on which it appears and move to the next Step . Skip does not use a Parameter setting. Skip can be a useful tool when assembling and testing Playlists .			
End	An End control causes the Playlist to halt, and the Current Step indicator to return to Step 0. A line containing the End control is automatically added after the last valid line in the Playlist. End does not use a Parameter setting. Do not enter a File Name. Any Message listed in the File Name field on the same line as an End control is not played to output.			
GoTo	A GoTo control specifies a skip to a specified step in the Playlist . The Step number is entered in the Parameter field. Do not enter a File Name .			
	 Do not set a Goto control to its own line number! 			
	 Any Message listed in the File Name field on the same line as a Goto control is not played to output. 			
	After a Skip is executed, Playlist execution continues from the new position of the Step Indicator .			

Parameter/ Function	Description					
GPI	The Playlist can trigger output of a GPI to an external system, or cause the system to await input of a GPI signal before continuing with subsequent events, much like the Wait For Key control. As shown below, Step 5 is set to be triggered by input from GPI 4 . It is recommended that a GPI that is already assigned as a Global GPI not be assigned to trigger a Playlist event, as it could cause a potential conflict. Set the GPI number in the Parameter field. Playlist1 - Stopped Current Take Line: 8 Curre <u>Line Control Parameter Effect Speine</u> <u>5 GPI 4 - Input Reveal</u>					
	Setting a GPI					
	 Duet SD/HD: When composing a Playlist on a Duet SD/HD system configured with a GPI/O board, the Parameter field will display either Input or Output, depending on the Direction setting on the GPI tab of Configuration > Duet Hardware. The numeric range of GPIs that may be selected is determined by the number of GPI/O boards installed in the Duet SD/HD system. The presence of a single board in the system makes eight GPIs available, numbered 1 - 8. A second board in the system makes available another eight GPIs, numbered 9 - 16 and so on. 					
	have sixteen GPIs available for each VPB. The presence of a single VPB in the system makes sixteen GPIs available, numbered 1 - 16 . A second board in the system makes available another sixteen GPIs , numbered 17 - 32 and so on. Note that PCI-Squeezeback boards do not have GPI capability on their own, but can access the GPIs of VPBs in the same system. The GPI Out setting is not available on Duet LE/LEX/PCI/PCI+ systems.					
	Care must be taken when setting up a Playlist containing GPI triggers for playout on a different system, or when composing the Playlist on a PC. Be sure that the GPI numbers and Input/Output selections in the Playlist Parameter field are appropriate for the available hardware and configuration of the Duet that will be used! Make sure also that the GPI is not the same number as a Global GPI that has been set on the system. <i>Refer to</i> <i>the appropriate chapter on Duet Hardware Configuration</i> for your system for additional information on GPIs , and the chapter on the Config menu for information on setting Global GPIs .					
Cue Clip	As of Lyric v5.0, Cue Clip was relocated to the Playlist Configuration dialog box. <i>Refer to</i> Playlist Configuration later in this section for details.					

Parameter

A number of the **Control** functions require additional **Parameters**, such as number of **Loops**, **Delay** duration, **Timecode** times, etc. A **Parameter** specific to particular **Control** are described in the preceding table.

Effect

Effect sets the transition effect that Duet executes *at the beginning* of the message named on the numbered line of the **Playlist**. To select an **Effect**, use one of the following methods:

- Click the Effect field for the event to toggle through the Effect choices.
- Press the first letter of the name of the **Effect**. If there is more than one **Effect** starting with the same letter, press the same key to scroll through the additional **Effect** names.

Toggling to a blank field is equivalent to selecting Cut.

NOTES

- Playlist Effect settings override Default Effect settings specified in the Config menu. *Refer to the chapter on Transitional Effects for information on Default Effects.*
- Playlist Effects are not supported on the Duet HD. All transitions execute as Cuts.
- If setting up a Playlist offline on a PC, the Lyric software must match that of the system on which the Playlist is to be executed. Duet SD Effects are not available to Lyric for Duet LE/LEX/PCI/PCI+ and vice versa.

The effects available for Duet SD and when composing a Lyric message offline on a PC are as follows:

• Cut, Dissolve, Wipe Right, Wipe Left, Wipe Down, Wipe Up, HSplit, VSplit, HBlind, VBlind, Box, BoxNW, BoxNE, BoxSE, BoxSW, Pixel, Rev HSplit, Rev VSplit, Rev HBlind, RevVBlind, Rev Box, Rev BoxNW, RevBoxNE, Rev BoxSE, Rev BoxSW.

The effects available for Duet LE/LEX/PCI/PCI+ and when composing a Lyric message offline on a PC are as follows are as follows:

• Cover, Cut, Dissolve, Fade, Hide, Matrix, Peel, Pour, Push, Reveal, Split, Weave, Sqz-In, Sqz-Out. Refer to Setting Up a Squeezeback Effect in a Playlist later in this section for information on Sqz-In and Sqz-Out setup.

IMPORTANT!! Effect parameters such as **Speed**, Effect Direction, etc., for Duet LE/LEX/PCI/PCI+ **Playlists** must be set within the **Primary Message Effects** dialog box, accessed by either highlighting an effect on the **Playlist**, then pressing **X**, or by right-clicking on the **Playlist**, then selecting **Effect Properties** from the context menu.

NOTES

- If an attempt is made to execute an effect that is not supported by the assigned board, such as a Squeezeback effect on a VPB, the transition defaults to a Cut.
- Chyron does not recommend the cross-platform creation and execution of Playlists For example, it would be inadvisable to write a Playlist on a Duet LE using Duet LE/LEX/PCI/PCI+ effects, and then attempt to execute the Playlist on a Duet SD. In this instance, the SD system would execute the Effect transitions as simple Cuts. The same caution is advised for creating a Playlist on a Duet SD, then executing on a Duet LE/LEX/PCI/PCI+. If it is necessary to attempt crossplatform Playlist execution, <u>preview the Playlist before executing to air</u>.

Speed

Speed is interpreted differently by the various Duet systems:

- **Duet SD:** A duration, in video fields, can be set in the **Speed** field. The field accepts a value of up to **999**.
- **Duet HD:** Since Duet HD does not support **Playlist Effects**, the **Speed** setting has no bearing on **Playlist** execution.
- Duet LE/LEX/PCI/PCI+: The Speed field is not enabled for Playlists created and executed on the Duet LE/LEX/PCI/PCI+, with the exception of the Video Squeezeback effects Sqz-In and Sqz-Out, where the Speed field is used to identify a Squeezeback Effect number. Refer to Triggering a Squeezeback Effect from a Playlist below for information on Sqz-In and Sqz-Out setup.

On a Duet LE/LEX/PCI/PCI+ system, effect Speed in a Playlist must be set instead within the Primary Message Effects dialog box, accessed by either highlighting an effect on the Playlist, and then pressing X, or by right-clicking on the Playlist, and then selecting Effect Properties from the context menu. Note that the Speed set in the Primary Message Effects dialog box is not reflected in the Playlist, although the Playlist executes at the Speed specified in the Primary Message Effects dialog box.

File Name

File Name specifies the file to be recalled. File types that may be entered in this field are as follows:

- Lyric messages with numeric file names, as seen in the **Message Number Display**. If recalling a message that is stored in the **Default Message Directory**, only the **Message Number** itself must be entered in the field. Otherwise, the full file path is necessary. If entering only a **Message Number**, do not enter the *.lyr* extension.
- **Macros** that have been saved with the *.lyr* file extension. Note that a **Macro** file used in a **Playlist** must be autoexecuteable, as the **Playlist** will not attempt to "play" it. **Macro** files with the *.lmx* extension may not be used in the **Playlist**.
- Mixer Settings Files, which use the extension .lyr (Duet SD only).

Note that files other than graphics and **Macros** files that have the *.lyr* extension, such as **Message FX** files (Duet LE/LEX/PCI/PCI+ **Default Effects**), **Multi FX** files (Duet SD) and **Video Settings** files (Duet SD) should not be used in a **Playlist**

The following should be noted when entering a File Name of a file stored in the Default Message Directory:

- If the **File Name** is completely numeric (no decimals or other symbols or letters) only the **Message Number** need be entered, not the entire filepath. The leading zeros and the extension may be omitted. **Example: 35849**
- If the File Name is alphanumeric, (contains numbers and/or symbols and/or letters), only the File Name and the extension must be entered, not the entire filepath. Example: 2003_Sports_Intro.lyr

The following should be noted when entering a **File Name** of a file stored outside of the **Default Message Directory**:

- If the **File Name** is completely numeric (no decimals or other symbols or letters), the entire filepath, including leading zeroes, must be entered. **Example: C:\News_Graphics\000358490.lyr**
- If the File Name is alphanumeric, (contains numbers and/or symbols and/or letters), the entire filepath must be entered. Example: C:\News_Graphics\Election_Coverage_Opening.lyr

To enter a File Name, choose one of the following methods:

- Type the File Name, including, if necessary, the full filepath.
- Drag-and-drop the file from the **Browser** or from a Windows Explorer-type window. The full filepath is automatically entered in the **File Name** field.

After the **File Name** is entered, **Enter** can be pressed to advance the cursor to the **File Name** field for the next **Step**.

Channel

Channel specifies the output channel on which the effect will execute. The type of Duet system and the presence of a **Video Mixer** determine how channel settings affect execution.

IMPORTANT!

If a Channel is not assigned to a Playlist step, the step does not execute to output!

Duet SD/HD without a mixer board: Available settings are None, 1, 2, 1>2 or 2>1.

- When **Channel** is set to **None**, the step is skipped.
- When **Channel** is set to **1** or **2**, **Playlist** messages do not preview on the **Canvas**. Effects are not available. The **Effects** column becomes unavailable when **Channel 1** or **2** is selected. These settings are best used when you need both outputs to act as **AIR** outputs and the message cannot be previewed.
- When **Channel** is set to 1>2 or 2>1, settings preview on both the **Canvas** and the first assigned output. (1 in the case of 1>2 or 2 in the case of 2>1). On Duet SD, all **Playlist Effects** are available. Remember that Duet HD does not currently support **Playlist Effects**.

Duet SD/HD with a mixer board: Available settings are **1** or **2**. The effect previews on the **Canvas**, and executes to the specified channel.

Duet LE/LEX/PCI/PCI+: Available settings are **None**, **1**, **2**, **3** or **4**. As of Lyric 4.0, this is a new feature for these systems. Previously, the entire **Playlist** was executed on the currently active frame buffer. Now, each step of the **Playlist** can execute on a specified frame buffer.

- **Playlist** operation is limited to one VPB or PCI-Squeezeback output. **Air** and **Preview** designations do not apply.
- Whichever VPB or PCI-Squeezeback board is active when **Playlist** execution is started becomes the
 output on which the entire **Playlist** is executed. The exception is that a **Sqz-In** or **Sqz-Out** effect
 executes on the PCI-Squeezeback board on which the on which the effect was originally
 programmed, which may not be the currently active board.
- Keep in mind that when executing a **Sqz-In** or **Sqz-Out** effect that has an associated graphic, it should be still be executed in the same frame buffer in which it was created. When **Channel** is set to **None**, the effect executes to the **Canvas**.
- Using the **Playlist** function while in **Link** mode is not recommended.

If the message is a static graphic, it displays on the **Canvas**, then the specified **Effect** is triggered by the specified **Control** and executes to the specified **Channel**. If the message is an animation, it loads, then the first frame displays on the **Canvas**. The specified **Effect** is triggered by the specified **Control**, then the effect and animation execute on the specified **Channel**.

Timecode Display

11:10:14:22

Timecode Display

The **Timecode Display**, located at the top right of the **Playlist**, displays the current **Timecode**. The **Timecode** is by default, **System** time from the Duet or PC's clock, unless the Duet system is connected to an external source of **Timecode**. To use an external **Timecode** source, Duet must be properly configured. *Refer to the appropriate chapter on Duet Hardware Configuration* for your system for additional information on **Timecode**. Using **Timecode** in a **Playlist** is covered later in this section.

Execution Controls

The following buttons and key control execution of the Playlist.

Control	Description			
Play	Play: Click Play to begin or resume execution at the location of the Current Take Line Indicator .			
Take Take Take	Take: The Take button is similar in function to the Read Next function. Clicking Take preloads the next message in the Playlist . Clicking Take again plays the message to air as programmed in the Playlist , and simultaneously preloads the following message.			
	Generally when using Take to execute a Playlist , the Control specified in a Playlist step should be Delay , which should be set to 00:00:00:00 . With this setting, the message executes to air immediately when Take is clicked.			
	In addition, pressing the Take button on a Duet LE/LEX/PCI/PCI+ system also executes an Xfer to Preview , so that the preloaded message is displayed in the Preview Channel . This necessitates the dedication of one Frame Buffer to the Preview channel. If more than one Frame Buffer is dedicated to the Preview channel, Take preloads into the first available Preview buffer. <i>Refer to the chapter on Duet LE/LEX/PCI/PCI+ Hardware</i> Configuration: Configure Board Use for additional information.			
	 The Take button appears red until clicked the first time to start Playlist execution. 			
	 If the Take button is not clicked to start execution, it cannot be used later in the execution unless Playlist execution is first stopped by pressing the Stop key. When the Take button is unavailable, it is grayed out. 			
	 The Take button is also grayed out when a Playlist step is in progress, or the system is waiting for a Keypress. 			
	 The Take button appears green when it becomes available for use. 			
	 The Take button appears yellow when Cue Clip is enabled, and a Clip programmed into the Playlist is ready to play. 			
	The Take button can be assigned a GPI Shortcut or a Keyboard Shortcut , eliminating the need to use the mouse to execute a Take during execution. <i>Refer to</i> Setup Take later in this section for details on setup.			
Stop	Stop: Click Stop to halt Playlist execution. Playlist execution can be resumed at the current Step by pressing Play or Take . The Stop button is available only when execution of a Playlist step is in progress. It otherwise appears grayed out.			
	A Playlist can also be stopped in order to read messages that are not in the Playlist . Playlist execution can be resumed as just described.			
Esc	Esc Key: Press Esc to halt execution and exit from the Playlist.			

<u>TC Relative To</u> See **Using Timecode in a Playlist** below for details.

<u>Configuration</u> Refer to the following section for details.

Playlist Configuration

Playlist parameters such as **GPIs**, **Take** hotkey, default settings and other options are set in the **Playlist Configuration** dialog box, accessed by clicking the **Configuration** button.

	— Playlist GPIs	-		- Take Keybo	ard Shorter
Line Up GPI:				Key F5	
	No Gi	Pl Chosei	n	Eau	Clear
Line Down GPI:	No Gl	PI Choser	n	☐ Cm ☐ Alt	
Take GPI: No GPI Chosen			Clip Player Options		
Default Playlist Lir Control	ne Paramet	ier	Effect	Speed	Channel
Scroll Offset	1	- Preview	Options		
	Lines	E Ench	de Proview		

Playlist Configuration

After all values are set, click **OK** to apply the values, or **Cancel** to cancel the settings.

Playlist GPIs

GPIs can be used to move the **Current Take** line up or down, and to execute a **Take**. Before a **GPI** can be specified in the **Playlist Configuration** dialog box, it must be configured in **Duet Hardware Configuration**. Refer to **Duet SD/HD Hardware Configuration - GPI** or **Duet LE/LEX/PCI/PCI+ Hardware Configuration - Setup GPI** for information on **GPI** configuration. Refer to the appropriate chapter on **Duet Hardware Configuration** for your system for additional information on **GPIs**, and the chapter on the **Config menu** for information on setting **Global GPIs**.

Once the **GPIs** have been configured in **Duet Hardware Configuration**, it can be specified in the **Playlist Configuration** dialog box.

- The Line Up GPI moves the Current Take Line Indicator up one line.
- The Line Down GPI moves the Current Take Line Indicator up one line.
- The Take GPI executes a Take at the line at which the Current Take Line Indicator is positioned.

Perform the following procedure for the Line Up GPI, the Line Down GPI and he Take GPI:

• From the Line Up/Line Down/Take GPI drop-down list box, select the GPI that is to be used to trigger the Line Up, Line Down or Take. The selected GPI number is displayed in the drop-down, and its description (as set in Duet Hardware Configuration) is displayed in the Description field (unlabeled). The description is not editable from this dialog box.

In the following example, GPI 1 is set to trigger Line Up; GPI 2 is set to trigger Line Down; and GPI 3 is set to trigger a Take.

	Playlist GPIs
Line Up GPI:	Playlist Line Up
Line Down GPI:	Playlist Line Down
Take GPI: 3 💌	Playlist Take



Take Keyboard Shortcut

A keyboard shortcut can be set to execute a Take.

In the Take Keyboard Shortcut area, enter a key in the Key field. F5 is the default setting. If desired, select (click) the Ctrl, Alt and/or Shift checkboxes. For example, if T is entered in the Key field, and Ctrl, Alt and Shift are selected, the resulting Keyboard Shortcut would be Ctrl + Alt + Shift + T. Pressing Ctrl + Alt + Shift + T during Playlist execution would execute a Take.

Take Keyboard Sh	ortcut
Кеу Т	
Clea	ar
🔽 Alt	
🔽 Shift	

Setting a Keyboard Shortcut

The Esc key cannot be specified as a keyboard shortcut for Take.

To clear the keyboard shortcut:

• Click the Clear button.

Clip Player Options

If **Cue Clip** is enabled: As the current step is executing, a clip that is part of the following step is cued up. The **Take** button turns yellow. The step is executed when the **Take** button is clicked or triggered.

If **Cue Clip** is disabled: The step containing a clip executes without cueing.

Default Playlist Line

To facilitate the setup of **Playlist** entries, default values can be set for **Control**, **Parameter**, **Speed**, **Effect** and **Channel**. A default setting can be set or modified for one, more than one or all parameters. The **Default Playlist Line** area in the **Playlist Configuration** dialog box is composed of display-only fields that cannot be edited from within the dialog box.

The following figure shows default values set at Control = Delay; Delay Parameter = 15 frames; Effect = Reveal; Speed (Duration) of Reveal = 15 frames; and playout Channel = 1. Note that on a Duet LE/LEX/PCI/PCI+ system, effect Speed in a Playlist must be set instead within the Primary Message Effects dialog box, accessed by either highlighting an effect on the Playlist, and then pressing X, or by right-clicking on the Playlist, and then selecting Effect Properties from the context menu. Note that the Speed set in the Primary Message Effects dialog box is not reflected in the Playlist, although the Playlist executes at the Speed specified in the Primary Message Effects dialog box. The Duet LE/LEX/PCI/PCI+ does, however, use the Speed field to enter an Effect Number of a Squeezeback effect.

10000000000		1.	600000 C	220000
Control	Parameter	Effect	Speed	Channe
Delav	00:00:00:15	Reveal	15	1

Default Playlist Line

To set default values for the **Playlist**, first close the dialog box, and then perform the following steps:

- 1. In the **Playlist**, enter a file name in the **File Name** field. The **File Name** can be typed, or dragged from the **Browser** or a Windows Explorer-type window. A file name must be in the **File Name** field in order for the default setting to be saved.
- 2. Set the Control, Parameter, Speed, Effect and Channel parameters are desired.
- 3. Perform one of the following operations:
 - If setting or modifying all parameters, click the **Line Number** of the line from which the parameters are to be saved. The entire line should be highlighted.
 - If setting or modifying more than one, but not all parameters, hold down the Ctrl key while clicking the Control, Parameter, Speed, Effect or Channel columns in the line from which the parameters are to be saved. If the parameters are contiguous, holding down the Shift key while clicking the Control, Parameter, Speed, Effect or Channel columns works as well. All selected fields should be highlighted.
 - If setting or modifying only one parameter, click the **Control**, **Parameter**, **Speed**, **Effect** or **Channel** column in the line from which the parameter is to be saved. The selected field should be highlighted. Note that if setting the **Control** and **Parameter** settings, both fields must be selected (highlighted).
- 4. Right-click to display the **Playlist** context menu. Select **Set as Default**. The menu closes. Whenever a new file is added to the **Playlist**, the default settings automatically populate the fields.

To view the default settings:

• In the **Playlist** window, click the **Configuration** button. The settings are displayed in the **Default Playlist Line** area in the **Playlist Configuration** dialog box.

Scroll Offset

When the **Playlist** executes, the **Current Message on Output Indicator** and the **Current Take Line Indicator** progress through the **Playlist**. The view of the **Current Take Line**, i.e., the line that is to be executed next, can be set to display a set number of lines from the top of the **Playlist**, or as a set percentage of total lines from the top of the **Playlist**.

For example:

- If the Scroll Offset is set to 4 lines, then the Current Take Line Indicator always displays at the fourth line from the top of the Playlist.
- If nine lines are currently displayed in the **Playlist**, and **Scroll Offset** is set to **30%**, then the **Current Take Line Indicator** displays at third line down from the top of the **Playlist**.

To set the Scroll Offset:

- 1. In the Scroll Offset area, select (click) either the Lines or Percent radio button.
- 2. Adjust the slider to the desired value. The value is reflected in the **Scroll Offset** field (unlabeled). Note that a value cannot be directly entered into this field.

The following examples show a Line and a Percent Scroll Offset.

C Scroll Offset	
3	C Lines
1-	O Percent
- 6	I.

C Scroll Offset	
30%	C Lines● Percent
<u> </u>	

Lines Offset

Percentage Offset

Preview Options

A frame of a message that is loaded, but not yet executed to air, can be previewed on the VGA monitor (**Canvas**). This display frame is determined as follows:

- If the Preview Frame setting in Config Menu > Preferences > Animation Settings is disabled, the first frame is displayed, regardless of whether or not a Preview Frame was specified in the Record Only dialog box when the message was recorded.
- If the Preview Frame setting in Config > Preferences > Animation Settings is enabled, but a Preview Frame was not specified when the message was recorded, the last frame of the animation is displayed.
- If the **Preview Frame** setting in **Config > Preferences > Animation Settings** is enabled, and a **Preview Frame** was specified in the **Record Only** dialog box when the message was recorded, the specified **Preview Frame** is displayed.

Refer to the chapter on **Animation** for information on **Animation Preferences**, and the chapter on **Getting Started**, in the section on **Reading and Recording Messages**, for information on **Selective Recording** (**Record Only** dialog box).

Enable Preview:

- When **Enable Preview** is active (checked), the **Playlist** transfers the display frame of the message to the **Preview Channel** when the message is read to the VGA monitor (**Canvas**).
- When **Enable Preview** is not active (unchecked), the **Playlist** does not transfer the display frame of the message to the **Preview Channel** when the message is read to the VGA monitor.

Auto Preview:

- When Auto Preview is enabled (checked), the Preview Channel updates whenever the Current Take Line Indicator changes position.
- When Auto Preview is disabled (unchecked), the Preview Channel does not update whenever the Current Take Line Indicator changes position.

Setting Up a Squeezeback Effect in a Playlist - Duet LE/LEX/PCI/PCI+

A **Squeezeback** effect (Duet LE/LEX/PCI/PCI+ Only) can be triggered from the Lyric **Playlist**. Note that the Duet system must contain a PCI Squeezeback board in order to execute a **Squeezeback** effect. The **Playlist Effects** column contains two **Squeezeback**-specific effects: **Sqz-In** and **Sqz-Out**.

1. In the first available **Playlist Line** (in this instance, **Line 0**), select enter a **File Name** (in this instance, **5002**), a **Control**, a **Parameter** (if necessary) and an **Effect**.

Line	Control	Parameter	Effect	Speed	File Name
0	Wait For Key		Cut		
1	Wait For Key		Sqz-In	4	
2	Wait For Key		Sgz-Out	4	

Playlist - Squeezeback Effect Setup

 On the next available Line (Line 1), select Sqz-In or Sqz-Out, a Control and a Parameter (if necessary). In the Speed field on the same Line, enter the Squeezeback Effect Number from the Lyric Squeezeback message specified in the previous Line. In this example, it is Effect Number 4 (from File ID 5002).

When executed, the graphic associated with the **Squeezeback** effect displays, then the **Sqz-In** effect executes immediately. The **Sqz-Out** effect executes when a key is pressed. Both **Sqz-In** and **Sqz-Out** execute at the duration set in the **Squeezeback Panel**.

NOTES

- When executing a Playlist that contains Squeezeback effects that have associated graphics, it is necessary to execute the Playlist in the buffer from which the graphics were stored to the Squeezeback effect. If the graphics were stored to effects on SQZ board 1, which was assigned to Buffer 2, then the Playlist must be executed on Buffer 2. If there are no graphics associated with the effects, then the Squeezeback effect can be executed from any available buffer.
- It is possible to use a Playlist Effect to transition a graphic associated with a Squeezeback effect. It is advisable, however, to preview the Playlist before airing.

Refer to Video Squeezeback for information on Squeezeback effect setup.

Using Timecode in a Playlist

Timecode can be referenced by the Playlist in three different manners:

- System Timecode: The Playlist step executes when the System Timecode matches the Timecode specified in the Control Parameter. To execute Playlists in this manner, TC Relative To should be disabled (unchecked).
- Relative to Play: The Playlist sets its own starting timecode as 00:00:00:00 for each execution. All Timecode Control Parameter settings within the Playlist are calculated from the 00:00:00:00 starting timecode.
- Relative to Start Time: The Playlist adds the Start Time set in the Timecodes Relative To dialog box to all of the Timecode Control Parameter settings in the Playlist. The Playlist waits for the System Timecode to match the recalculated Timecode in each Playlist step that has a Timecode Control before executing the step.

To set **Timecodes Relative To** to either **Start Time** or **Play**:

1. Click the **TC Relative To** checkbox to enable relative **Timecode** and display the **Timecodes Relative To** dialog box, as shown at right in the following figure.

The figure below shows the three possible states of the **Timecode** setting. Only one displays at any time. When the **TC Relative To** checkbox is not selected (unchecked), the **Timecode** is the same as **System Timecode**. The **Timecodes Relative To** dialog box settings show how the appearance of the **Playlist's TC Relative To** information can be affected when **TC Relative To** is selected (checked).



Timecode Reference Settings

2. Click the Play radio button to select Relative to Play.

OR

Click the Start Time radio button to select timecode relative to Start Time, then enter a start time.

3. Click **OK**. Notice in the figure above how the setting is displayed to the user in the **Playlist TC Relative To** area.

To set a Timecode Control for a Playlist step:

- 1. At the desired step, select Timecode in the Control field.
- 2. In the **Parameter** field, enter the **Timecode** at which the step should execute.
 - When the **Playlist** is executed, the step executes at the point where the **System Timecode** matches **Timecode** as set in the **Control** field, or it reaches a specified relative **Timecode** as set in the **TC Relative To** area at the right of the **Playlist**.
 - If **Timecode** is set **5** minutes or less *ahead* of the current **System Timecode** or specified relative **Timecode**, the step executes immediately when it is reached.
 - If Timecode is set earlier than 5 minutes ahead of the current System Timecode or specified relative Timecode, the step delays execution until the System Timecode matches the set or relative Timecode.

Refer to the appropriate chapter on **Duet Hardware Configuration** for your system for additional information on **Timecode**.

Saving and Recalling Playlists

Open	State of the local division in which the local division in the loc			<u>? ×</u>
Look in: 🔁	Playlists	•	+ 🗈 🖻	* 📰 -
NewsEver NewsLatel NewsMorr NewsNoor	ing.ply Night.ply ing.ply 1.ply			
File <u>n</u> ame:				<u>O</u> pen
Files of <u>type</u> :	Playlist Files (*.ply)			Cancel

Opening a Playlist

Playlists have their own folder in Lyric's Default Directory.

A quick method for recording a **Playlist** file is as follows:

- 1. Press **Ctrl + Record**. The **Record Only:** dialog box opens.
- 2. Select Playlist (.ply).
- 3. Click **Record**. The **Playlist** is saved to the current **Message Number** in the **Default Playlist Directory**.

A Hotkey combination can also be used to record the Playlist:

• Press Ctrl + Record P Enter. The Playlist is saved to the current Message Number in the Default Playlist Directory.

Internal Clip Player - Hardware and Connections

Tools Menu > Clip Control Panel > Internal Clip Player

IMPORTANT!!!

The Internal Clip Player offers a variety of input/output and encoding/decoding options. Ensure that the Matrox *DigiSuite* utility, accessed from Start > Settings > Control Panel, has been properly configured for production requirements, and that video/audio sources and outputs are properly cabled to the clip player, the Digital LE Module (if applicable), and to the system. *Refer to Matrox documentation for detailed information on hardware and configuration.*

Overview

Duet SD/LE/PCI/LEX/PCI+ systems support single and dual Internal Clip Players, which provide encoding and decoding of video and audio inputs and outputs.

Two types of Internal Clip Players are supported:

The Matrox[®] DigiSuite LE Internal Clip Player supports the M-JPEG codec. The DigiSuite LE clip player processes analog video and audio. Analog video output from the DigiSuite LE clip player, that is to be otherwise processed by the Duet system, must be input to an Lantern 64 (analog) board. Analog Lantern 64-A boards are supported by Duet LE/LEX/PCI/PCI+ systems, and are not supported by Duet SD systems.

To process digital input and to use digital output of the DigiSuite LE clip player as input to digital video boards in a Duet system, the digital signals must be input to or output from the Digital LE Module of the DigiSuite clip LE player.

If outputting digital video, the **Analog Video Out** and **Analog Audio Out** on the clip player can be used for monitoring purposes.

• The Matrox DigiServer Internal Clip Player supports the DV and MPEG-2 codecs. The DigiServer clip player processes digital video and audio. Conversion from or to analog audio must be done externally. Only one codec type can be processed at a time. When the clip player is set to DV, it cannot read/play MPEG-2 files, and vice versa. DigiServer clip players are supported by Duet LE/LEX/PCI/PCI+ systems, and are not supported by Duet SD systems.

The Internal Clip Player can record video/audio from an external source and save to *.*avi* (video) and/or *.*wav* (audio) format files. For proper playback in broadcast applications, files should be stored on a SCSI hard drive within the Duet system.

If two Internal Clip Players are installed in a system, they must be of the same type; either two DigiSuite LE clip players or two DigiServer clip players. The two types cannot be mixed in the same system. Dual Internal Clip Players can access the same SCSI drive in a system.

NOTE

A distinction should be made between a video/audio file recorded from Internal Clip Player input, and a Clip file. A Clip file (*.ccf) format stores data such as In and Out points and other playback instructions. The original source video/audio must be available on a playback device in order to play it back from the Clip Control Panel.

Video and/or audio that is input to the Internal Clip Player can be recorded and saved as a file in the **.avi* and **.wav* formats. respectively. The file is self-contained, and can be played via the Clip Control Panel without the presence of the device that originally fed the Internal Clip Player.

For example, a video file could be recorded as an **.avi* file using the Internal Clip Player. A **.ccf* file could be created in the Clip Control Panel to control the playback of a selected portion of the file. Using output from the **Internal Clip Player** is similar to using an external VTR, DDR or live feed as a source of video to be keyed under Lyric/Duet graphics. Like other external video, the **Internal Clip Player** video output is not a typical object in a Lyric composition, and is not visible on the Lyric **Canvas** as seen on the Duet VGA monitor.

Digital video output of the clip player may be input to Duet's Video I/O board or to a graphics board as a source for keying or background. On a Duet SD system, digital video can also be input to Duet's optional **SD Mixer** for layering.

	DigiSu	DigiServer		
	Input	Output	Input	Output
SDI Video	Yes, with Digital Module*	Yes, with Digital Module*	Yes	Yes
Analog Video	Yes	Yes - On a Duet system, analog video from the DigiSuite LE clip player can be input only to an Lantern 64-A (analog) board (Duet LE/LEX/PCI/PCI+ only)	Νο	Νο
Digital Audio Yes, with Digital Module*		Yes, with Digital Module*	Yes	Yes
Analog Audio	Yes	Yes	No	No

The following table outlines the standards supported by the Internal Clip Players:

*Required for outputting digital video from DigiSuite LE clip player into a digital board in a Duet system. This applies to any board on a Duet SD, and any board on a Duet LE/LEX/PCI/PCI+ except a Lantern 64-A (analog) board.

Internal Clip Player Connections

The **Internal Clip Player** option is factory-installed or retrofitted by Chyron or the dealer, but the user must complete the appropriate cabling as part of installing or reinstalling the Duet system. The connections on the DigiSuite LE and DigiServer clip players differ somewhat from each other, and are outlined in the following sections.

Refer to **Cabling Options - Duet LE/LEX/PCI/PCI+** for additional cabling options if the Internal Clip Player is installed in a Duet LE/LEX/PCI/PCI+ system.

DigiSuite LE Clip Player Connections

NOTE

Digital video output from the DigiSuite LE clip player/Digital LE Module to the Duet system is supported by the Video I/O board, PCI graphics boards and the SD Mix Effects board on Duet SD systems, and the Video I/O board, PCI-Squeezeback boards and Lantern 32/64 boards on Duet LE/LEX/PCI/PCI+ systems.

Analog video output from the DigiSuite LE clip player to the Duet system is supported by Lantern 64-A (analog) boards on Duet LE/LEX/PCI/PCI+ systems.

Ensure that the Matrox DigiSuite utility, accessed from Start > Settings > Control Panel > DigiSuite, is accurately configured for digital/analog video/audio.

The DigiSuite LE clip player and its Digital Module are most likely located at the left side of the Duet SD chassis (rear view), or at the right side of the Duet LE/LEX/PCI/PCI+ chassis. Two PCI slot spaces are required for each DigiSuite LE clip player/Digital LE Module pair. Although two PCI slot spaces are required, the DigiSuite LE clip player/Digital LE Module unit plug into only one PCI receptacle. The following figure shows the back panel of a single DigiSuite LE clip player (left) fitted with a Digital Module (right).



Internal Clip Player Connectors

There are four multi-cable connectors to the Internal Clip Player/Digital Module unit. An Analog Audio Connector and an Analog Video connector are on the DigiSuite LE Internal Clip Player. A Digital Audio connector and a Digital Video connector are on the Digital Module.

The analog connectors can be used to input analog video and audio for recording to *.*avi* and *.*wav* files via the **Internal Clip Record Panel**. Analog video can input to a Lantern 64-A (analog) board on a Duet LE/LEX/PCI/PCI+. Analog video and audio be also used for external purposes such as monitoring or feeding output to external analog devices. *Analog video output cannot be used as an input to the Duet SD Mix/Effects board, any Duet Video I/O board or any Duet digital graphics board.*

ANALOG CONNECTIONS

Each analog video connector which is a component of the analog video multi-cable is individually labeled, and some cables are colored other than black. Colors and labeling may vary. Attach the large, multi-pin analog video connector on the cable to the video connector on the DigiSuite LE clip player, as shown in the following figure:



DigiSuite LE Analog Video Connections

The inputs/outputs, connector types and colors are as follows:

- IN C1/B-Y (BNC Black)
- IN Y1/COMPS1 (BNC Red)
- IN Y/C2 (S-Video Black)
- IN C2/R-Y (BNC Black) Grouped with Y/C2 S-Video cable
- IN Y2/Y/COMPS2 (BNC Black) Grouped with Y/C2 S-Video cable
- PREVIEW COMPS (Composite) (BNC Orange)
- PREVIEW Y/C (S-Video Black double cable)
- PROGRAM B-Y (BNC Green)
- PROGRAM COMPS (BNC Brown)
- PROGRAM Y/C (S-Video Black)

- PROGRAM Y (BNC Black) Grouped with PROGRAM Y/C S-Video Cable
- PROGRAM R-Y/C (BNC Black) Grouped with PROGRAM Y/C S-Video Cable
- KEY OUT (BNC Blue)
- REF IN (BNC Yellow)

When using the Internal Clip Player to record video input to an **.avi* file, a variety of video source types are available: **Composite 1**, **Composite 2**, **Y/C (S-Video 1)**, **Y/C (S-Video 2)**, **Analog Component** and **4:2:2 SDI**. A source type can be selected from the **Video Source** drop-down list box in the **Internal Clip Record Panel**.

The following figure shows each analog **Video Source** choice, and how it must be fed to the DigiSuite LE clip player analog video inputs. The slashes in the cable designations indicate that there is a choice of signal type that can be accepted by the clip player from that connector. *Ensure that the correct signal type is used as an input, and that the Matrox DigiSuite utility is properly configured to recognize the signal type.*



Analog Video Input Cabling - DigiSuite LE Clip Player

WARNING!!!

Simultaneous Y/C (S-Video) and analog component input connections and/or Simultaneous Y/C (S-Video) and analog component output connections are not supported by the DigiSuite LE clip player. IN Y/C 2 should *never* be connected at the same time as IN Y2/Y/COMPS2 and/or IN C2/R-Y, as this will short-circuit your hardware and damage your equipment.

Additionally, do *not* attempt to connect PROGRAM Y/C at the same time as PROGRAM Y and/or PROGRAM R-Y/C, as this will result in double termination of the video signals.

In order to use Y/C and analog component equipment simultaneously, the Y/C connector must be disconnected before connecting the BNC connectors, and vice versa. Remember that the Matrox *DigiSuite* utility must be configured to accommodate the change.

Each analog audio connector, which is a component of the analog audio multi-cable, is individually labeled. Labeling may vary. Attach the large, multi-pin analog audio connector on the cable to the audio connector on the DigiSuite LE clip player, as shown in the following figure:



DigiSuite LE Analog Audio Connections

The inputs/outputs and connector types are as follows:

- IN 1 (XLR) Used as Left Channel input
- IN 2 (XLR) Used as Right Channel input
- IN 3 (XLR) Not used
- IN 4 (XLR) Not used
- OUT 1 (XLR) Used as Left Channel output
- OUT 2 (XLR) Used as Left Channel output
- OUT 3 (XLR) Not used
- OUT 4 (XLR) Not used

DIGITAL CONNECTIONS

All digital input connections to the Duet system must be from the Digital LE Module. Labeling may vary. Attach the large, multi-pin digital video connector on the cable to the video connection on the Digital LE Module, as shown in the following figure:



Digital LE Module Digital Video Connections

The inputs/outputs and connector types are as follows:

- SDI IN (BNC) This is the Video Source that is recorded when SDI 4:2:2 is selected in the Internal Clip Recorder Panel for recording a video file.
- REF IN (BNC) Analog
- SDI OUT (BNC)
- SDI KEY OUT (BNC)
- REF LOOP OUT (BNC) Analog

Each digital audio connector which is a component of the digital audio multi-cable is individually labeled. Labeling may vary. Attach the large, multi-pin digital audio connector on the cable to the audio connector on the Digital LE Module, as shown in the following figure:



Digital LE Module Digital Audio Connections

The inputs/outputs and connector types are as follows:

- IN 1/2 (XLR)
- IN 3/4 (XLR) Not used
- OUT 1/2 (XLR)
- OUT 3/4 (XLR) Not used.

DigiServer Clip Player Connections

The DigiServer clip player offers digital video and audio inputs and outputs, and therefore does not need a Digital Module. The DigiServer clip player is most likely located at the right side of the Duet LE/LEX/PCI/PCI+ chassis. The following figure shows the back panels of single and dual DigiServer clip players.

The one connector on the single clip player back panel handles both digital video and digital audio input and output.

The dual back panel has **Primary Codec** and **Secondary Codec** connectors, each of which inputs and outputs digital video and audio to/from a separate DigiServer clip player. The two clip players are mounted to the same back panel. Each DigiServer clip player can be individually configured in the Matrox **DigiSuite** utility, accessed from **Start > Settings > Control Panel > DigiSuite**.





The inputs and outputs to and from the DigiServer clip player are incorporated into a multi-cable that connects to the **Primary Codec** connector on a single- or dual-clip player board. An additional multi-cable connects to the **Secondary Codec** connector on a dual-clip player unit. If using only one board of a dual-board clip player system, wither the **Primary** or **Secondary** codec can be connected, i.e., either board can be used.



DigiServer Cable Connections

Each connector is labeled. The inputs/outputs and connector types are as follows:

- Digital Audio (AES/EBU) In 1/2 (XLR black) Used as stereo pair
- Digital Audio (AES/EBU) In 3/4 (XLR black) Not used
- Digital Audio (AES/EBU) Out 1/2 (XLR black) Used as stereo pair
- Digital Audio Out (AES/EBU) 3/4 (XLR black) Not used
- Audio Monitor Out (3/4" black)
- Digital Ref In (AES/EBU) (XLR black)
- Analog Ref In (BNC yellow)
- Ref Loop Out (BNC gray) Analog
- SDI/SDTI Video In (BNC red) This is the Video Source used when SDI 4:2:2 is selected in the Internal Clip Recorder Panel for recording a video file.
- SDI/SDTI Video In Loop Out (BNC) Reclocked
- SDI/SDTI Video Channel A Out (BNC blue)
- SDI/SDTI Video Channel B Out (BNC black)
- Analog Composite Video Out (BNC white) for monitoring

Connecting the ICP to the Duet Video I/O Board

Connection of the Internal Clip Player to the Video I/O board of any Duet system is essentially the same. The following figure shows connection of a DigiSuite LE Digital Module to the **Video In** of a Duet SD. Remember that only digital video can be input to a Duet Video I/O board.



Connecting the Internal Clip Player to Duet Video I/O Board

NOTE

To use analog sync, the same analog sync signal must be connected to the Internal Clip Player Ref In connector.

Audio Configuration

The DigiSuite LE and DigiServer clip players can record and play back audio. Refer to **Audio and the** Internal Clip Player for information on audio processing in the DigiSuite LE and DigiServer clip players.

Audio and the Internal Clip Player

The **Internal Clip Player** can record and play back *.*wav* audio files. The DigiSuite LE clip player has analog audio processing capability. With the addition of the Digital LE Module, it has digital audio processing capability as well. The DigiServer clip player has digital audio processing capability only.

DigiSuite Configuration

Analog/Digital preference is set in the Matrox® DigiSuite® Configuration dialog box, accessed from Start > Settings > Control Panel > DigiSuite. The appropriate format for Output 1 and Output 2 becomes available when Digital Output is selected.

ard Set 1				
General DigiSui	ite LE			
Video In Vide	o Out Audio Ger	llock Audio In Audio Out	Storage Inform	ation
	Audio Settings Output Pair 1: Output Pair 2:	Digital Dutput A A A A A A A S / E B U (balanced digital A A S / E B U (balanced digital	.nalog Output al stereo) al stereo)	-
			These settings	are always permanent.
	International		Sequences and	

DigiSuite Configuration - Digital Audio Capability

DigiServer Audio Considerations

The DigiServer clip player can input/output only digital AES/EBU audio. If the audio source is analog, it must be converted to digital before it is input to the DigiServer clip player. If analog audio is required on output, it must be converted to analog after it is output from the DigiServer clip player.

Clip Control Panel

Tools Menu > Clip Control Panel

Overview

The **Clip Control Panel** provides the ability to play back video and/or audio clips either independently or as part of a Lyric animation. A video clip plays *behind* Lyric graphics on output, and is *not* visible on the **Canvas** during clip editing, preview or playback. An audio clip can be monitored through a headset or speakers connected to the Duet system.

Information about how the clip is to be played back is recorded to a Lyric clip file (*.ccf). The clip file defines the start frame and end frame of the clip, duration, and loop and other data. When recording a clip file, Lyric does not perform actual edits on the recorded content of the source material. In order to play back the video/audio, the original material and the playback device must be available.

Clip files can be created from sources such as the following:

- Duet's Internal Clip Player.
- Audio files processed through integrated audio hardware in Duet.
- Chyron Aprisa DDR.
- VTR or DDR (Digital Disk Recorder) via **BVW-75** serial protocol. To control these external devices, an RS-422 Serial I/O and GPI/O board must be installed in the Duet system.

Video clips are not supported on Duet HD systems. The **Clip Control Panel** can be used, however, to play back audio clips if there is audio hardware in the Duet HD system.

DigiSuite LE and DigiServer Clip Players

The following Internal Clip Players are available for playback of video files:

- The **DigiSuite LE** Internal Clip Player records and plays **Motion JPEG** (**M-JPEG**) files. The board provides support for both analog and digital video/audio I/O.
- The DigiServer Internal Clip Player records and plays Digital Video (DV, DV-25, DV-50) and MPEG-2 files. It supports only digital video/audio I/O. It is available as a single-channel or dual-channel unit. There are two versions of the DigiServer Internal Clip Player, one that supports DV/DV-25/MPEG-2 and one that supports DV-50/MPEG-2. The DigiServer Internal Clip Player is not available for Duet SD/HD, and requires Lyric v4.14 or later.

NOTE

M-JPEG, DV and MPEG-2 files all share the *.*avi* extension. They do *not*, however, share the same compression codec. M-JPEG files must be recorded and played back on a DigiSuite LE clip player, and DV, DV-25, DV-50 and MPEG-2 files must be played back on the appropriate DigiServer clip player.

- Recording and playing back an M-JPEG *.avi file requires a DigiSuite LE clip player.
- Recording a DV or DV-25 *.avi file requires a DigiServer DV-25 clip player, "DV" must be selected in the Internal Clip Recorder Panel, and "DV" or "DV-25," respectively, must be selected in the DV Capture Settings dialog box. Playback of the recorded file requires a DigiServer DV-25 clip player, and "DV" must be selected in the AVI Properties dialog box (accessed from the Clip Control Panel).
- Recording a DV-50 *.avi file requires a DigiServer DV-50 clip player, "DV" must be selected in the Internal Clip Recorder Panel, and "DV-50" must be selected in the DV Capture Settings dialog box. Playback of the recorded file requires a DigiServer DV-50 clip player, and "DV" must be selected in the AVI Properties dialog box (accessed from the Clip Control Panel).

 Recording an MPEG-2 *.avi file requires either a DigiServer DV-25 or DV-50 clip player, and "MPEG-2" must be selected in Internal Clip Recorder Panel. Playback of the recorded file requires a DigiServer DV-25 or DV-50 clip player, and "MPEG" must be selected in the AVI Properties dialog box (accessed from the Clip Control Panel).

AVI Properties are covered later in this section.

There are a number of MPEG codecs. The DigiServer clip player plays back and records only MPEG-2 AVI files. Any mention of "MPEG" with regard to DigiServer clip player operation refers to "MPEG-2."

Dual Clip Player Use

As of Lyric v4.14, Lyric supports the installation and simultaneous use of two Internal Clip Players.

NOTE

DigiSuite LE and DigiServer clip players cannot be mixed within a system. If two clip players are to be installed in a system, they must be either two DigiSuite LE or two DigiServer clip players. When two clip players are installed, they both can draw video and audio data from the same SCSI drive.

Configuration for Display of Video Clips

Depending on the video/audio source and the system, special configuration may be necessary. *Refer to Matrox documentation for information.*

NOTE

If using the Clip Control Panel to play back audio (*.wav) files only, Video configuration for clip playout is not necessary. If using the Internal Clip Player or other device such as an Aprisa DDR or a VTR to play back video clips, specific Duet Hardware Configuration settings are required. Refer to Configuration for Display of Video Source - Duet SD, Configuration for Display of Video Source - Duet HD or Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+ for information.

The Internal Clip Player can also be used to record external video or audio to an **.avi* or **.wav* file, respectively, eliminating the need for an external playback device

Accessing the Clip Control Panel

To access the Clip Control Panel:

• Select Clip Control Panel from the Tools menu. A new menu heading, Clip, is added to the menu bar between Tools and Window.



Clip Menu

X

The **Clip Control Panel** is also displayed. The **Playback Device** drop-down list box (unlabeled) at the top of the **Clip Control Panel** displays the default device for the system. If there is no Internal Clip Player installed, or an Aprisa DDR or other video playback device is not connected, the **Playback Device** field specifies **Audio Hardware**, if available. If there is an Internal Clip Player installed, the **Playback Device** field specifies **Internal Clip Player**.

Clip Control Panel	🎫 Clip Control Panel 📃 🗖
Internal Clip Player 💌 1 🛨	Audio Hardware 💌 🚺
	<u>Goto</u> 00:00:00:00
Scrub	
AVI File	Wa <u>v</u> e C
Load Browse Clear	Load Browse Clear
In Point	- In Point
	Mark 00:00:00:00
Out Point	Out Point
	Mark GoTo
Play to End Loop	Play to End 🗖 Loop
Clip File	Clip File
Save <u>R</u> ecall	Save <u>R</u> ecall
TLine Add TLine Update	TLine Add TLine Update
Play Clip OK	Play Clip OK

The following figures show Internal Clip Player and Audio Hardware selected.

Internal Clip Player

Audio Hardware

The following figures show Aprisa DDR, SONY PVW-2800 and Sierra DDR selected.

Clip Control Panel	🕶 Clip Control Panel 💶 🗙	Clip Control Panel
Aprisa DDR 💽 1 🛨	Port 1: SONY PVW-2	DEVICE (Sierra DDR) 💌 1 🛨
<u>Goto</u> 00 00 00 00 00	<u>Goto</u> 00,00,00 ÷	<u>Goto</u> 00 00 00 ÷
Event # C	A <u>V</u> I File	
Load Browse Clear	Load Browse Clear	Load Browse Clear
In Point	In Point	In Point
	Mark GoTo	Mark GoIo
Out Point	Out Point	Out Point
Mark GoTo	Mark GoTo	Mar <u>k</u> GoTo
Play to End	Play to End Loop	Play to End Loop
Clip File	Clip File	Clip File
Save <u>R</u> ecall	<u>Save</u> <u>R</u> ecall	Save <u>R</u> ecall
TLine Add TLine Update	TLine Add TLine Update	TLine Add TLine Update
Play Clip OK	Play Clip OK	Play Clip OK
Aprisa DDR	External VTR	External DDR

Most of the controls on the Clip Control Panel are duplicated as commands in the Clip menu.

Clip Control Panel and Clip Menu Controls and Parameters

Parameters and controls on the **Clip Control Panel** and in the **Clip** menu provide settings for a variety of cliprelated operations. The following table specifies which parameters in the **Clip Control Panel** are available to each type of video/audio source.

Clip Control Panel Parameter	Internal Clip Player: AVI Files	Audio Hardware: WAV Files	Aprisa DDR: Aprisa Clips	Video/Audio from External VTR/DDR
Playback Device	Yes	Yes	Yes	Yes
Goto	Yes	No	Yes	Yes
Record (from External Video/Audio)	Yes	No	No	No
Transport Controls	Only Stop and Play, until Scrub Mode is made active.	Play, Stop and Rewind Only	Yes	Yes
Scrub Mode	Yes	No	No	No
Slide Box (Jog/Shuttle)	Yes, when Scrub is enabled.	No	Yes	Yes
Source Type	AVI File	Wave	Event #	None
AVI Properties	Yes	No	No	No
Key Delay	Yes	No	No	No
Audio Delay	Yes	No	No	No
Loop Frame	Yes	No	No	No
CODEC: MPEG, DV	DigiServer Clip Player Only	No	No	No
CODEC: Latency	Yes	No	No	No
Load	Yes	Yes	Yes	No
Browse	Yes	Yes	No, but Aprisa Clips can be browsed from the Lyric Browser	Νο
Clear	Yes	No	Yes	No
In/Out Points	Yes	No	Yes	Yes
Mark	Yes	No	Yes	Yes
Go To	Yes	No	Yes	Yes
Play To End	Yes	No	Yes	Yes
Loop	Yes	No	No	No

Clip Control Panel Parameter	Internal Clip Player: AVI Files	Audio Hardware: WAV Files	Aprisa DDR: Aprisa Clips	Video/Audio from External VTR/DDR
Save	Yes	Yes	Yes	Yes
Recall	Yes	Yes	Yes	Yes
TLine Add	Yes	Yes	Yes	Yes
TLine Update	Yes	Yes	Yes	Yes
Play Clip	Yes	Yes	Yes	Yes
ОК	Yes	Yes	Yes	Yes

The following table specifies which parameters in the **Clip** menu are available to each type of video/audio source.

Clip Menu Parameter	Internal Clip Player: AVI Files	Audio Hardware: WAV Files	Aprisa DDR: Aprisa Clips	Video/Audio from External VTR, DDR
Play Stop Rewind Fast Forward Next Frame > Previous Frame <	Only Stop and Play, until Scrub Mode is made active.	Play, Stop and Rewind Only	Yes	Yes
Mark In Mark Out	Yes	No	Yes	Yes
Go to: Beginning End Timecode	Yes, but only when Scrub Mode is active.	Go to Beginning Only	Yes	Yes
Play Clip	Yes	Yes	Yes	Yes
Add Timeline Clip	Yes	Yes	Yes	Yes

Playback Device

The **Playback Device** drop-down list box (unlabeled), located at the top of the **Clip Control Panel**, specifies the selected playback device. Only playback devices that are available to the system can be selected from the drop-down list box. Examples of playback devices are: **Audio Hardware**, **Internal Clip Player**, **Aprisa DDR**, **Sony PVW-2800** and **Sierra DDR**. Depending upon which device is selected, specific controls or parameters may or may not be available.

In order to communicate with an external BVW-75-protocol playback device, such as a VTR or DDR, the device must be connected to an RS-422 port on the Duet's RS-422 Serial I/O and GPI/O board. It must then be properly configured in the **Device Control Configuration** dialog box, accessed from **Config Menu > Duet Hardware > Device Control**. When the external playback device is selected in the **Clip Control Panel**, the name displayed in the **Playback Device** field reflects the name as set in the **Description** field in the **Device Control Configuration** dialog box.

Output Channel

One or two clip players can be installed in a system, and are identified as 1 and 2 in **Output Channel** dropdown list box. When a clip player is selected, the settings for that clip player are displayed in the **Clip Control Panel**.

When Frame Buffer 1 in a Duet system is selected as active, the Clip Control Panel automatically displays the settings for Internal Clip Player 1. When Frame Buffer 2 in a Duet system is selected as active, the Clip Control Panel automatically displays the settings for Internal Clip Player 2. This occurs regardless of how the clip players are connected to the various boards in the Duet system.

<u>GoTo</u>

Entering a frame number in the **Goto** frame counter moves the source video to that frame. **GoTo** is available as follows:

- When Internal Clip Player is selected to play *.avi files, but only when Scrub Mode is active. Scrub Mode is covered later in this section.
- When Aprisa DDR is selected to play back Aprisa Clips, or an RS-422 protocol external VTR or DDR is selected to play back video.
- Not available when Audio Hardware is selected to play back *.wav files.

The Clip menu also offers three Go To choices:

- Go to Beginning: Moves the source video to the beginning.
- Go to End: Moves the source video to the end.
- **Go to Timecode:** Moves the source video to the specified frame or **Timecode** (e.g., from an external VTR).

Record

The **Record** function, accessed from the **Record** icon located to the right of the **Goto** frame counter, enables video or key from an external source such as an Aprisa DDR or a VTR to be recorded and saved in an **.avi* format. Audio from an external source can also be recorded to a **.wav* format file. Recording a video or audio file in this manner eliminates the need for the external playback device. The **Record** function records only to Duet system via the Internal Clip Player, and not to external devices such as DDRs or VTRs.

Clip Transport Controls

The **Clip Transport Controls** are similar to the **Transport Controls** found on the Lyric interface. Clicking a **Transport Control** icon moves the video or audio source as specified in the following figure.



The **Clip Transport Controls** are also available from the **Clip** menu. Additionally, pressing > or < moves the video or audio source to the next or previous frame, respectively. Using these controls does not play a clip as set in the **In Point** and **Out Point** areas (described later in this section), but instead allows preview of the entire source video/audio.

When Internal Clip Player is selected in order to play *.avi files, only Play and Stop are available until Scrub Mode is made active.

Scrub Mode and Scrub Slide Box

When **Internal Clip Player** is selected, **Scrub Mode** allows *.*avi* file to be easily previewed, and provides quick access to any frame. The slide box is similar in operation to the **Jog/Shuttle** control found on VTRs and DDRs.



Scrub Slide Box and Scrub Mode Button

To enable Scrub Mode:

- 1. Click the **Scrub** button. The **Scrub** name on the button turns blue <u>Scrub</u>.
- 2. Use the mouse to drag the **Scrub** slide box to play through the video or audio.

Scrub Mode should be active only when previewing and editing video. **Scrub Mode** should be disabled before playing video to air in order to avoid video artifacts at the beginning of playout. To disable **Scrub Mode**:

• Click the **Scrub** button. The **Scrub** name on the button turns black <u>Scrub</u>. Note that the slide box cannot be moved when **Scrub Mode** is disabled.

The following points also apply to Scrub Mode:

- When Scrub Mode is disabled (not active), only Play and Stop in the Transport Controls are available. GoTo and In Point/Out Point Go To are not available.
- When Scrub Mode is enabled, all Transport Controls, GoTo and In Point/Out Point Go To become available. In addition, Scrub Mode Enabled is displayed on a red Status Bar.
- Scrub Mode is automatically disabled when the Play Clip function in the Clip Control Panel is executed.

Scrub Mode does not apply to Audio Hardware, Aprisa DDR or external playback devices. The Scrub slide box, however, can be used to preview Aprisa Clips or material from external playback devices.

- If Previewing an Aprisa Clip: After moving the Aprisa Clip to a new position, the slide box returns to the center position.
- If Previewing Material from an External Playback Device: After moving the source material to a different frame, click the Stop icon or select Stop from the Clip menu. The slide box returns to the center position.

Source Type, Load, Browse

The procedure for selecting video/audio to play back from the **Clip Control Panel** depends on the playback device that has been selected:

• If Internal Clip Player is Selected: In the AVI File field, enter a file path and name of a video file. Click the Load button to open and load the file.

An **.avi* file can also be selected and loaded using the **Browse** feature, described ahead in this section.

• If Audio Hardware is Selected: In the Wave field, enter a file path and name of an audio file. Click the Load button to open and load the file. Note that Audio Hardware refers to the onboard audio card currently in use in the Duet system.

A *.wav file can also be selected and loaded using the **Browse** feature, described ahead in this section.
The following should be considered when playing audio files through the Clip Control Panel.

- All Windows[®] alarms, system beeps and other system sounds should be disabled in whichever utilities and other applications that might trigger them. If they are not disabled, the sounds could be included in the production's sound mix!
- Lyric cannot stretch or contract audio clips on the **Timeline**. Audio clips can only be moved to a different position along the **Timeline**.
- Beware of programming a Lyric composition to play two audio clips in rapid succession, or to repeat the same audio clip too quickly. The characteristics of the Duet's sound card and its drivers determine how quickly a *.wav file can be loaded and played following the playout of another *.wav file.
- If Aprisa DDR is Selected: In the Event # field, enter a number of a video event that is available from the Aprisa DDR. Note that the Aprisa DDR application must be open on the Aprisa DDR to enable playback.

The **Browse** feature available in the **Clip Control Panel** is not available to navigate to and select Aprisa clips. Thumbnails and information about Aprisa clips, however, can be viewed in the Lyric **Browser**, although they cannot be loaded into the **Clip Control Panel** from the **Browser**.

Refer to Aprisa Interface Configuration, Aprisa Systems, Browser Overview, Aprisa Clip Asset **Operations** and Aprisa documentation for comprehensive information on Aprisa operations.

• If a VTR or DDR Controlled by BVW-75 Serial Protocol is Selected: Use the transport controls to cue the tape to the beginning of the material. *Refer to External VTR and DDR Systems, RS-422 Serial I/O & GPI/O Board, Configuration for External Device Control and the documentation for the playback device for additional information on these systems.*

An **.avi* or **.wav* file can also be selected and loaded using the **Browse** feature, which provides the ability to navigate to and select a file for loading.

- 1. Click the **Browse** button. The dialog box that is displayed when **Browse** is clicked depends on the selected playback device. For example:
 - o If Internal Clip Player is selected, the Select AVI File dialog box is displayed.
 - o If Audio Hardware is selected, the Select Audio File dialog box is displayed.
- 2. Navigate to and select a file.
- 3. Once the file is selected, click OK. The file is loaded into the clip player.

To reload the previously loaded clip:

• Click the **Load** button.

AVI Properties

When an clip file containing playback information for an *.avi file is loaded, then the *.avi file, the associated file containing the *.avi file's **alpha (key) component** and any associated audio files are loaded as well. For the Internal Clip Player to recognize the files as associated, they must share the same name and reside in the same directory. For example, the following files are associated: *Sports_Intro.avi, Sports_Intro.matte.avi, Sports_Intro.a1.wav* and *Sports_Intro.a2.wav*. They correspond to the video, key, left audio and right audio files. The *.avi file and the associated key file must be of the same duration. If not, Lyric adjusts the duration of the shorter file accordingly.

When using the **Internal Clip Player** to play back **AVI** files, configuration parameters must be set. The **AVI Properties** configuration differs slightly between a DigiSuite LE and a DigiServer clip player. To access **AVI Properties**:

• Click the radio button directly to the right of the AVI field.



Accessing AVI Properties

The AVI Properties dialog box opens.

AVI	Properties	×
	Key Delay:	
	Audio Delay:	
	Loop Frame:	
	CODEC: O MPEG O DV	
	Latency:	
	OK Cancel	

AVI Properties

Key Delay, **Audio Delay** and **Loop Frame** are available to both types of clip players. The **MPEG** and **DV** radio buttons are available to only the DigiServer board.

To apply **AVI Properties** settings:

• Click the **OK** button.

Key Delay, Audio Delay, Loop Frame - AVI Files Only

A file can be composed of a number of separate components:

- Video: This is the file that contains the video information. The format is *.avi file.
- Matte: This is the file that contains the Key information. The format is *.matte.avi.
- Audio: There can be one or two audio files, depending on if the audio is mono or stereo. The formats are *.wav, *.a1.wav and/or *.a2.wav.

Note that the **Video** and **Alpha** components of a **Key** signal originating from the Internal Clip Player are likely to have been created separately. **Video** and **Alpha** components are always separate files playing back simultaneously from the Internal Clip Player. It may be desirable to delay or advance playout of one or both files to compensate for slight differences between their start times and durations.

In the AVI Properties dialog box, the following playback parameters can be set:

- Key Delay: If the Key Delay is set to a positive number, the Matte file starts playing the specified number of frames later than the Video file starts to play. If the Key Delay is set to a negative number, the Matte file starts playing the specified number of frames before the Video file starts to play. Default value is 0, which specifies that the Matte file starts playing simultaneously with the Video file.
- Audio Delay: If the Audio Delay is set to a positive number, the Audio file(s) starts playing the specified number of frames later than the Video file starts to play. If the Audio Delay is set to a negative number, the Audio file(s) starts playing the specified number of frames before the Video file starts to play. Default value is 0, which specifies that the Audio file(s) starts playing simultaneously with the Video file.

• Loop Frame: When Loop is enabled (checked) on the Clip Control Panel, the Loop Frame specifies the frame to which the playback loops after it reaches the end of the animation. The default value is **0**, which specifies that playback loops back to the beginning of the animation. The minimum number of frames that can be looped to from the end of a clip is **15**. Output is unpredictable if the loop frame is set to fewer than **15** frames from the end of the clip.

CODEC Type - DigiServer Clip Player Only

Two compression codecs are available to the DigiServer clip player for playback and recording: **Digital Video** (DV) or **Motion** (MPEG-2). To select a codec:

• Click the **MPEG** or **DV** radio button.

Note that only the files formatted in the selected codec can be played on the DigiServer clip player.

- If **MPEG** is selected, **DV** files and **M-JPEG** files cannot be played.
- If DV is selected, MPEG-2 files and M-JPEG files cannot be played. In addition, files recorded using DV or DV-25 compression must be played back on a DigiServer DV-25 clip player. Files recorded using DV-50 compression must be played back on a DigiServer DV-50 clip player.
- The codec set in the Clip Control Panel is independent of the format set in the Internal Clip Recorder Panel.

The **MPEG** and **DV** radio buttons are unavailable (grayed out) for DigiSuite LE clip players, as they support only **M-JPEG** video files.

Latency

Since the exact load time for a clip depends on a variety of factors, it may be necessary to slightly delay the start of an animation so that the animation and the clip are in sync. To set this delay:

• In the Latency spin control box, set the number of milliseconds that the animation is to be delayed.

It may take experimentation to arrive at the optimal **Latency** value, as clip load time can depend a variety of factors including the type of CPU and the type of clip player.

- The default Latency for DigiSuite LE clip players is 200ms.
- The default **Latency** for DigiServer clip players is dependent on a registry key indicating how fast the Matrox Switcher switches. If this value has not been set by the user, the **Latency** defaults to **1000ms**.

Range: 0 - 2000ms

<u>Clear</u>

The **Clear** function allows the output of the currently selected clip player to be quickly purged of images remaining from previously loaded clip files. To clear the clip player output:

• Click the **Clear** button.

To clear the clip player output channel and the Duet output channel:

• Press Alt + Erase (Duet keyboard) or Ctrl + Alt + Q (PC keyboard).

In and Out Points, Play to End, Loop

As mentioned earlier in this section, recording a clip file saves information about how to play back the clip, but not the video file itself. Included in the information are the **In** and **Out Points**, and instructions on when to stop the clip. These parameters are set in the **In Point** and **Out Point** areas of the **Clip Control Panel**.

In Point	
Mark Onloguon	7
<u>Golo</u>]
Out Point	
	7
Goto Goto	1
Play to End	p

Setting In and Out Points

In Point, Out Point, Play to End and Loop are available as follows:

- When Internal Clip Player is selected to play *.avi files, but only when Scrub Mode is active.
- When Aprisa DDR is selected to play back Aprisa Clips, or an RS-422 protocol external VTR or DDR is selected to play back video. Loop is not available for either the Aprisa DDR or other external systems.
- In Point, Out Point and their related parameters are not available when Audio Hardware is selected to play back **.wav* files. An audio file saved as a clip is always played back at its full length.

To set In Point, Out Point, Play to End and Loop:

- 1. In the **In Point** area, use one of the following methods to move the video source to the desired **In Point**:
 - Use Scrub Mode.
 - Use the Transport Controls to move the video to the desired frame. Remember that when Internal Clip Player is selected as the playback device, Scrub Mode must be active in order to have complete access to the Transport Controls and to the In Point and Out Point parameters.
 - Enter a frame number in the frame counter, and then click **Go To** or select **Go to Timecode** from the **Clip** menu.

Note that on Duet LE/PCI systems, video clips must begin playback at **Frame number 0** of the animation. This restriction does not apply to Duet SD/LEX/PCI+ systems.

- 2. Click Mark or select Mark In from the Clip menu.
- 3. In the **Out Point** area, use one of the methods just described to move the video source to the desired **Out Point**. Remember to click **Go To**, or the **Out Point** will revert to the previously selected **Go To** frame.
- 4. Click Mark or select Mark Out from the Clip menu.
- 5. Optional: Select (check) **Play to End** to override the **Out Point** setting. The loaded file or other video source plays from the **Mark In** frame to the end.

6. Optional (Internal Clip Player playout only): Select (check) Loop to enable looping. After the clip plays to the specified Out Point or the end, it loops back to the frame set as the Loop Frame in the AVI Properties dialog box. If no loop frame is set, the clip loops back to the beginning of the clip. When Loop is enabled, the clip plays indefinitely until stopped, unless it has been added to a Timeline. In this instance, it plays for the duration set on the Timeline. Adding a clip to a Timeline is covered later in this section. Loop is available only to *avi files played on the Internal Clip Player.

Play Clip

The clip can be previewed by using the **Play Clip** function, which plays only the clip as set by the marked **In Point** and **Out Point**, as opposed to the entire length of the file or video source. The clip file (*.*ccf*) need not be saved first to preview a clip using the **Play Clip** function. To play back a clip:

- Click the **Play Clip** button.
 - On Duet LE/PCI systems, clips must begin playback at Frame number 0 of the animation. This restriction does not apply to Duet SD/LEX/PCI+ systems.
 - When **Play Clip** is used to play an audio file, it always plays the entire file.
 - Scrub Mode is automatically disabled when the Play Clip function in the Clip Control Panel is executed.

Previewing, Creating and Playing a Clip

Overview

Clip Control Panel operation is similar for each device that is selected. The following examples demonstrate the slight differences in clip playback and marking the **In Point/Out Point**. Once a video/audio has been marked as a clip, the clip information can be saved as a separate file, and/or it can be added to the **Timeline** of a Lyric composition and saved as a component of a Lyric message. *Refer to Clip Control Panel* for *details*.

Internal Clip Player - AVI File

To play back and mark an *.avi file:

- 1. Select Internal Clip Player from the Device drop-down list box at the top of the Clip Control Panel.
- 2. Use the **Browse** function to locate and select the file, and then click **Open**. The filename appears in the **AVI File** field.

OR

Enter the filepath and filename directly into the **AVI File** field, and then click **Load**.

- Click the Scrub button to enable Scrub Mode, and then experiment with the Transport Controls: Play, Stop, Rewind, Fast Forward, Next Frame and Previous Frame. Also experiment with the Clip menu controls: Play, Stop, Rewind, Fast Forward, Next Frame, Previous Frame, Go To Beginning, Go to End and Go to Timecode. Press the > or < keys to advance or move back the animation one frame at a time.
- 4. In the In Point area, enter a frame number, click Go To and then click Mark, or select Mark In from the Clip menu.
- 5. In the **Out Point** area, enter a frame number, click **Go To** and then click **Mark**, or select **Mark Out** from the **Clip** menu.
- 6. To experiment with the **Loop** function, click the **Loop** checkbox. Click **Play Clip** or select **Play Clip** from the **Clip** menu, and the clip material repeats indefinitely.
- 7. The clip can loop back to a different frame. Click the **AVI** radio button, set a **Loop Frame** and then click **OK**. Click **Play Clip** or select **Play Clip** from the **Clip** menu, and observe the change in playback.

Video (*.*avi*) files that are to be used as source material for clips can be previewed outside of Lyric by using media player software that is available from within Windows.

• From Windows Explorer or My Computer, navigate to the video file, and then double-click the file. Depending on the available software, the file might play immediately, or if a player interface is displayed, from which the file can then be played.

Note that even though the media player can display the video, the Internal Clip Player will not be able to play back the file if the codec is incompatible.

From within Lyric, an **.avi* file can be previewed using the **Transport Controls** available to that playback device type (**Internal Clip Player** or **Audio Hardware**). If, however, an Internal Clip Player is installed in the system, but an output monitor is not available, the video file can be viewed from within Lyric if a Windows-type media player is available.

- 1. Select Internal Clip Player as the Playback Device.
- 2. Enter the name of a video file in the **AVI File** field and then click **Load**, or use **Browse** to navigate to and select the video file.
- 3. Select Audio Hardware as the Playback Device.
- 4. Click **Play** or select **Play** from the **Clip** menu. A Windows-type media player should open, from which the file can then be played.

Note that the media player is external of Lyric, and a clip cannot be set up by using the **Transport Controls** on the media player. In addition, even if the media player can display the video, the Internal Clip Player will not be able to play back the file if the codec is incompatible.

Audio Hardware - WAV File

To play back a *.wav file from the **Clip Control Panel**:

- 1. Select Audio Hardware from the Device drop-down list box at the top of the Clip Control Panel.
- 2. Use the **Browse** function to locate and select the file, and then click **Open**. The filename appears in the **Wave** field.

OR

Enter the filepath and filename directly into the Wave field, and then click Load.

3. Experiment with the **Transport Controls**: **Play**, **Stop**, **Rewind**. Also experiment with the **Clip** menu controls: **Play**, **Stop** and **Rewind**.

There is no need to mark an audio clip, as the entire audio file is always played back when **Play Clip** is executed.

Audio files that are to be used as source material for clips can be previewed outside of Lyric by using media player software that is available from within Windows.

• From Windows Explorer or My Computer, navigate to the audio file, and then double-click the file. Depending on the available software, the file might play immediately, or a player interface is displayed, from which the file can then be played.

Aprisa DDR - Aprisa Clip

To play back and mark an Aprisa Clip:

- 1. Make sure that the Aprisa application is open on the Aprisa system, and then select **Aprisa DDR** from the **Device** drop-down list box at the top of the **Clip Control Panel**.
- 2. Enter an **Aprisa Clip ID Number** in the **Event** # field., and then click **Load**. Remember that the **Lyric Browser** can be used to view thumbnails and information about the available **Aprisa Clips**, although it cannot be used to load a clip.
- Experiment with the Transport Controls: Play, Stop, Rewind, Fast Forward, Next Frame, Previous Frame. Also experiment with the Clip menu controls: Play, Stop, Rewind, Fast Forward, Next Frame, Previous Frame, Go To Beginning, Go to End and Go to Timecode. Press the > or < keys to advance or move back the animation one frame at a time.
- Experiment with the Scrub slide box to move the advance or back up the video. The slide box is similar in operation to the Jog/Shuttle control found on VTRs and DDRs. After moving the Aprisa Clip to a new position, the slide box returns to the center position.
- 5. In the In Point area, enter a frame number, click Go To and then click Mark, or select Mark In from the Clip menu.
- 6. In the **Out Point** area, enter a frame number, click **Go To** and then click **Mark**, or select **Mark Out** from the **Clip** menu.
- 7. Click the Play Clip button or select Play Clip from the Clip menu to play the marked clip.

External Playback System

To play back and mark a clip from an external source:

- 1. Select the external device from the **Device** drop-down list box at the top of the **Clip Control Panel**.
- Experiment with the Transport Controls: Play, Stop, Rewind, Fast Forward, Next Frame, Previous Frame. Also experiment with the Clip menu controls: Play, Stop, Rewind, Fast Forward, Next Frame, Previous Frame, Go To Beginning, Go to End and Go to Timecode. Press the > or < keys to advance or move back the animation one frame at a time.
- 3. Experiment with the **Scrub** slide box to move the advance or back up the video/audio. The slide box is similar in operation to the **Jog/Shuttle** control found on VTRs and DDRs. After moving the video/audio to a new position, click the **Stop** button or select **Stop** from the **Clip** menu. The slide box returns to the center position.
- 4. Experiment with the **Go to Timecode** function on the **Clip** menu. Enter a frame number in any of the frame counters, and then select **Go to Timecode** from the **Clip** menu.
- 5. In the **In Point** area, enter a frame number, click **Go To** and then click **Mark**, or select **Mark In** from the **Clip** menu.
- 6. In the **Out Point** area, enter a frame number, click **Go To** and then click **Mark**, or select **Mark Out** from the **Clip** menu.
- 7. Click the Play Clip button or select Play Clip from the Clip menu to play the marked clip.

Saving/Recalling a Clip File, Clip Behavior in Lyric

Tools Menu > Clip Control Panel > Save, Recall

The parameters that govern playback of the clip, such as the **Start/End Points**, are saved in a **Clip** file and recalled for future use. A **Clip** (*.*ccf*) file is independent of the Lyric composition that was currently open which it was created.

Saving a clip as a *.*ccf* file is necessary only when it is to be used in more than one Lyric message. A clip can also be saved as a component of a Lyric composition when the message is saved in the *.*lyr* format. When the Lyric message is read, the **Clip** settings are displayed in the **Clip Control Panel**.

The source video and/or audio itself is not saved. In order to play back the clip, the source video and/or audio and the playback device must be available, whether it is external, from a DDR or VTR, or internal, from Duet's Internal Clip Player or audio hardware.

Saving a Clip File

To set and save a clip:

- 1. Set In Point, Out Point and other parameters for the clip.
- 2. Click Save. The Save As dialog box is displayed.

lip Files	E	-111 *
MJPEG.ccf		
CP_DV.ccf		
p.ccf		
_VTR.ccf		
DDR.ccf		
_MPEG.ccf		
DV.ccf		
_Audio.ccf		
Football_ICP_MPEG.ccf		Save
Clip Files (*.ccf)	•	Cancel
	Clip Files (*.ccf)	S.ccf S.ccf DDR.ccf _MPEG.ccf _V.ccf _Audio.ccf Football_ICP_MPEG.ccf Clip Files (*.ccf)

Saving a Clip File

Navigate to the desired directory in the Save In drop-down list box, and then select Clip Files (*.ccf) from the Save as Type drop-down list box. Enter a file name in the File Name field, and then click OK.

All clip files are saved in the *.ccf format, without regard to the type of source material or the type of playback device. If the clips in the selected directory play back material from different devices or are saved in more than one codec, it is recommended that the device type, and if applicable, codec type, be included in the file name.

To quickly record a **Clip** file:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Clip (.ccf).
- 3. Click **Record**. The **Clip** settings are saved to the current **Message Number** in the **Default Clip Files Directory**.

A Hotkey combination can also be used to record the Clip settings:

• Press Ctrl + Record C Enter. The Clip settings are saved to the current Message Number in the Default Clip Files Directory.

To record a clip as part of a Lyric message:

• Record the Lyric message in the normal manner. Saving the Lyric message retains all information necessary for the clip to run with the animation.

Recalling a Clip

A clip saved to the Duet can be recalled and played back from the **Clip Control Panel**. Make sure that the source video/audio and the playback device are available.

When a clip that controls playback of an **.avi* file is recalled, the **.avi* file is loaded, and the associated matte and audio files are loaded for simultaneous playback. For example, the following files would also be loaded when *Basketball.avi* is loaded: *Basketball.matte.avi*, *Basketball.a1.wav* and *Basketball.a2.wav*. For these files to be loaded, they must reside in the same directory as the **.avi* file.

When a clip that controls playback of an Aprisa DDR or an external device is recalled, no files are loaded. If the source material happens to contain audio, it can be fed to an audio mixer or other audio device.

1. Click the Recall button on the Clip Control Panel. The Open dialog box is displayed.

Open			? ×
Look in: 🔀	Clip Files	- 🖬 🍅 🖬 -	
 00000000. Baseball_I Basketball Crowd_Au Cycling_Be Football_I 	ccf CP_MJPEG.ccf _ICP_DV.ccf dio.ccf dia_VTR.ccf CP_MPEG.ccf	 Golf_Aprisa_DDR.ccf Hockey_ICP_MPEG.ccf Soccer_ICP_DV.ccf Sports_Intro_Audio.ccf 	
File name:	Soccer_ICP_I	DV.ccf Open	
Files of type:	Clip Files (*.co	rf)	

Recalling a Clip File

Navigate to the desired directory in the Look In drop-down list box, and then select Clip Files (*.ccf) from the Files of Type drop-down list box. Enter a file name in the File Name field, and then click OK. The source material is loaded or cued up, and the clip settings are displayed in the Clip Control Panel.

Opening/loading a clip file that loads a video (*.avi) file, also loads the associated **Matte** (**Key**) and audio file(s) if they are available. If the *.avi file and the associated **Matte** file are not of the same duration, Lyric adjusts the duration of the shorter file accordingly. When the clip file is played, the associated files play simultaneously.

Clip Behavior in Lyric

As of Lyric v5.0, the first frame of a clip is not displayed in output when a message containing a clip is loaded. When the message is executed, the clip starts playing and is then visible on output.

To change default behavior so that the first frame of the clip is displayed on output when the message is read:

- 1. Navigate to file in which Lyric is installed.
- 2. Double-click on the file DisableMatroxSourceSwitcher.reg.

Displaying the first frame of the clip was the default behavior of messages read in versions of Lyric predating Lyric v5.0. Note that clips contained in messages created in these earlier versions behave according to the current default setting in Lyric v5.0 when read.

To revert back to the default behavior for Lyric v5.0:

- 1. Navigate to file in which Lyric is installed.
- 2. Double-click on the file EnableMatroxSourceSwitcher.reg.

Clip Timeline Operations

Adding a Clip to the Timeline

A clip can be added to a Lyric **Timeline** and executed as a component of a Lyric animation. A clip is not a typical Lyric object, in that it does not appear on the Canvas, nor can it be animated as an object. Unlike external-source video such as that which is fed to a Lyric **Video Region** (Duet SD), the clip cannot change scale, position, etc. To add a clip to a **Timeline**:

If not already loaded, load the clip from the Clip Control Panel. Click the TLine Add button or select Add Timeline Clip from the Clip menu. An Object Timeline for the clip appears on the Timeline. The object is also added to the Scene Graph. A clip from an AVI file, WAV file, Aprisa DDR or external BVW-75-protocol playback device can be added to the Timeline. Remember that the playback device must be available to the Duet system when the message is played back!!!



Adding a Clip to a Timeline

A Clip with a Start Time of 0, 1 or 2 frames always starts at Frame 0 when the animation is executed. A Clip with a Start Time of 3 or higher executes at the specified frame.

Editing and Updating the Clip on the Timeline

Clip parameters can be modified in the **Clip Control Panel** and then updated on the **Timeline**. To update the **Timeline** for the clip:

- 1. Select (highlight) the clip on the **Timeline** or in the **Scene Graph**.
- 2. Make the modifications to the clip.
- 3. Click the **TLine Update** button. The **Clip Timeline** is updated with the new information.

To discard the modifications:

• Recall the unmodified clip and execute **TLine Update** again. The **Timeline** is updated with the earlier version of the clip information.

Recording Video/Audio to Video/Audio Files

Tools Menu > Clip Control Panel > Record

IMPORTANT!!!

The Internal Clip Player offers a variety of input/output and encoding/decoding options. Ensure that *Matrox DigiUtils*, accessed from Start > Settings > Control Panel, has been properly configured for your requirements, and that video/audio sources and outputs are properly cabled to the clip player and to the system. *Refer to Matrox documentation for detailed information on hardware setup and configuration.*

Overview

The **Internal Clip Recorder** enables the Internal Clip Player to record input **Video**, **Key** and/or **Audio** files to standard animation and audio file formats. The **Internal Clip Recorder** does not record embedded audio. The audio file(s) are instead recorded to a separate file(s).

NOTE

If a DigiSuite LE internal clip player is installed in a system, and digital video/key/audio are to be recorded, then the source must be connected to the Digital LE Module of the DigiSuite LE clip player. If analog video/key/audio are to be recorded, then the source must be connected to the inputs of the DigiSuite LE clip player. Note, however, that on a Duet system, only a Lantern-64-A (analog) board can input analog video and analog key. Only Duet LE/LEX/PCI/PCI+ systems support Lantern 64-A boards.

The DigiServer clip player supports only digital video/key/audio input and output.

The files recorded using the procedures described in this section are *not* the same types of files that are recorded from the **Clip Control Panel** (*.*ccf*). The files recorded from the **Internal Clip Recorder** are standalone files that can be played through Lyric or other software.

Files recorded directly from the **Clip Control Panel** contain only information about how the clip should be played back, and not the source files themselves.

From the **Clip Control Panel**, the Internal Clip Player can simultaneously play back a video file, a **Matte** file and one stereo or two monaural audio files. If recording these files for simultaneous playback, they must all be given the same names and reside in the same directory. If audio files are to be played back, the name of the directory in which they are stored cannot contain a period ".", or else the audio file will not play back.

When a clip that controls playback of an *.avi file is recalled, the *.avi file and the associated **Matte** and audio files are loaded for simultaneous playback. For example, the following files would be loaded when *Basketball.avi* is loaded: *Basketball.matte.avi*, *Basketball.a1.wav* and *Basketball.a2.wav*.

Refer to Clip Control Panel for details on recording Clip (*.ccf) files.

NOTE

Files recorded through the Internal Clip Player should be recorded to SCSI drives to ensure proper playback.

About Video, Key and Audio Sources

Video - Insert Video vs. Key (Alpha)

A full video signal is comprised of two components: **Insert Video** and **Key**. Both must be recorded to **Video** and **Key** (also known as **Matte**) files, respectively, in order to reconstitute **Video** and **Key** for use in Lyric. The figure below represents the relationship between **Video** (i.e., **Insert Video**) and its **Key** (**Alpha**) component.



Insert Video Component



Key Component

Analog Video and Key can be recorded from a number of source types: Composite 1, Composite 2, Y/C (S-Video) 1, Y/C (S-Video) 2 and Component sources. Recording analog Video and Key is supported by a DigiSuite LE clip player. It is not supported by a DigiServer clip player. To record analog Video and Key, the Composite, S-Video or Component signal(s) must be input to the appropriate connectors on the DigiSuite LE clip player multi-cable Analog Video connector. In addition, the Matrox DigiSuite utility, accessed from Start > Settings > Control Panel > DigiSuite, must be properly configured.

To record digital **Video** and **Key**, an **SDI Video** source must be connected to the digital video input of the Digital LE Module of the DigiSuite LE clip player, or to the digital video input on the DigiServer clip player. In addition, the Matrox **DigiSuite** utility, accessed from **Start > Settings > Control Panel > DigiSuite**, must be properly configured.

Refer to **Internal Clip Player - Hardware and Connections** for information on proper cabling, and to Matrox documentation for information on proper input/output configuration.

NOTE

Video and key (matte) files are recorded in two separate operations. The type of video/key (matte) AVI file that is recorded is determined by the type of clip player from which it was recorded, and, on the DigiServer clip player, the codec that is currently selected.

- If the video/key file is recorded from a DigiSuite LE clip player, then the resulting file is an M-JPEG AVI file.
- If the video/key file is recorded from a DigiServer clip player, and DV is the currently selected codec in the Clip Control Panel, then the resulting file is a DV AVI file. The codec can also be changed to MPEG-2 in the Internal Clip Recorder Panel.
- If the video/key file is recorded from a DigiServer clip player, and MPEG is the currently selected codec in the Clip Control Panel, then the resulting file is an MPEG-2 AVI file. The codec can also be changed to DV in the Internal Clip Recorder Panel. IMPORTANT! DV and DV-25 *.*avi* files can be recorded and played back using only a DigiServer DV-25 clip player. DV-50 *.*avi* files can be recorded and played back using only a DigiServer DV-50 clip player.

Audio

The **Internal Clip Player** can record and play back audio. The DigiSuite LE clip player has analog and digital audio processing capability. The DigiServer clip player has digital audio processing capability only. *Refer to Audio and the Internal Clip Player* for details on audio configuration and operations.

- To record analog audio using the DigiSuite LE clip player, an analog audio source must be connected to the audio input(s) of the DigiSuite LE clip player. The DigiServer clip player does not support analog audio. In order to record analog audio using a DigiServer clip player, the analog audio source must converted to digital prior to connection to the audio input of the DigiServer clip player.
- To record digital audio, the audio source must be connected to the digital audio input of the Digital LE Module of the DigiSuite LE clip player, or to the digital audio input of the DigiServer clip player. In order to record analog video using a DigiServer clip player, the analog video source must converted to digital prior to connection to the video input of the DigiServer clip player.

For additional information on audio operations, refer to Audio and the Internal Clip Player.

Internal Clip Recorder Parameters and Controls

<u>Overview</u>

Before recording, ensure that the external video/audio source(s) is producing a signal(s). If the VPB or PCI-Squeezeback board is correctly configured for display of external video, the video source should be visible on the Duet video output. *Refer to Configuration for Display of Video Source - Duet SD or Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+* for information on displaying external video.

Composite analog output from the DigiSuite LE clip player or the DigiServer clip player can be displayed on an additional monitor. Audio can be monitored from a speaker or headphone plugged into the 3/4" output from the DigiServer clip player, or from an XLR output from either clip player.

To access the Internal Clip Recorder Panel:

- 1. From the Tools menu, select Clip Control Panel. The Clip Control Panel opens.
- 2. Select Internal Clip Player from the drop-down list box at the top of the Clip Control Panel.
- 3. Click the **Record** icon **I** located towards the top right of the **Clip Control Panel**.

Clip Control Panel	<u>- 🗆 ×</u>
Internal Clip Player 💌	1 ÷
<u>Goto</u> 00 00 00	<u>:</u>

Accessing the Internal Clip Recorder

The **Internal Clip Recorder Panel** opens. The following figure shows the appearance of the **Internal Clip Recorder Panels** for the DigiSuite LE (left) and DigiServer (right) clip players

Internal Clip Recorder 📃 🔲 🗙	Internal Clip Recorder 📃 🗖 🗙
MJPEG - NTSC	MPEG2 - NTSC
Frame 0 of 0	Frame 0 of 0
Video Video Source: 4:2:2 SDI 1	Video Video Source:
Video Filename: Browse	Video Filename: Browse
Audio Left Filename: (48 kHz) Browse	Audio Filename: (48 kHz) Browse
Right Filename: Browse	
- Options	Options
Enable Video Add to End Enable Audio Confirm Overwrite	Enable Video Add to End Enable Audio Confirm Overwrite
Capture Duration Fixed At: 300 frames	Capture Duration
Select Format DV MPEG2	Select Format DV MPEG2

Internal Clip Recorder - DigiSuite and DigiServer

There are slight differences between the two **Internal Clip Recorder Panels**., which are explained in the following paragraphs. Both panels are shown with video and audio recording enabled.

Format/Video Standard

The file format to which a video or key file is to be recorded is indicated at the top right corner of the **Internal Clip Recorder Panel**. The format is determined by the following:

- If recording using a DigiSuite LE clip player, then the file format is always set to M-JPEG.
- If recording using a DigiServer clip player, then the file format reflects last format selected in the **Select Format** area in the **Internal Clip Recorder Panel**. This setting is independent of the codec that is set for playback in the **Clip Control Panel**.

The Video Standard is also displayed at the top right corner of the Internal Clip Recorder Panel. In the preceding figure, the Video Standard is NTSC. The Video Standard cannot be changed in this dialog box. It is determined by the Video Standard that is set in the Matrox software for the clip player.

Each format offers various compression options for recording, which are covered later in this section.

Control

There are three **Transport Controls**: **Play**, **Stop** and **Record**. As the source is recording, the **Frame Number** and the total number of frames in the material to be captured are displayed in the **Frame Counter** fields. The total number of frames is determined by the **Capture Duration**, also set in the **Internal Clip Player** dialog box.

Video

Video (Key) Source type and video (key) file name are set in the Video area. Video and key are recorded separately. Generally, video would be fed to an input and recorded, and then key would be fed to the same input, and then recorded.

- The Video (Key) source types that can be recorded depend on the type of Internal Clip Player that is installed in the system.
 - If a DigiSuite LE clip player is installed, the following Video (Key) sources are available: Composite 1, Composite 2, Y/C (S-Video) 1, Y/C (S-Video) 2, Analog Component, and 4:2:2 SDI.
 - If a DigiServer clip player is installed, the Video (Key) Source is already set to Digital SDI 1
 Digital Input, as it is the only video that is accepted for recording. The Video Source dropdown list box is grayed out,

Refer to **Internal Clip Player - Hardware and Connections** for information on proper cabling for each type of **Video Source**. Refer to Matrox documentation for information on proper input configuration.

The name of the video (key) file to which the video (key) is to be recorded is entered in the Video Filename field. If overwriting or adding to an existing file, the file can be located using the Browse function. If video assets from both types of clip players and/or multiple codecs are stored together, it is recommended that the file name include identifying information. For example a file saved in an MPEG-2 codec could be named News_Intro_MPEG2.avi or News_Intro_MPEG2.matte.avi. This name would identify it as a file that could be played back only from a DigiServer clip player.

Files should be recorded to a SCSI drive to ensure proper playback from the clip player.

Audio

Audio can be recorded in the **.wav* format from the Internal Clip Player. Note that the audio is not embedded in a video file, but rather, recorded to audio-only files.

 The (48 kHz) indicates the digital audio type supported by clip recording. This value cannot be changed.

A DigiSuite LE clip player can simultaneously record left and a right monaural *.*wav* files from an analog source input to the clip player. There are two file name fields displayed in the **Internal Clip Recorder Panel** when a DigiSuite LE clip player is installed and the clip player is configured for analog audio input:

- The left analog audio file is recorded from the **IN 1 XLR** input of the DigiSuite LE clip player. The name of the left channel audio file to which the left channel audio is to be recorded is entered in the **Left Filename** field. If overwriting or adding to an existing file, the file can be located using the **Browse** function. The resulting recorded file is a monaural *.wav file.
- The right analog audio file is recorded from the **IN 2 XLR** input of the DigiSuite LE clip player. The name of the right channel audio file to which the right channel audio is to be recorded is entered in the **Right Filename** field. If overwriting or adding to an existing file, the file can be located using the **Browse** function. The resulting recorded file is a monaural *.wav file.

Refer to Audio and the Internal Clip Player for information on audio configuration.

A DigiServer clip player or a DigiSuite LE clip player/Digital LE Module can record one stereo *.wav file at a time from a digital source. There is one file name field displayed in the **Internal Clip Recorder Panel** for a DigiServer clip player, or a DigiSuite clip player/Digital LE Module that is configured for digital audio input:

• The stereo audio file is recorded from the **Digital Audio (AES/EBU) In 1/2 XLR** input. The name of the audio file to which the stereo audio is to be recorded is entered in the **Filename** field. If overwriting or adding to an existing file, the file can be located using the **Browse** function. The resulting recorded file is a stereo *.wav file.

Files should be recorded to a SCSI drive to ensure proper playback from the clip player. Refer to **Internal Clip Player - Hardware and Connections** for information about proper cabling for each type of **Audio Source**.

Options

- Enable Video: Select (check) Enable Video to allow recording of external video. If Enable Video is not active, the video parameters in the Internal Clip Recorder Panel are grayed out.
- Enable Audio: Select (check) Enable Audio to allow recording of external audio. If Enable Audio is not active, the audio parameters in the Internal Clip Recorder Panel are grayed out.
- Confirm Overwrite: Select (check) Confirm Overwrite to display a confirmation before overwriting the currently selected Video, Audio, Audio Left and/or Audio Right file(s). If the following prompt is displayed when executing a recording, click Yes to allow the recording to overwrite the file, or No to cancel the recording.



Clip Recorder Overwrite Prompt

• Add to End: Select (check) Add to End to append the newly recorded material to the end of the currently selected Video, Audio, Audio Left and/or Audio Right file(s).

If **Confirm Overwrite** is selected, the following prompt is displayed before adding to the end of the file(s). Select **Yes** to add the new material to the file, or **No** to cancel the recording.



Clip Recorder Add to End Prompt

If **Confirm Overwrite** is not enabled, the material is added to the file with out a prompt.

Capture Duration

The length of recording can be predetermined, or can run until the **Stop** icon is clicked. To set a recording length:

• Select (check) **Capture Duration**, and then enter the length of the recording, in frames, in the **Frames** field.

I-Frames, B-Frames and P-Frames

In a motion sequence, individual frames of an animation are grouped together in a **GOP** (group of pictures) and played back so that the viewer sees motion.

The following video compression methods can be used to record an **MPEG-2** animation file:

- I-Frame (Intraframe): An I-Frame, also known as a Keyframe, is a single frame of digital content that the compressor examines independently of the frames that precede and follow it. The I-Frame contains all of the data necessary to display the frame. The compressor stores this data and may use it to fill in missing data from the preceding and following frames. Typically, I-Frames are interspersed with P-Frames and B-Frames. The more I-Frames contained in a motion sequence, the higher the video quality. I-Frames contain the highest number of bits as compared to other frames in an animation sequence, and therefore take up more storage space.
- B-Frame (Bidirectional Frame or Bidirectional Predictive Frame): B-Frames contain only the data, such as color or motion, that has changed from the preceding I-Frame, or that is different from the data in the succeeding I-Frame. Information on static elements is not included. The compressor references I-Frames to fill in the remainder of the data for the B-Frames. Because they track only changes, they are also known as Delta Frames. B-Frames almost always contain less information than I-Frames, and therefore require less storage space.
- P-Frame (Predictive Frame or Predicted Frame): P-Frames follow I-frames in a motion sequence, and contain only the data that has changed from the preceding I-frame, such as in color or motion. Information on static elements is not included. The compressor references I-Frames to fill in the remainder of the data for the P-Frames. Because they track only changes, they are also known as **Delta Frames**. P-Frames almost always contain less information than I-Frames, and therefore require less storage space.

MPEG-2 Profiles and Luminance/Chrominance Sampling

When recording video, a variety of options are available, such as format, **Data Rate** and **MPEG-2 Profile**. The **MPEG-2 Profile** determines the pixel sampling rate of **Luminance** (Y) vs. **Chrominance** (Cr, Cb) The human eye is much more discerning when perceiving **Luminance** (grayscale) information, than it is with **Chrominance** (color) information; therefore, **Chrominance** can be sampled less frequently than **Luminance**, with a virtually imperceptible effect on the video.

Due to the eye's sensitivity to **Luminance**, all digital formats available for recording within the **Internal Clip Recorder Panel** sample each pixel for **Luminance** during the recording process. There is, however, leeway with regard to **Chrominance** sampling. Depending upon the final use of the recorded video, or if storage space is at a premium, **Chrominance** can be sampled at a rate as low as one pixel for every four pixels sampled for **Luminance**. Chyron recommends that to record graphics for broadcast, the lowest available **Chrominance** to **Luminance** ratio be selected.

There are three **MPEG-2 Profiles** available to the **Internal Clip Recorder**. The figures showing **MPEG-2 Profiles** use the following legend:



Y only is sampled.

Cr and Cb only are sampled.

and and leach represent a single pixel. I is a special case that is explained in the paragraphs covering **4:2:0**.

<u>4:1:1</u>

Luminance (Y) is sampled in every pixel, and Chrominance (Cr and Cb) is sampled in every fourth pixel.



4:1:1 sampling is applied as follows:

- DV: NTSC.
- DV 25: NTSC and PAL.
- MPEG2: NTSC, when Main is selected as the MPEG-2 Profile.

<u>4:2:0</u>

Luminance (Y) is sampled in every pixel, and Chrominance (Cr and Cb) is sampled as an average of every other pair of vertical pixels. In effect, 4:2:0 samples every other pixel in every other line.



4:2:0 sampling is applied as follows:

- DV: PAL.
- MPEG2: PAL, when Main is selected as the MPEG-2 Profile.

<u>4:2:2</u>

Luminance (Y) is sampled in every pixel, and Chrominance (Cr and Cb) is sampled in every other pixel. 4-2-2 is recommended for recording files for broadcast graphics applications.



4:2:2 Sampling

4:2:2 sampling is applied as follows:

- DV 50: NTSC and PAL.
- MPEG2: NTSC and PAL, when 4-2-2 is selected as the MPEG-2 Profile.

Select Format - MJPEG (DigiSuite LE Clip Player Only)

If a DigiSuite LE clip player is used to record, the format automatically defaults to **MJPEG**. The compression settings for the recorded **MJPEG** video file can be adjusted. The **Compression Ratio** dictates how the **Internal Clip Player** trades off picture quality for file size. This variable can have a significant effect on the appearance of the recordings produced by the **Internal Clip Player**. If attempting to preserve disk space by using higher data compression, experiment carefully!

When a Data Rate is entered, the Compression Ratio is automatically calculated.

Data Rate: Kbits/sec	
2000 10.2 :1 Co	mpression Ratio

MJPEG Capture Settings

The following table shows sample settings for **Compression Ratio** vs. quality:

Data Rate	Compression	Quality
60	341.0:1	High compression; very low quality
2000 (Default)	10.2:1	Default setting.
5105	4.0:1	A lower compression rate, and a good starting point. It may be necessary, however, to increase or decrease the value based on the type of material to be recorded and individual requirements for quality.
15300	1.3:1	Almost no compression; highest possible picture quality on the Internal Clip Player.

To apply settings and exit MJPEG Capture Settings:

• Click the Close icon X.

Select Format - DV (DigiServer Clip Player Only)

DV is recorded using the I-Frame Only process. DV frame size is 720 X 576 for PAL, and 720 X 480 for NTSC. When converting from the CCIR NTSC Video Standard (720 X 486), six lines must be cut; four lines from the top and two lines from the bottom. The lines are added at the same locations when converting back to the CCIR NTSC Video Standard.

If DV is selected as the recording format, the DV Capture Settings dialog box opens.

⊙ DV		
C DV 25		
C DV 50		

DV Capture Settings

The following **Data Rates** can be selected:

- DV: The Data Rate is 25 megabits per second. In NTSC, the 4-1-1 MPEG-2 Profile is applied. In PAL, the 4-2-0 MPEG-2 Profile is applied. This Data Rate is supported by a DigiServer DV-25 clip player only.
- DV 25: The Data Rate is 25 megabits per second. In NTSC and PAL, the 4-1-1 MPEG-2 Profile is applied. This Data Rate is supported by a DigiServer DV-25 clip player only.
- DV 50: The Data Rate is 50 megabits per second. In NTSC and PAL, the 4-2-2 MPEG-2 Profile is applied. This Data Rate is supported by a DigiServer DV-50 clip player only.

To apply setting and exit DV Capture Settings:

• Click OK.

Select Format - MPEG2 (DigiServer Clip Player Only)

MPEG-2 can be recorded using the **I-Frame Only** or **B-P-I** recording process. The **MPEG-2 Profile** can be the main profile normally used for capture, or **4-2-2**, which is a higher-quality capture profile. **MPEG-2 Capture Data Rate** is also adjustable, and can be either constant or variable.

If MPEG2 is selected as the recording format, the MPEG2 Capture Settings dialog box opens.

×
MPEG2 Profile
C Main • 4-2-2
MBits / Sec
. MDR27 26C

MPEG2 Capture Settings

To apply settings and exit **MPEG2 Capture Settings**:

• Click the Close icon 🗵

MPEG2 Process

The **MPEG2 Process** setting determines if **I-Frames** only or a combination of **I-Frames**, **B-Frames** and **P-Frames** are used to record the file.

- I-Frame Only: When I-Frame Only is selected, all data in each frame is recorded. This results in a high-quality, large file. The quality of recording is determined in part by the Initial Q Factor I settings.
 B and P settings do not apply to I-Frame Only recording. Using I-Frame Only to record a file is highly recommended for broadcast graphics applications.
- I-B-P: When I-B-P is selected, the compressor uses a combination of all three types of frames to record the file. The quality of recording is determined in part by the Initial Q Factor I, B and P settings. The additional compression applied when I-B-P is used to record a file is not recommended for broadcast graphics applications, as it can cause undesirable artifacts.

MPEG2 Profile

The MPEG2 Profile determines the sampling pattern used to record color and luminance information.

- Main: In NTSC, 4-1-1 sampling is applied. In PAL, 4-2-0 sampling is applied.
- 4-2-2: In NTSC and PAL, 4-2-2 sampling is applied. 4-2-2 is highly recommended for recording files for broadcast graphics applications.

MPEG2 Capture Data Rate

The type of **Data Rate** and the **Data Rate** value determine the amount of data that is recorded per second. The higher the **Data Rate**, the higher the quality of the recorded video.

- **Constant Data Rate:** A constant data rate does not adjust for an increase of data caused due to the complexity of the video at a particular frame. In keeping to a constant data rate, data could be discarded, resulting in undesirable artifacts.
- Variable Data Rate: A variable data rate allows the recording process to adjust for spikes in amount of data that must be processed.
- MBits/Sec: The minimum recommended Data Rate value is 50 megabits/per second. When Variable Data Rate is selected, this value becomes a target, as opposed to an absolute setting.

Initial Q Factor

The Q Factor for each of the frame types (I, B, P) determines the quality of the video that is recorded. Range: 1 (best) to 112 (poorest). A setting of 32 or higher generally results in poor video capture. When I-Frame Only is selected as the MPEG-2 Process, B and P settings do not apply. Experiment to determine the optimal settings for the type of video and its intended use.

Caution! When I is set to 1, and the **Data Rate** is set to less than **15 megabits per second**, there is a danger of encoding only half the video frame during **I-Frame 4:2:2** capture. To avoid this situation, set the **Data Rate** at a higher value.

Recording

To set up and execute a recording:

- 1. Connect the video/audio sources as follows:
 - **DigiSuite LE Analog Video:** Connect source video to the appropriate analog video input(s).
 - **DigiSuite LE Analog Audio:** Connect source audio to the **IN 1** and **IN 2** analog audio inputs.
 - Digital LE Module of the DigiSuite LE Digital Video: Connect source video to the SDI IN digital video input.
 - Digital LE Module of the DigiSuite LE Digital Audio: Connect source audio to the IN 1/2 digital audio input.
 - **DigiServer Digital Video:** Connect source video to the **SDI/SDTI** digital video input. The DigiServer clip player does not support analog video input.
 - **DigiServer Digital Audio:** Connect source audio to the **Digital Audio (AES-EBU) In 1/2** digital audio input. The DigiServer clip player does not support analog audio input.
- 2. Verify that the video source is producing the desired picture, and/or that the audio source is producing the desired sound.
- 3. Access the Internal Clip Recorder menu as describer earlier.
- 4. If using a DigiSuite LE clip player to record, select a video source from the **Video Source** drop-down list box, if it not already selected. If using a DigiServer clip player, **Digital SDI Video** is automatically selected as the video source.
- 5. In the **Options** area near the bottom of the menu, select (check) **Enable Video** and/or **Enable Audio**.
- 6. Optional: Select Confirm Overwrite.
- 7. Optional: Select Add to End.
- Enter a file name in the Video Filename field, or browse to the file that is to be added to or overwritten. The filepath should be to a SCSI drive, in order to ensure proper playback through the clip player.
 - If recording analog audio using a DigiSuite LE clip player, enter Left and Right Audio Filenames, or browse to the file(s) that is to be added to or overwritten.
 - If recording digital audio using a DigiServer clip player or a DigiSuite LE clip player/Digital LE Module, enter an **Audio Filename**, or browse to the file that is to be added to or overwritten.

If the audio file(s) is to be played back in conjunction with the video file, the audio file(s) should have the same name as the video file and be saved to the same directory as the **.avi* file. The directory containing the audio file(s) should not have a period "." in the directory name, as the audio file(s) may not play back.

- It is not necessary to add file extensions. When recording is completed and the files are saved, the system adds file extensions as follows: **.avi* for a video file; **.wav* for a digital audio recorded on a DigiServer clip player or DigiSuite LE clip player/Digital Module; and/or **.a1.wav* and **.a2.wav* for left and right analog audio recorded on a DigiSuite LE clip player.
- When establishing filepaths for recording through the clip player, Lyric defaults to the last directory used. If a full filepath is entered on first recording to the **Internal Clip Player** in a Lyric session, then subsequent recordings made during that session are automatically saved to the same drive and directory.
- Optional: Select (check) the Capture Duration Fixed At checkbox, and then enter the number of Frames to record. Whether or not Capture Duration is enabled, recording length is limited only by the amount of space on the SCSI drive to which the Internal Clip Player is recording.

Internal Clip Recorder	_ 🗆 ×
MPE	G2 - NTSC
Control	
Frame 0 of 0	
Video	
Video Source:	
Digital SDI 1 Video Inpu	t 💌
Video Filename:	
s\News_Background	Browse
Audio	
Filename:	(48 kHz)
s\News_Background	Browse
Options	
🔽 Enable Video 🔽 A	dd to End
🗹 Enable Audio 🔽 🖸	onfirm verwrite
Capture Duration	
Fixed At: 300	frames
Select Format	
DV MPEG2	MJPEG

Parameters Entered

- 10. Select and configure the format.
- 11. Once setup is complete, the **Record** icon becomes available. Click **Record Record** prompt is displayed.





Ready to Record Prompt

12. Click **OK**. The **Record** icon becomes grayed out, and the **Frame** counter starts to advance, as shown in the **Control Area Frame** field.

nternal Clip Ree	corder 📃 🗌 🗙
- Control	MPEG2 - NTSC
Frame 31	of [300

Record in Progress

- If Fixed At has been enabled: When the recording has captured the designated number of frames, the Record operation stops. The Frame Counter displays 0 of 0, and the Record icon again becomes available.
- If the Fixed At has not been enabled: The Frame Counter does not advance during

recording. Recording continues until the **Stop** icon **is** clicked. The **Frame Counter** updates to show the total number of fields when the file is played back by clicking the **Play** icon.

• When new material is added to an existing file, the values shown in the **Frame Counter** fields for the entire file are updated *after* the new material is added.

Playback

Once recording has stopped, the **Play** icon becomes available.

• Click **Play** to play back the clip and check the recording on the Duet **Program Out** monitor. Remember that playback does not appear on the Lyric **Canvas** as seen on the VGA monitor. Note that the **Play** icon in this dialog box has limited function. Any programmed and/or edited playout of recorded clips to air should originate from the **Clip Control Panel** or from within a Lyric animation.

Creating a Matte File

The **Matte**, or **Alpha** layer that accompanies **Insert Video** must be created in a second recording process. The procedure for creating a matte file is similar to recording a video file.

- 1. Connect the key source to the appropriate video input(s) of the DigiSuite LE clip player, the Digital Module of the DigiSuite LE clip player, or to the DigiServer clip player.
- 2. Verify that the key source is producing the desired picture.
- 3. Access the Internal Clip Recorder Panel as previously described.
- 4. Select the appropriate key source from the Video Source drop-down list box.
- 5. In the **Options** area near the bottom of the menu, select (check) **Enable Video**.
- 6. Optional: Select Confirm Overwrite.
- 7. Optional: Select Add to End.
- 8. Enter the same file name in the Video Filename field as was just recorded, or browse to the Matte file that has the same file name as the recorded video, and that is to be added to or overwritten. The filepath should be to a SCSI drive, in order to ensure proper playback through the clip player. The Matte file should be in the same directory as the *.avi file to which it is associated. Add ".matte.avi" to the File Name.

Video Filename:	
}ackground.matte.avi	Browse

Entering a Matte File Name

- 9. Optional: Select (check) the **Capture Duration Fixed At** checkbox, and then enter the number of **Frames** to record. Whether or not **Capture Duration** is enabled, recording length is limited only by the amount of space on the SCSI drive to which the **Internal Clip Player** is recording.
- 10. Once setup is complete, the **Record** button becomes available. Click the **Record** button. The **Ready to Record** prompt is displayed.
- 11. Click **OK**. The **Record** button becomes grayed out, and the **Frame** counter starts to advance. When recording is complete, the video and matte file can be used together to create a clip that can be used in a Lyric composition.

Refer to Clip Control Panel for details on clip editing and incorporation of clips into Lyric compositions.

27. Video Mixing

Video Mixing

Duet systems provide tremendous flexibility and control over video outputs. With the addition of a Video Mixer board in Duet SD or HD systems, or CMix in any Duet family system, a composition can be richly layered with both static and animated Lyric graphics, and internal/external video input.

Video Mixer - Duet SD/HD

Tools Menu > Video Mixer

The optional internal mixer board allows precise routing and layering of video to output. The boards and setup procedures are different for the **Video Mixer - Duet SD** and the **Video Mixer - Duet HD**.

Internal mixer functions are not currently supported on Duet LE/LEX/PCI/PCI+. Video routing and layering can be accomplished by cabling and linking boards or by mixing within the optional Chyron **CMix**. *Refer to* **Duet Hardware - Configure Board Use** and **Cabling Options - Duet LE/LEX/PCI/PCI+** for information on linking and cabling, respectively, or **CMix** for information on CMix operations.

Video Mixer - Duet SD

Tools Menu > Video Mixer; Canvas/Scene Graph Right-Click Menu > Video Mixer

Click here for more information on using Duet HD mixer.

Overview

The SD Mixer enables selection, routing and mixing of up to three sources. Inputs may be chosen from any of three VGE boards, the "Program" live video input to the video I/O board, or the video input on the SD Mixer. Any of these three sources (but only one of the live video inputs) may be selected as the input to three layers in the mix being created.

A Duet configured with the SD Mixer Board supports 2 independent video sources. **Video In 1** is the input to Duet's Video I/O Board; **Video In 2** is an extra video input, connected directly to the Mixer itself for efficient use of your facility's routers and other resources. The video source selected at a given time will be the only one available for SD Mixer operations.

On the Lyric interface, go to the **Tools** dropdown menu and select **SD Mixer**. The control panel opens:

Vide	o Mixer Con	trol 💶 ⊃
Video S Video S SD	Source leo I/O So Mixer So	ettings
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T	T	Ť
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Effect	solve C Fad	le C Cut
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Output Outpu Mix	Router t 1 Outp	out 2 er 2 💌
Test	Timeline Ac	ld Save
Variation 1		States and States

Video Mixer Control in Dissolve Mode

Video Source

At the top of the control panel, choose the video source that will be input to the router. This can be either the **Program Video** Input or the **Video In** port on the SD Mixer board. Remember, only one input may be selected at a time.

Click the Settings... button to make these adjustments:

Mixer Video Settings 🛛 🗙
Source
Video I/O
Enable Key Input
🔽 Enable Video Shaping
Enable VGE Shaping
OK Cancel

Mixer Video Settings

- Enable Key Input if there is a Key signal with the Program In. Otherwise, a 100% matte is assumed.
- Enable Video Shaping to attenuate input video to the key signal, so that color components do not exceed the key level.

Layer 1/Layer 2/Layer 3 Sliders

The next section allows mixing of up to 3 video layers. Each layer may draw from one video source, selectable via the layer's dropdown menu. VGEs and/or PCI-Squeezeback boards (labeled Frame Buffers) 1, 2 or 3, or the Video Input selected above may be routed into each layer. Note that the same source may be routed to each of the mixer's three layers.

Note that Layer 1 receives highest display priority in the mix, Layer 2 next highest and Layer 3, the background, lowest priority.

Use the slide control for each layer to adjust the proportion of that layer's signal in the mix you are creating. Layers may be turned off and on without disturbing the level controls by use of the **Active** checkbox under each slider. The numerical display beneath each slider does not change dynamically with its slider's movement, but will show an appropriate value when the slider has been set.

Next, skip down to the *Output Router* area, because you'll need to understand its controls to work with Effects.

Output Router

The SD Mixer board outputs two video channels, represented by the controls **Output 1** and **Output 2**. These outputs are connected to the **Video Out** BNC connectors on the back of Duet. The output of the 3 layer Mixer can be directed to Video Output 1, Video Output 2, or to both outputs by selecting **Mix** in the pull down menu. In addition, Video In 2 (the individual live video input to the mixer board) can be directed to one or both of the video outputs. Each output's dropdown menu provides these choices:

Output 1 Output 2	
Mix 💌 Layer 2	•
Layer 1	_
Layer 2 ne Add 9	Save
RIMIX Update	OK
Video In	

Output Router

Effects

The **Dissolve** effect is useful for performing cross-dissolves between two pages. The effect modifies the transparency percentages of Layer 1 and Layer 2 without affecting the Frame Buffer fade levels.



Video Mixer Control - Dissolve Setup

The default duration (shown in frames) is 100, however any value between 1 and 1000 may be entered. A simple dissolve can be created as follows:

- 1. Click the Dissolve radio button. Note that the vertical slider in the lower half of the control panel is now labeled "Layer 1" at one end and "Layer 2" at the other.
- 2. Set the frame buffer percentages for Layer 1 and Layer 2 to 100.

NOTE

Layer 3 may be turned on or off, depending on the presence of a video background in your composition. However, for this exercise, it is left off. Remember that the Dissolve effect itself only affects Layers 1 and 2.

3. Set the router to Mix for Output 1 and Layer 2 for Output 2. These settings configure Output 1 as the Program output ("Air") and Output 2 as Preview.

Optional: If you wish, you may use the slider to manually preview the effect.

4. Press the Test button to view the dissolve effect at actual speed. View the dissolve effect in **Output 1**.

The Preview channel will automatically change to the next frame buffer after executing the effect, thus allowing you to preview the next message before taking it on the Program output.

The **Fade** effect modifies the fade levels of all 3 layers, allowing the user to preset these values at programmed Start and End points.

🔲 Video	o Mixer Con	trol 💶 🗙
Video 9 Vid SD	Source leo I/O S Mixer	ettings
FB1	FB2	Layer 3 FB3 ▼
F	T	T
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		L Astin
IV ACIN	Active	I Active
C Dis	solve 💽 Fac	ie 🔿 Cut
Ease M	ode	Start -
Duration	1	
30	<u>-</u>	End
-Output	Router	
Outpu	t 1 Outp	out 2
Layer	1 💌 Lay	er 2 💌
Test	Timeline Ad	dd Save
Recall	Timeline Upd	Jate OK

Video Mixer Control - Fade Setup

- 1. Click the Fade radio button. Note that the vertical slider in the lower half of the control panel is now labeled "Start" at one end and "End" at the other.
- 2. Make sure to click the checkbox of each layer with which you will be working.
- 3. Set the router to Layer 1 for Output 1 and Layer 2 for Output 2.
- 4. With the Start-End slider at Start, set the frame buffer percentages for each layer as you wish them to appear at the beginning of the effect.
- 5. Move the Start-End slider to End, and set the frame buffer percentages for each layer as you wish them to appear at the end of the effect.

Optional: You may use the slider to manually preview the effect. Note that as the effect progresses, the sliders representing Layers 1 and 2 move to the opposite extremes of their programmed values.

6. Press the Test button to view the fade effect at actual speed. View the fade effect in Output 1.

Cut is the default effect. When it is selected, all other controls are inactive.

Ease Mode controls the interpolation of fade levels between the start and end frames of a dissolve. Choices for Ease Mode include:

- *Linear:* Maintains a constant speed during the transition.
- Ease In: Starts the transition slowly and increases to the default speed for the rest of the transition.
- Ease Out: Starts the transition at the default speed and slows to zero by the time the effect is • complete.
- Ease In/Out: Starts the transition slowly, increases speed to the default and decreases the speed to zero by the time the effect is complete.

Other Controls

Test

Test Previews the selected effect.

Timeline Add

Timeline Add : A mixer effect (dynamic or static) can be added to the current scene by clicking the Timeline Add button. The mixer effect appears as an object on the timeline* (as well as on the Scene Graph). By default, the length of the new entry will be the duration specified in the Mixer Control Panel. However, this value as well as the start time of the effect can be modified using Lyric 's standard Timeline editing tools (mouse or keypad controls). You may click "Timeline Add" more than once to add multiple mixer effects to the timeline as separate objects; however, the start and stop times must not overlap.

*The Mix object is not a separate "real" object visible on the Canvas. However, inclusion of the object in the Timeline, Scene Graph and Keyframe Graph is how Lyric incorporates the recorded values of the Mixer settings into the composition.

Timelir	ne				
0:00	01:00 111111111111111111111111111111111	02:00 111111111111111	03:00 0100100	04:00 1111111111111111	Ŀ
	Mix				
+ 2 D	Fext 1				
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🛨 📕 Glo	bal Light				
in Cor	nera				

Adding the Mix object to the Timeline is Lyric's way of including the Mixer's settings in your composition.

Save/Recall

Save and Recall : Dynamic effects or static mixer settings can be saved to a file by clicking on the **Save** button. The files thus created are in the customary **.lyr** format, and can be entered in the Lyric Playlist for automated playback based on timecode or other control parameters. These Lyric messages can also be read from the Canvas via a Message Number and the Read controls, or by opening a file with an alphanumeric name. Settings and effects saved in the file execute immediately when read back.

Clicking the Save or Recall buttons displays the standard Windows file selector, open to the default Message directory set up in Lyric Preferences. Dynamic playback of a dissolve or fade in a Playlist (or when read from the Canvas) operates only if the **Dissolve** checkbox is checked before the file is saved to disk.

A quick method for recording a Video Mixer file is as follows:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Video Mixer.
- 3. Click **Record**. The **Video Mixer** settings are saved to the current **Message Number** in the **Default Message Directory**.

A Hotkey combination can also be used to record the Video Mixer settings:

• Press Ctrl + Record X Enter. The Video Mixer settings are saved to the current Message Number in the Default Message Directory.

Timeline Update

Timeline Update

applied to Mix objects on the Timeline.

Selecting Frame Buffers

The Duet Toolbar contains these icons for selecting VGEs (Frame Buffers) and controlling the mixer:



Duet Tools

By default FB 1 is selected upon Lyric startup. The other VGEs may be selected by clicking the appropriate FB icon. Buttons representing VGEs that are installed but not available to Lyric will be grayed out. If the **Live** button is pressed, changes made to the Canvas on the VGA monitor are immediately reflected in the active VGE's output. If the **Live** button is not depressed, the Xfer button may be used to transfer the contents of the current scene displayed on the VGA Canvas to the VGE output selected.

Each time an FB button is pressed the contents of the Canvas on the VGA monitor will be replaced with the contents of the scene being generated by the active VGE (or a blank screen upon Lyric startup). A new scene with the default camera, global light and source light will be created if one has not yet been assigned to this frame buffer. Note that the output frame buffer will not be affected by changes on the VGA canvas if the

button is not depressed.

The Swap *button will exchange the scenes in the two output channels.* Swapping will be disabled if an animation is playing in either channel.

The following hot keys are also supported:

1	Transfers contents of VGA Canvas display to the selected (VGE) frame buffer.
*	Selects the next Frame Buffer (e.g., if FB 1 is currently selected, FB 2 will be selected next when * is clicked)
Ctrl /	Swaps Output 1 and Output 2
Alt /	Transfers Output 1 to Output 2 using the Mixer effect defined in the Video Mixer Control Panel.
Video Mixer - Duet HD

Tools Menu > Video Mixer; Canvas/Scene Graph Right-Click Menu > Video Mixer

The **High Definition Mixer**'s controls are launched from the **Video Mixer** item on the **Tools** menu. The mixer may also be set up from the Windows **Control Panel** without launching Lyric. The control panel utility is installed automatically when the drivers are installed.

1. From the Windows Start menu, select Settings > Control Panel, then double-click the HD Mixer icon to open the Duet Hardware Configuration dialog box, as shown below.



Control Panel - Duet Hardware Configuration

2. Expand the **Duet Hardware** entry, then the driver entries, to view the various devices that may be controlled from this utility.

Duet Hardware Configuration	×
THE COMPANY THE WHOLE WORLD WATCHES	
 Duet Hardware Video I/O Driver Mixer Driver MIXER0: HD Mixer Board Squeezeback Driver Video Graphic Engine (VGE) Driv VGE0: Video Graphics Engir VGE1: Video Graphics Engir General Purpose I/O (GPIO) Driv 	ver ne ver
Reset Settings	Diagnostics Exit

Duet Hardware Configuration - Expanded

3. Select the **HD Mixer Board** entry as shown highlighted above, then click **Settings**. The **High Definition Mixer Settings** dialog box opens.

ligh Definition Mi	ker Settings			
Mixer Inputs				
Layer 1 🔽 🖸	ompositor 1 💌			
Layer 2 🗖 🖸	ompositor 2 💽			
Layer 3 🗖 🖸	ompositor 1 💌			
Output 1	- Output 2			
C Bupass	Bupass			
C Nor	C Nim			
* Mixer	Mixer			
				1
		UK	Cancel	Advanced >:

High Definition Mixer Settings - Basic

The **HD Mixer Board** contains two compositors and one mixer. The VGEs in Slots S4 and S5 are associated with **Compositor 1**, the VGEs in Slots S6 and S7 with **Compositor 2**. If a fifth VGE is present in the system, it appears in the mixer as the VGE in Slot S3.

To properly set up the HD mixer, you need to know which slots in the CPCI backplane have VGE boards installed. The current recommendation is that the standard two-board system have the VGE boards installed in Slots S5 and S7. The backplane slots are numbered from the HD Video I/O board (Slot S1) to the last CPCI slot (Slot S7). The CPU board is in Slot S8.

The additional settings for the **HD Mixer** may be accessed by clicking the **Advanced** button in the lower right corner of the menu. The **High Definition Mixer Settings** dialog box expands:

- Miuor Inputo				
	ositor 1	- Composi	tor 1	SA T
Layer 2 Comp	ositor 2 💌	Back	VGE in Slot	S5 C Dissolve
Bypass 🔽 Comp	ositor 2 💌	Composi	tor 2	
Output 1	Output 2 Bypass	Back	VGE in Slot 9	Video Standard-
Mixer	C Mixer	Alignment		C 720 line

High Definition Mixer Settings - Advanced

4. In the **Compositor 1** area, enable the VGE in Slot S5 to the background.

It is possible to assign the same VGE as a compositor's foreground and background, but the same image will simply appear superimposed upon itself.

- 5. In the **Compositor 2** area, enable the VGE in Slot S7 to the background.
- 6. In the **Mix Mode** area: The default setting is **Composite**.

When a **Dissolve** is executed on the Duet HD (by pressing **Shift-Xfer**), the video from Channel 2 dissolves into the Air Channel. Lyric automatically changes the **Mix Mode** settings as this occurs. There is normally no need to manually change the **Mix Mode** setting from **Composite**.

- In the Mixer Inputs area, enable or disable each layer using the checkbox. For each layer, you may choose an input with the dropdown menu; each offers a choice of Compositor 1, Compositor 2 or VGE5.
- 8. In the Output 1 and Output 2 areas, select the Mixer (output of the mixer) or Bypass.
- The Alignment control advances or delays video from the VGEs to compensate for a delay in the signal introduced by the HD Mixer. For 1080 standards, the proper setting is -31. For 720p standards, the proper setting is -45.
- 10. Video Standard displays the current video standard settings. Changing the video standard cannot be performed from this panel. To change the video standard, it is necessary to exit Lyric, then perform the adjustment from Start>Control Panel>Duet Hardware.

NOTE

As mentioned above, Lyric automatically changes Mixer settings as a Dissolve executes. Lyric also automatically changes Mixer settings when a Video Capture is executed.

CMix - Duet SD/LE/LEX/PCI/PCI+, Offline

Tools Menu > CMix

Overview

CMix is a 1RU-rack mount device providing two output channels, each displaying an independent mix of up to 4 **Video/Key** input layers over an optional **Program** video input layer, which mix to one **Video/Key** output. **CMix** is connected to a host machine via the **Universal Serial Bus (USB)**. Originally designed for use with Duet LE/LEX/PCI/PCI+, **CMix** can also be used to expand the mixing capabilities of Duet SD systems, or with conventional PCs equipped with broadcast-quality video sources, for use as a standalone router/switcher. Note that the setup information described applies to the Duet LE/LEX/PCI/PCI+.

The **CMix** system contains two independent sets of mixing logic, controlling two **Video/Key** outputs. The mixers share the same inputs, but the inputs can be assigned to different layers in each mixer. *For information on installing and connecting* **CMix**, refer to **CMix Installation and Connections**.

Setup

Genlock Setup

All components in the system must share a common Genlock source. The usual configuration routes an analog black burst signal to the **CMix Reference** input and all of the graphics boards in the Duet LE/LEX/PCI/PCI+. Duet LE/LEX/PCI/PCI+ systems have an internal cable that connects the reference inputs of all of the boards to a single external BNC. Connecting the analog black burst to any BNC labeled as **REF IN** should lock all of the boards in the system.

VPB Setup

To configure the Video Processing Boards (VPBs) in a Duet LE/LEX/PCI/PCI+:

1. With Lyric running, select **Duet Hardware** from the **Config** menu, then select the **Setup Board Configuration** tab.

Duet Configuration	×
Configure Board Use Setup Board Configuration Device Control Setup GPI Timecode Settings For: Settings For: Setup Board 1 C Board 2 C Board 3 C Board 4	1
Video Output Standard Genlock Key In Image: NTSC IN PAL Image: Analog Image: Control of the second sec	
Background Scanline 20 Wizard 333 Vertical Video 2 :	
OK Cancel Apply Help	

CMix Configuration

- 2. Set **Key In** to **On**, even if there is no key input to the VPB. Setting it to **Off** would set the key output from that channel to 100% for the full frame, masking all lower layers in the mixer.
- 3. Set Video to Insert. Setting Video to Only would disable the graphics from the VPB to the output.
- 4. Set Video Layer Off. It is possible to key the VPB graphics over a **Program Video** input and then send this output to the **CMix**, but the system's video timing would be substantially altered. See the information regarding video timing issues later in this section.
- To preserve Closed Caption data on line 284 (the CC line of the second field), set Ancillary Data to On. Setting Ancillary Data to Off would generate VPB video on line 284. The VPB would never generate graphics on line 21. This action preserves any Closed Caption data that might appear there.

PCI-Squeezeback Board Setup

Video Layer should be set to Off. Since the PCI-Squeezeback board has no Key Input, setting Video Layer to On would set the Key Output of the board to 100% for the full frame, starting at line 20. This would block any lower layer and the program video in the CMix.

Video Timing Issues

Proper mixing of the video sources requires that their timing be matched. There is no time base correction inside the **CMix** unit.

The **Horizontal Video** and **Vertical Video** in the **Setup Board Configuration** tab (*see previous figure*) should be set to the same values for all of the graphics boards in the Duet LE/LEX/PCI/PCI+ system. This ensures that a graphic read in one frame buffer will appear in the same place on-screen as the same graphic read in the other frame buffers.

Note that it is inadvisable to connect a single video source to both the **CMix Program Input** and the inputs to any of Duet LE/LEX/PCI/PCI+ VPBs. This is a function of the **1**-scanline delay created by the circuitry of the VPBs. If the same signal is fed to both the **CMix Program Input** and a VPB input, the version of the signal passing through the VPB input would appear one line lower on **CMix Output**. If it is necessary to use such an arrangement, the signal going to **CMix Program Input** should first be routed through a **1**-scanline delay device.

When a PCI-Squeezeback board is used to resize video input, there is a 1--frame delay between the PCI-Squeezeback board input and its output. As noted above, if the same **Program Input** is fed to both a PCI-Squeezeback board and the **Program Input** of the **CMix**, the program video from the PCI-Squeezeback board would be one line lower than the **Program Video**. This cannot be corrected by adjusting **Squeezeback Panel** settings to change the position of the resized video on the screen. Again, to correct this, a 1-scanline delay must be introduced from the video that is fed to the **Resizer In** to the **Program In** of the **CMix**.

When using the same **Program Video Input** for both the **CMix** and the **Resizer Input** of the PCI-Squeezeback board, the **Resizer Output** should be set to full-screen (**720 X 486**). The **Vertical Delay** of the PCI-Squeezeback board should be set so that the two video signals align at the output, and then the **Vertical Delay** of the other VPBs and PCI-Squeezeback board graphics planes should be aligned with the graphic plane in the PCI-Squeezeback board that is sharing its signal with the **CMix**.

Chyron strongly recommends using the PCI Squeezeback board to resize and reposition alternate video sources into the **Program Video Output**, but should not be used to resize **Program Video** before connection to a **CMix** input.

To resize **Program Video**, connect the video output of the **CMix** to the Resizer input of the PCI-Squeezeback board. This places the PCI-Squeezeback board downstream of the **CMix**. In this configuration, the video output of the PCI-Squeezeback cannot be connected to the **CMix** input without causing timing problems at the switcher.

Internal Clip Player Issues

When the Lyric application is launched, the Internal Clip Player's DigiSuite hardware may initialize its **Key Output** to a full frame of 100% out. If the **CMix** layer assigned to the **Clip Player** is active, this will block all lower layers. This condition may be corrected by reading a **Clip** file that starts with no **Key Output**.

Unlike the VPB and PCI-Squeezeback boards, the Internal Clip Player generates video on lines **21** and **284**. If the Internal Clip Player is generating a full frame of video, it will cover lines 21 and 284. The VPBs and/or Squeezeback boards will never cover line **21**, and will only cover line **284** if **Ancillary Data** is set to **Off**.

CMix Control

The CMix assignments and parameters are set within the CMix Control dialog box. To access:

• From the **Tools** menu, select **CMix**. The **CMix Control** dialog box is displayed.

CMix Control
Output 1
1 2 3 4 Output
CH1 CH2 CH3 CH4 Level
ŢŢŢŢ <u>Ţ</u>
100 100 100 100 100
Route Mix PGM OFF
□ 🔽 Output 2
Layer 1 2 3 4 Output CH1 CH2 CH3 CH4 Level
ŢŢŢŢŢ
100 100 100 100 100
Route Mix PGM OFF
Effect
Cut Duration 1
Frame Frame Frame End
Setup Timeline <u>A</u> dd
<u>C</u> lose Timeline <u>U</u> pdate

CMix Control

Output 1 and Output 2 Settings

The checkbox at the top of each output section enables the controls within that section. Deselecting (unchecking) a checkbox to disable an **Output** hides that **Output's** individual controls. This allows the user to create a mix effect for one channel without affecting the other. The default labels for the outputs are **Output 1** and **Output 2**.

Video Inputs - Layer Settings

It may be helpful to assign signal sources to inputs with some concern for the easiest arrangement to remember, for example, assigning Duet **Frame Buffer 1** to **CMix Input 1**, **Frame Buffer 2** to **Input 2**, etc. Additionally, the layers can be color-coded for easy recognition.

These labels may be changed to indicate which sources are connected to which inputs. The default labels for the **Layers** are **CH1**, **CH2**, **CH3** and **CH4**.

CMix Setup

Layer and Output parameters are set in the CMix Setup dialog box. To access:

• Click the **Setup** button located at the bottom of the **CMix Control** dialog box. The **CMix Setup** dialog box opens.

CMix Se	tup	×
Device		
	Not Conr	nected
- Inputs		
Input	—Co Label BG	olor- Shape FG Video
1	CH1	
2	CH2	
3	ГНЗ	
4	СНА	
DCM		
FUIM		
- Output	8	
Output	Label	ANC Data
1	Output 1	
2	Output 2	
- Sync 0	ien	
Video	Standard N	ITSC 💌
Genlo	ck 🔽	igital 💌
	— Horizontal D	elay —
		769 -
		lay —
OK		Cancel

CMix Setup

Device

The **Device** setting is a **USB** communication status indicator for the external device, such as a Duet system, controlling **CMix**. Currently, the **Device** dropdown is not used, as only a single external system may be connected to **CMix** at a given time.

CMix Setup	×
	Not Connected
CMix Setup	×
Device	Communications Error
CMix Setup	×
	Connected

USB Connection Status Displayed at the Top of the Setup Panel

Setting Input and Program Parameters

To assign user-defined labels to the Layers and PGM, and color codes to the Layers:

- 1. Enter new names in the **Input Label** fields and the **PGM Label** field. Note that the **PGM Label** is displayed only when the **PGM** is not **OFF** in the **CMix Control**.
- For each layer and the PGM, click on the BG color chip to set the color of the background of the Label field, and on the FG color chip to set the color of the text of the Label field. When a chip is clicked, the Color dialog box opens. Select a color, then click OK to set. Refer to Color Selection for Light Sources and 3D Characters/Objects for information on using the Color dialog box.

When **Shape Video** is enabled, the **Input Video** is attenuated to the **Key** signal, so that color components do not exceed the **Key** level. When **Shape Video** is disabled, the **Input Video** is not attenuated. To set:

• Select (check) the **Shape Video** checkbox to enable, or deselect (uncheck) the **Shape Video** checkbox to disable.

Setting Output Parameters

To assign user-defined labels to the Outputs:

• Enter new names in the Output Label fields.

When **ANC** is enabled, the ancillary data is transmitted along with the rest of the video signal that is output from the **CMix**. When **ANC** is disabled, the ancillary data stripped from the video signal that is output from the **CMix**. To set:

• Select (check) the **ANC** checkbox to enable, or deselect (uncheck) the **ANC** checkbox to disable.

Setting Sync Gen Parameters

To set Video Standard:

• Select NTSC or PAL from the drop-down list box.

To set Genlock:

• Select Analog, Digital or Free Run from the drop-down list box.

To set Horizontal Delay and Vertical Delay:

• Adjust the respective sliders to match the Horizontal Video and Vertical Video settings in the Setup Board Configuration tab in Duet Hardware Configuration.

Applying CMix Setup Parameters

The following is an example of **CMix** setup.

CMix Se	tup	×
Device		
1	Connect	ed
Inputs		olor- Shape
Input	Label BG	FG Video
1	FB1	
2	FB2	
3	FB3	
4		
PGM		
- Output	s	
Output	Label	ANC Data
1	Switch In 1	
2	Switch In 2	
- Sync G	ien	ĺ
Video	Standard	NTSC 🔽
Genlo	ck [[Digital 💌
	— Horizontal D)elay
	— Vertical De	elay
OK		Cancel

CMix Setup - Parameters Set

Once **CMix** parameters are entered:

• Click **OK** to apply. The **CMix Setup** dialog box closes.

The new settings are reflected in the CMix Control dialog box.

CMix Control
Switch In 1
Layer 1 2 3 4 Output
FB1 FB2 FB3 CLIP Level
T T T T T
100 100 100 100 100
Route Mix PGM CAM
Switch In 2
Layer 1 2 3 4 Output
FB1 FB2 FB3 CLIP Level
100 100 100 100 100
Route Mix PGM OFF
Effect
Cut Duration 1
► ➡ Start ► End
Setup Timeline <u>A</u> dd
<u>C</u> lose Timeline <u>U</u> pdate

CMix Control with CMix Setup Parameters Applied

Layer Assignments and Transparency

Any CMix input, except for the Program input, can be assigned to any layer. To do so:

1. Click the **Label** field of a **Layer**. A drop-down list box displays the available Inputs, as well as an **OFF** setting. The **OFF** setting disables the **Layer**.



Layer Drop-Down

2. Repeat the layer assignment process for **Output 2**. Remember that the inputs can be assigned to different layers in **Output 2**.

Each Output Layer slider (1 through 4) corresponds to a Video Input/Key Input pair. The sliders control the Transparency of each layer in the mix.

NOTE

The Transparency setting is technically an Opacity setting, in that a setting of 0 is completely transparent, and a setting of 100 is completely opaque. It is common throughout the industry, however, to use the terms Transparency and Opacity interchangeably when referring to level settings.

Output Level

The **Output Level** slider to the right of the **Layer** sliders controls the overall **Transparency** of the entire mix.

<u>Route</u>

A separate layer or the mix of all layers can be routed to the output. To set:

• Click the **Route** drop-down list box. Select **Mix**, **Layer 1**, **Layer 2**, **Layer 3** or **Layer 4**. If a layer is selected, it is sent to the output at 100% video level. If **Mix** is selected, the programmed mix is sent to the output.

NOTE

The Route controls affect *all* of the CMix Output(s). Their effect is not confined to the Monitoring outputs.

CMix Control
Image: Switch In 1 Layer 1 2 3 4 FB1 FB2 FB3 CLIP
T T T T
100 100 100 100 100
Route Mix PGM CAM
Sw Layer 1 Layer 2 1 Layer 3 ▼ 4 Output EP1 EP2 EP3 EID Level

Route Setting

Program Input

The **Program** (**PGM**) input to the system's mixes can only be turned on and off. **Program** video is always at 100% video, and its level may not be varied. Clicking the **PGM** field toggles the input on and off. If the **Program** source is turned off, **CMix** inserts black in its place, and all other components of the mix(es) are unaffected.



Program On/Off

Effects

A **Cut**, **Dissolve** or **Fade** effect can be executed when the mix is rendered to output. These effects consist of starting and ending mixer states for each of the two **CMix** outputs, when the output is enabled. When **Dissolve** or **Fade** is selected, the user may specify a **Duration** in video **Frames**. The **Duration** and **Frame** controls are disabled if **Cut** is selected.

To set up an effect:

1. Select (check) the Effect checkbox.

Effect	
Dissolve 💌 Dura	ition 40
Fra	me
Start ј 🛨	— End
Setu <u>p</u> Timeline <u>A</u> dd	
	-
<u>Close</u> Timeline <u>U</u> pdat	e

CMix Effect Controls

- Select Cut, Fade, or Dissolve from the Effect drop-down list box. If Cut is selected, Frame and Duration settings are not accessible, and setup is complete. If Fade or Dissolve is selected, continue to the next step.
- 3. Move the **Frame** slider to **Start**, and then set the **Layer** and **Output Level** sliders to the desired initial values.

Layer and Output Level sliders can be adjusted only when the Frame slider is at either Start or End. Interpolation between Start and End values is always Linear.

4. Move the **Frame** slider to **End**, and then set the **Layer** and **Output Level** sliders to the desired final values.

Note that when setting a **Dissolve** effect, the combined **Transparency** of **Layers 1** and **2** must equal **100%**, and the combined **Transparency** of **Layers 3** and **4** must equal **100%**. If the **Layer** sliders are set to incorrect values, **CMix Control** automatically corrects the settings.

5. Set a duration in the **Duration** field. Setup is complete.

To play the effect:

Click the Play icon

To preview the effect frame-by-frame:

• Use the mouse to drag the **Frame** slider through the effect.

To execute the effect and switch the signal on Output 1 with that on Output 2 and vice-versa.

• Click the Swap icon . This is equivalent to executing a Swap 2 on a Duet LE/LEX/PCI/PCI+.

NOTE

When CMix software is installed, the normal Duet Tools Swap function is disabled, whether or not a CMix system is connected, and/or whether or not the CMix Control dialog box is open.

- To restore normal Swap function, move the *CMix.ocx* file from the Lyric *Plugins* directory to another location.
- To restore CMix functionality, move the *CMix.ocx* back to the Lyric *Plugins* directory.

Timeline Add

A CMix effect object can be added to the current Lyric scene.

Click the **Timeline Add** button
 Timeline Add

When the **CMix** effect is added to the **Timeline**, it appears as an object on the **Timeline**, as well as on the **Scene Graph** and **Keyframe Graph**. By default, the length of the new entry is the effect duration specified in the **CMix Control** dialog box. This value, however, as well as the **Start Time** and **End Time** of the effect, can be modified using Lyric 's standard **Timeline** editing tools.

- Right-clicking on the CMix Timeline displays a menu which accesses Timeline editing functions.
- Right-clicking on the **CMix** item in the **Scene Graph** displays a context menu which lists one item, **CMix Properties**. Select **CMix Properties** to display the **CMix Control** dialog box.
- Right-clicking on the **CMix Keyframe Graph** displays a menu which accesses **Keyframe Graph** editing functions.

Timeline Add can be executed more than once to add multiple mixer effects to the **Timeline** as separate objects, however, the **Start** and **End Times** must *not* overlap.

Keep in mind that the **CMix** element in the **Timeline**, **Scene Graph** and **Keyframe Graph** is not an object that is visible on the **Canvas**. Creating a **CMix** object, however, is how Lyric incorporates the **CMix** settings into the Lyric composition.



CMix Effects Objects Displayed on Timeline and Scene Graph

Timeline Update

Modifications to an effect can be made in the **CMix Control** dialog box, and then applied to the Lyric **CMix Effects** object.

- 1. On the **Timeline** or **Scene Graph**, (select) highlight the effect.
- 2. In the CMix Control dialog box, make the modifications.
- 3. Click the **Timeline Update** button

Saving/Recalling CMix Settings

CMix effects and mixer settings can be recorded without other Lyric information, or they can be stored as a component of a complete Lyric composition.

To record CMix effects/mixer settings only:

1. Press **Ctrl + Record** on a Duet keyboard, or **Ctrl +** the numeric keypad minus sign (-) on a PC keyboard. The **Record Only:** dialog box is displayed.

Text Window	_ Timeline
C All <u>T</u> ext	C Scene (.efx)
C Cursor to End	C Object (.kyf)
C Current <u>R</u> ow	Panel
Plugin	C Clip (.ccf)
1 C Harvester Lite	C Clocks/Timers
2 🖲 CMix	C Macros
<u>3</u> C	C Multi <u>E</u> X
4 C	C Playlist (.ply)
5 C	C Sgueezeback
<u>6</u> C	C Video Mi <u>x</u> er

Record Only Dialog Box

2. Select (click) the **CMix** radio button, then click **Record**. The **CMix** message is recorded in the *.lyr file format, to the current number displayed in the **Message Number Display**, in the **Default Message Directory**.

A **CMix** message can easily be recalled (read) by using the Lyric **Read** function. It can also be programmed into a **Playlist**. Settings and effects execute immediately when the file is recalled.

To save **CMix** settings as a component of a complete Lyric composition:

- 1. Add the CMix object to the Timeline using the Timeline Add function as previously described.
- 2. Save the Lyric message.

Saving CMix settings using the File Save As function is not currently supported.

Exiting the CMix Control Dialog Box

To close the CMix Control dialog box:

- 1. If desired, save the **CMix** settings.
- 2. Click the button or the Windows **Close** icon **S**. Be sure you've saved your work before closing the panel.

CMix Installation and Connections

Introduction

CMix is a 1RU-rack mount device providing two output channels, each displaying an independent mix of up to 4 input layers over optional Program video. CMix is connected to a host machine via the Universal Serial Bus (USB). Originally designed for use with Duet LE/LEX/PCI/PCI+, CMix can also be used to expand the mixing capabilities of Duet SD systems, or with conventional PCs equipped with broadcast-quality video sources for use as a standalone router/switcher. *For information on operating CMix within Lyric, refer to CMix*.

Software Installation

CMix's software control panel is available in two ways: as a standalone application for use outside of Lyric, or as a Lyric plugin. The standalone application is available in Chyron's digital pcCODI Software Developer's Kit and is discussed in the documentation included with the SDK.

For additional information on Lyric Plugins and the LEIF architecture, consult Lyric Online Help.



CMix Software Installation

CMix's plugin software for Lyric is installed by the familiar Install Shield process. Locate the **CMix.exe** on the included CD and double-click it. The install process begins. Follow the instructions in the installation script, and click **Next** as needed. (To uninstall the CMix software, use the Windows Add/Remove Program facility, as seen in the lower right corner of the illustration above.)

CMix's software is an ActiveX control with the .ocx extension. As with all Lyric Plugins, the file *CMix.ocx* must be located in the proper directory on your system. It should be in the *Plugins* folder of the Lyric installation that contains the copy of Lyric with which it will be used. If your system includes multiple versions of Lyric, make sure the .ocx file is in the correct version's installation! See the illustrations on the next page.

Chyron				1	
Ele Edit View Favorites	Iools Help				11
J ⇔ Back + ⇒ - 🔂 🔘 S	arch 🔁 Folders 🎯 階 🧏 🗙 🕬 🔟 🔹				
Address C:\Program Files\Ch	yron		- 6	Go	Links »
2-47	Name A		Size	Туре	
Chyron	Effects The CMix software m ImageMagick Plugins folder of your	ust be ins Lyric inst	talled in the allation.	File Fo File Fo File Fo	ider ider ider
Select an item to view its description. See also:	Lyric 4.0			File Fo File Fo File Fo	ider ider ider
My CDocuments My Natural Planar	Playlists ▼ 4			File Fo	lder 💌
25 object(s)		4.47 MB	My Compu	ter	1

Installing CMix in Plugins Directory

The system pictured here contains different versions of Lyric. In the first illustration below, the installation script did not place the file in the appropriate directory. The operator's intent here is to use CMix with Lyric Version 4.1 and later.

Plugins				
Ele Edit Yiew Favorites	Lools Holp	Wrong	directory	
😓 Back 🔹 🤿 - 🖭 🔍 Sear	ch 👍 Folders 🎯 😤 🥵	X n II.		
Address C:\Program Files\Chyro	on\Lyric\Plugins			
2-1.7	Name	Size	Туре	Modified V
	CMix.ocx	168 KB	ActiveX Control File Folder	8/27/2003 4:32 PM 2/20/2003 1:57 PM
Plugins	RegSvr32			×
My Network Places My Computer			ĸ	
File Edit View Eswerber	Tools	Diabt di	reatory	
Back + ⇒ - 🔁 📿 Sear	ch 🚽 Folders 🎯 🖓 🖓		rectory	
Address C:\Program Files\Chyro	on\Lyric 4.1\Plugins			
2-47	Name	Size	Туре	Modified V
Plugins	CMix.ocx	168 KB	ActiveX Control File Folder	8/27/2003 4:32 PM 2/20/2003 1:57 PM
Select an item to view its description	h			

Top: Installation into the Directory for the *Incorrect* version of Lyric Bottom: The CMix.ocx has been moved to the appropriate directory, in this case, Lyric Version 4.1.

CMix Connections



Rear Panel of CMix Chassis

USB Port

The Windows 2000 operating system will detect and configure new USB connections.

Ethernet Connector

This connector is not currently in use.

Video Outputs

Signal: SMPTE 259M/CCIR-656 SDI Format, except for the analog monitor outputs (next item).

- Monitor 1 and Monitor 2: These BNC connectors offer analog video monitoring output for each of the system's two outputs (SDI VIDEO OUTs 1 & 2). Connect to standard NTSC/PAL monitors. These video outputs are low-resolution and are not suitable for broadcast.
- Video Out 1 & Key Out 1: SDI video and key output from Mixer 1 of the CMix. If ANC DATA is enabled, ancillary data from the Program In, including Closed Captioning on lines 21 and 284 will appear at this output.
- Video Out 2 & Key Out 2: Provides video and appropriate key signal from Mixer 2 of CMix.

Video Inputs

Signal format: SMPTE 259M/CCIR-656 SDI

CMix's four video and key input pairs may be combined in any order by means of compositing and/or blending layers. All mixer settings may be controlled as animation elements by Chyron's Lyric application or other programs created with the digital pcCODI Developer's Kit. Typical inputs to the Mixer are video from a clip player or from a character generator. Multiple graphics planes can be combined; for instance, CMix could simultaneously composite elements created by CAL and Lyric applications, a bug inserter and an animated background originating from clip playout.

For mixing, a video input must have an associated **key** input. If there is no **Key In** for a given Video In, a 100% **matte** signal will be assigned, covering all lower layers in the mixer.

• **Program In:** The Program In signal is essentially a fifth video layer, distinct from the four Video and Key Input pairs. Program Video is always below Layer 4. All Layers are on top of Program Video. Note that Program In is where the system takes in Closed Captioning as well as other Ancillary data. This data is passed through CMix and preserved on the Video Out 1 & 2 signals. The Program In signal is protected by a **bypass relay** that automatically routes the signal to Program Out 1 in case of system power loss.

NOTE

This video input may be used as a digital Genlock source; selection of analog or digital Genlock may be set in software (see *Ref In for more about analog* Genlock).

• Video In and Key In, Pairs 1 - 4: These pairs of video and key inputs comprise CMix's four fullymanipulatable layers. Each of these four signals may be routed to either or both of CMix's output channels. The arrangement of output layers defines visual display priority. Layer 1 is on Top and layer 4 is on the bottom. Program Video is always below layer 4. All Layers are on top of the Program Video.

Analog Reference Connections

CMix may be optionally Genlocked to the SDI Program Video Input or to an analog composite video black burst reference signal. Selection of Genlock source is made in software.

• **Ref Loop:** This BNC connector is an **output** of the black burst signal received at the **Ref In** connector. This provides a means to share analog sync with other devices, such as Chyron's digital pcCODI-type Video Processors, clip players and other mixers and switchers.

To share black burst among multiple systems using the Ref Loop facility, you must remove the shunt at jumper JP24, located on the printed circuit board near the Ref Loop and Ref In connectors.



Remove the Shunt at Jumper JP24 to Share Analog Genlock

Ref In: Connect a composite analog black burst signal to this BNC connector. Also note that this
video input may be used as an analog Genlock source; your selection of analog or digital Genlock
may be set in software (see Video In for more about digital Genlock and §5 for more about software
used with CMix).

Hardware Topology

Basic System



CMix Block Diagram

Sample Setup

The diagram below shows CMIX used with a Chyron Duet LEX equipped with optional Internal Clip Player and Squeezeback board. Such an arrangement might be used to send a completely produced feed from a news network's regional bureau to its central facility, using the Chyron systems' resources to minimize demand on other assets, such as switchers and keyers at the central facility.



Example of CMix Connected to Duet LEX for USB Control and Three Video Sources

In such an arrangement, Program Video In might be a camera signal showing a news anchorperson. Duet LEX's Video Processor Board could be generating a Lyric-created lower-third, while its Internal Clip Player and Squeezeback Board worked together to place footage from a reporter in a movable, shrinkable region over the anchorperson's shoulder. In this way, all compositing and/or keying is done at the remote location.

28. Video Capture

Video Capture

Tools Menu > Video Capture

Lyric's optional **Video Capture** board tool allows the Duet to capture a frame of video, display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats (e.g. **TIFF**, **TGA**, **BMP**, **JPG**, etc.). The hardware and procedures are different depending on whether the system is a Duet SD, Duet HD or Duet LE/LEX/PCI/PCI+.

Video Capture - Duet SD

Tools Menu > Video Capture; Canvas/Scene Graph Right-Click Menu > Video Capture

Lyric's **Video Capture** tool allows the user to capture a frame of standard definition video (NTSC or PAL), display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats (e.g. **TIFF**, **TGA**, **BMP**, **JPG**). Note that each time a video frame is captured, the previously captured frame is overwritten.

Alpha information, if present, *is* captured and preserved along with the grabbed frame. However, **Alpha** content cannot be viewed on the Lyric Canvas as seen on the VGA monitor. The **Alpha** information can only be seen by looking at the output of Duet's keyer.

To capture a video frame:

1. Select Video Capture from the Tools menu to open the Video Frame Capture dialog box. Note that Video Capture is available on the menu only if Lyric is running on a Duet system.

Video Frame Capture 🛛 🗖 🗙
Video Source
Video I/O 💌 Settings
View Live Video
Crop Image
X: Width:
Y: Height: 0 + 720 +
🔽 Save Full Screen
Offset Image X: Y: 0 + 0 +
<u>G</u> rab Frame <u>D</u> e-Interlace
<u>Save Frame</u> <u>Cancel</u>

Video Frame Capture Dialog Box - Duet SD

- 2. Select Video I/O or SD Mixer from the Video Source drop-down list box.
- 3. Click Video Settings. The Video Capture Settings dialog box is displayed:

Video Capture	Settings 🗙
Source	
Video I/O	
🔽 Enable <u>K</u> ey	Input
✓ Enable Vide	eo Shaping
Enable⊻GE	Shaping
ОК	Cancel

Video Capture Settings Dialog Box - Duet SD

- a. If you have not already selected the source or would like to change it, select **Video** I/O or **SD Mixer** from the **Source** drop-down list box.
- b. Select Enable Key Input if you have a valid Key input and wish to save it along with the Video input. The setting on opening the dialog box reflects the Enable Key Input setting in the Config Menu > Video tab.
- c. Select Enable Video Shaping if you have a valid Key input and wish to save it along with the Video input. The setting on opening the dialog box reflects the Enable Video Shaping setting in the Config Menu > Video tab.

Enable VGE Shaping is not available in this application.

- d. Click **OK** to accept settings, or **Cancel** to cancel. The **Video Capture Settings** dialog box closes.
- 4. In the **Crop Image** area:
 - Check the **Save Full Screen** checkbox to save the capture as a full-screen image. Note that **Save Full Screen** is the default **Save** mode.

OR

You can use the Crop Box to record a rectangular region of a grabbed frame for use as a Lyric object. Specify values for X, Y, Width, and Height to adjust the size and position of the Crop Box. Note that size and proportions of the Crop Box determine only the size of the saved image. The original captured frame is always full-screen. Note that Save Full Screen is automatically deactivated (unchecked) when the user modifies the Crop Box size or position from either the Video Frame Capture dialog box or by using the mouse.

To use the mouse to move or resize the **Crop Box**, first make sure that **Global Light** is selected on the **Scene Graph**. To move the **Crop Box**, left-click the center of the **Crop Box**, then drag it to a new Canvas location. The **Crop Box** can also be moved by 1-pixel/scanline increments by pressing **Ctrl** + $\leftarrow \rightarrow \uparrow \Psi$; or by 10-pixel/scanline increments by pressing **Shift** + **Ctrl** + $\leftarrow \rightarrow \uparrow \Psi$.

To resize the **Crop Box**, left-click an edge, then drag it to a new position. If a corner is selected instead of an edge, the entire **Crop Box** is resized, and aspect ratio is maintained.

Video Capture Crop Box

- 5. Set **Offset Image** to set desired image offset. This parameter is set prior to a **Video Frame Capture** operation to ensure that the captured video frame is properly positioned on the Canvas.
- 6. Click **Grab**. The full-screen image is now captured. The full-screen image now becomes the **Background** of the Lyric composition. *Caution!* If a background is imported via **Tools** >

Background, or by clicking the **button** on the **Chyron Toolbar**, the captured frame is overwritten.

To cancel the Video Capture before clicking Grab, click Cancel.

In some instances when live video is captured, visible temporal displacement artifacts may be introduced into the captured video frame. To remove these artifacts:

• Click the **De-Interlace** button. This creates new even scanlines by interpolating between consecutive odd scanlines and has the effect of removing flicker between fields.

To save the Full Screen or Crop Box as a 24-bit Lyric message:

 Press the Record key (the minus sign on the numeric keyboard) or by select Save or Save As from the File menu and enter the appropriate information in the dialog box.

To save the Full Screen or Crop Box as another type of graphics file:

Click the Save button in the Video Frame Capture dialog box. The Save dialog box opens. Select a file type (TIFF, Targa, BMP, etc.) from the File of Type drop-down list box.

View/Hide Live Video

IMPORTANT!!!

Do not click the View Live Video button if Duet's outputs are on air!!!

View Live Video changes the Mixer settings to display the currently selected Video source on Duet Video Out 1. To enable this display:

• Click the View Live Video button. Note that the button name changes to Hide Live Video.

To hide the live video and restore the mixer settings:

• Click the Hide Live Video button. Note that the button name changes back to View Live Video.

Video Capture - Duet HD

Tools Menu > Video Capture; Canvas/Scene Graph Right-Click Menu > Video Capture

Lyric's **Video Capture** tool allows the user to capture a frame of high-definition video (*1080i only*), display it as a background on the Duet output and save it to a graphics file in one of the supported graphics formats (e.g. **TIFF**, **TGA**, **BMP**, **JPG**). In order to perform **Video Captures**, the Duet HD must be equipped with optional **HD Video Capture** board, which must be installed in the Duet HD's **CPCI Slot S3**.

Alpha information, if present, *is* captured and preserved along with the grabbed frame. However, **Alpha** content cannot be viewed on the Lyric Canvas as seen on the VGA monitor. The **Alpha** information can only be seen by looking at the output of Duet's keyer. Note that each time a video frame is captured, the previously captured frame is overwritten.

Executing and Saving a Video Capture

To perform a Video Capture:

 Select Video Capture from the Tools menu to open the Video Frame Capture dialog box. Note that Video Capture is available on the menu only if Lyric is running on a Duet system with the optional HD Capture Board is installed.

Video Frame Capture 🛛 🗖 🗖	×	
Video Source		
HD Capture 💌 Settings		
View Live Video		
Crop Image	٦	
X: Width:	52	
	2	
Y: Height	0	
🔽 Save Full Screen		
Offset Image		
Grab Frame De-Interlace		
Save Frame Cancel		
Load Buffer Clear Buffer	Clear Buffer	
Show Buffer		

Video Frame Capture Dialog Box - Duet HD

2. Select **HD Capture** from the **Video Source** drop-down list box. This is the only available choice. The **Settings** button is grayed out. **Settings** are fixed, and therefore cannot be changed.

- 3. In the **Crop Image** area:
 - Check the **Save Full Screen** checkbox to save the capture as a full-screen image. Note that **Save Full Screen** is the default **Save** mode.

OR

• You can use the **Crop Box** to record a rectangular region of a grabbed frame for use as a Lyric object. Specify values for **X**, **Y**, **Width**, and **Height** to adjust the size and position of the **Crop Box**. Note that size and proportions of the **Crop Box** determine only the size of the saved image. The original captured frame is always full-screen. Note that **Save Full Screen** is automatically deactivated (unchecked) when the user modifies the **Crop Box** size or position from either the **Video Frame Capture** dialog box or by using the mouse.

To use the mouse to move or resize the **Crop Box**, first make sure that **Global Light** is selected on the **Scene Graph**. To move the **Crop Box**, left-click the center of the **Crop Box**, then drag it to a new Canvas location. The **Crop Box** can also be moved by 1-pixel/scanline increments by pressing **Ctrl** + $\leftarrow \rightarrow \uparrow \Psi$; or by 10-pixel/scanline increments by pressing **Shift** + **Ctrl** + $\leftarrow \rightarrow \uparrow \Psi$.

To resize the **Crop Box**, left-click an edge, then drag it to a new position. If a corner is selected instead of an edge, the entire **Crop Box** is resized, and aspect ratio is maintained.



Video Capture Crop Box

4. Set **Offset Image** to set desired image offset. This parameter is set prior to a **Video Frame Capture** operation to ensure that the captured video frame is properly positioned on the Canvas.

5. Click **Grab**. The full-screen image is now captured. The full-screen image now becomes the **Background** of the Lyric composition.

Caution! If the *lue* button is active when a frame of video is grabbed, it is stored in the VGE and becomes the background of the Lyric scene on the canvas. If a background is imported via **Tools** >

Background, or by clicking the **button** on the **Chyron Toolbar**, the captured frame is overwritten.

To cancel the Video Capture before clicking Grab, click Cancel.

In some instances when live video is captured, visible temporal displacement artifacts may be introduced into the captured video frame. To remove these artifacts:

 Click the **De-Interlace** button. This creates new even scanlines by interpolating between consecutive odd scanlines and has the effect of removing flicker between fields.

To save the Full Screen or Crop Box as a 24-bit Lyric message:

 Press the Record key (the minus sign on the numeric keyboard) or by select Save or Save As from the File menu and enter the appropriate information in the dialog box.

To save the Full Screen or Crop Box as another type of graphics file:

• Click the **Save Frame** button in the **Video Frame Capture** dialog box. The **Save** dialog box opens. Select a file type (**TIFF**, **Targa**, **BMP**, etc.) from the **File of Type** drop-down list box. The image saved in the file must be **1920 x 1280** pixels.

View/Hide Live Video

IMPORTANT!!!

Do not click the View Live Video button if Duet's outputs are on air!!!

View Live Video allows the user to preview the live video source; and causes video input to the HD Video Capture board to appear on *both* Duet outputs.

Caution! The View Live Video function erases any video previously stored in the Video Frame Capture memory. Any captured video should be saved elsewhere as a file before performing further Video Capture operations.

To do so:

Click View Live Video. When View Live Video is active, Output 1 and Output 2 are set to Bypass, and the Bypass is enabled to the VGE in Slot S3, which is the HD Video Capture board. All Duet outputs show whatever is coming from the HD Video Capture board. The View Live Video button now displays as Hide Live Video.

To hide the live video:

• Click the Hide Live Video button.

Load/Clear/Show Buffer

An existing image can be opened in the **HD Video Capture** board's buffer for use as a Background in compositions. To do so:

• Click Load Buffer. The image is loaded into the buffer, but is not displayed until Show Buffer is activated (*see below*). This video background appears in the mixer as Layer 3, which is the layer to which the HD Video Capture board is assigned.

To display the loaded video as a background:

• Show Buffer displays the video output from the HD Video Capture on the Duet output(s) that are assigned to the Mixer. When Show Buffer is active (checkbox is checked), Layer 3 is turned on. It will display the current contents of the buffer or current input to the buffer.

To clear the last captured or loaded image from the buffer:

• Click Clear Buffer.

Video Capture - Duet LE/LEX/PCI/PCI+

Tools Menu > Video Capture; Canvas/Scene Graph Right-Click Menu > Video Capture

Make sure that there are valid sources of analog or digital sync and digital video connected to Duet LE/LEX's **Ref In** and **Video In** connectors, respectively. From the Lyric **Tools** drop-down menu, select **Video Capture** to open the **Video Capture** dialog box.

Frame Delay Capture Chann 5 . Capture Sample 1 2 3 4 5 6 7 8 All Video Display Thumbnails Display Sample 1 2 3 4 5 6 7 8 Auto Clean Artifacts Display Sample 1 2 3 4 5 6 7 8 All Video Display Preview	E Video Capture 📃 👂		
Capture Sample 1 2 3 4 5 6 7 8 All All Image: Sample for the second se	Delay Capture Channe Capture Capture Channe Capture Channe		
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 Auto Display Thumbnails Auto Clean Artifacts Display Sample 1 2 3 4 5 6 7 8 All Save Transfer To Air Page Blank Transfer To Canvas Video Display Preview 	All		
Auto Clean Artifacts Display Sample 1 2 3 4 5 6 7 8 All Save Display Transfer To Air Page Blank Transfer To Canvas Video Display Preview	Auto Display Thumbnails		
Display Sample 1 2 3 4 5 6 7 8 5 6 7 8 All All All Save Transfer To Air Page Blank Transfer To Canvas Video Display Preview Video Display	Auto Clean Artifacts		
1 2 3 4 5 6 7 8 All Save Transfer To Air Page Blank Transfer To Canvas Video Display Preview	splay Sample		
All Save Display Page Blank Video Display Preview	2 <u>3</u> 4 6 7 8		
Save Transfer Display To Air Page Blank Transfer To Canvas Video Display Preview			
Page Blank Transfer To Canvas Video Display Preview	Save Transfer Display To Air		
-Video Display Preview	Page Blank Transfer To Canvas		
On Off	On Off		
Exit	Exit		

Video Capture Dialog Box

The Video Capture settings are described in the following paragraphs.

Frame Delay

Duet LE/LEX/PCI/PCI+ can capture eight samples in an automated sequence. Set **Frame Delay** to specify a waiting period between each capture in the sequence.

Capture Channel

To select which one of the installed VPBs and/or PCI-Squeezeback boards is to be the source of the image to be captured, click a radio button in the **Capture Channel** radio button group.

Capture Sample

Eight different frame grabs can be captured and held. Additionally, any of the eight can be selected for replacement by a new frame grab. The **1** - **8** buttons in the **Capture Sample** button group represent which of eight possible positions among thumbnails the capture is to occupy. For example, a capture designated **1** will occupy the upper left-most position in the field of eight thumbnails, and **8** the lower right-most. If all eight possible captures are being displayed as thumbnails, these designations may be used to selectively replace individual captures. Once an anticipated capture is designated, press the **Capture Sample** button to capture the image. The **All** button captures all eight possible images, separated by the interval specified in the **Frame Delay** control. **Auto Display Thumbnails** automatically launches the **Display Sample** function (*see Display Sample below*) as the specified number of captures is completed. **Auto Clean Artifacts** is a preset function that attempts to remove blurring, tearing, etc. from the captured samples.

Display Sample

Display Sample enables the display of the captures specified in the **LE Video Capture** dialog box. When a **Display Sample** is selected, the associated **Capture Sample** is displayed full-screen on the video monitor. Click **All** to view all eight captured images as thumbnails over the live picture on the video monitor.



Thumbnails as Seen on Video Monitor

Save Display

The **Save Display** button saves all of the selected captures (**one-eight** or **All**) as a bitmap that can be saved to disk for reference.



All Captures Saved as a Bitmap

Transfer to Air

The **Transfer To Air** button transfers the captured image selected by the **Display Sample** drop-down list to the **Air** output. Note that if the **ALL** button is clicked under **Display Sample**, *all* of the captures will appear as thumbnails on Duet LE/LEX's air output.

Page Blank

Page Blank erases all of the captured images and their thumbnails.

Video Display Preview

Video Display Preview toggles thumbnails or displayed captures on and off in the Preview Channel.

Transfer to Canvas

Transfer To Canvas adds a bitmap model of the displayed sample(s) to the Lyric **Canvas**. Once transferred in this fashion, the bitmap becomes a normal Lyric object, which can be manipulated in the same way as other 2D images.

Like any other Lyric object, the bitmap newly added to the **Canvas** is also represented by a **Scene Graph** entry named **Video Capture**.

NOTE

The addition of a new element of this type will replace the previous one! You may wish to add multiple Video Captures to your composition. Unwanted replacement of existing captures by new ones can be avoided by renaming existing Capture elements before adding new ones, as shown below.



Changing Name of a Scene Graph Element

29. Video Regions and Squeezeback Objects - Duet SD

Video Region - Duet SD

Tools Menu > Video Region; Canvas/Scene Graph Right-Click Menu > Video Region

Video Regions are areas of the Canvas that display video from external sources or the Duet Internal Clip Player. Video Regions may be incorporated into Lyric compositions and animated or manipulated like any other object on the Canvas. Video Regions may be scaled with or without locked aspect ratio, but the video playing back may not be cropped. Apparent size may also be altered by increasing distance from the Camera along the Z-axis.

A Video Region object is created when the user selects Video Region in the Tools menu. Initially, a Video Region is shown as a 100 x 100 (pixel) rectangle centered in the Canvas on the VGA screen. As in Video Capture, live video input is not viewable on the VGA screen. To view the created Video Region on Duet, the

user must transfer the channel that contains the **Video Region** to Duet or press the **Line** button on the **Duet Toolbar**.

A **Video Region** object is added to the **Scene Graph** and **Timeline** windows when a **Video Region** is first created. Only one **Video Region** can be included in a scene. Handling and animation of **Video Regions** is similar to bitmap graphic objects (i.e., **Transform Tools** can be used to move, scale, and rotate the object on a keyframe basis). In addition, transparency can be modified and keyframed.

A Video Region's source is the signal connected to Duet's video I/O board. In order for the video to be displayed in a Video Region, Key In must be enabled. *Refer to Configuration for Display of Video Source - Duet SD, Configuration for Display of Video Source - Duet HD or Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+ for details.*

In the exercise below, you will simply place a video region on the **Canvas** as an object.

- 1. Make sure there is a video source connected to Duet's Video I/O board, and that it is producing a picture.
- 2. Pull down Lyric's Config menu and select Duet Hardware. Click on the Video tab.

Duet Configuration		×
Video Device Control GPI	Timecode MPx	
Video Standard	Reference Select	Video In
O 525 line (NTSC)	C Analog sync In	📕 Enable Video Shaping
625 line (PAL)	SDI Video In	Enable Key Input
	C Free <u>R</u> un	
Horizontal Delay	Vertical Delay	Output 1
880	4 <u>÷</u>	
Ancillary Data		
		Sa <u>v</u> e Re <u>c</u> all
		OK Cancel

Config > Video: Video Region Setup

- 3. Since you won't be using the **Keyer** in this exercise, make sure all of the checkboxes on the right are unchecked.
- 4. Click OK to close the Duet Hardware menus.
- 5. Pull down the Lyric **Tools** menu and select **Video Region** from the drop-down menu.
- 6. A rectangular area opens on the **Canvas**. On the VGA monitor's **Canvas**, the **Video Region** will always show color bars, as pictured below, even with the video source properly configured and running. This is normal. However, the selected video source will be properly displayed in your composition on the video output if the **Live** or **Xfer** buttons are pressed.



Creating a Video Region

7. Try adding other elements to the **Canvas** and programming an animation that manipulates the **Video Region**.

Remember that, depending on the complexity of your composition, you may experience trade-offs in video processing performance. For instance, Lyric is capable of creating more than one **Video Region**, but rendering may be slowed down or otherwise degraded. Additionally, multiple **Video Regions** will necessarily all display the same video source.

Squeezeback Object - Duet SD

Tools Menu > Squeezeback Object

- For use on SD Duet only.
- Updated for Lyric Versions 3.2 and later. Note that new Squeezeback improvements in Lyric Versions 3.2 and later require a **Revision H**-level Squeezeback Board. Contact Chyron Customer Service for more information.

Overview and Setup

In contrast with Video Regions, Lyric's Squeezeback Video facility creates regions in a Lyric composition that can be displayed **full-screen** with no loss of video quality. Either of these methods may be better suited for a particular application; it is recommended that you experiment with both for the best results.

Whereas Video Regions are produced by Duet's standard Video Graphics Engines (VGEs), Squeezeback effects are created using SD Duet's optional **Squeezeback Board**. Because Squeezeback video is processed in its own hardware, manipulation of Squeezeback video has fewer effects on the behavior of other elements in a Lyric composition.

With Lyric Versions 3.2 and later, the required Revision H Squeezeback Board receives timecode from Duet's VGE board(s). The timecode is used to precisely synchronize Squeezeback movement with objects and text produced and processed by the VGE itself.
The Squeezeback Board is installed in the CPCI slots that accommodate Duet's VGEs. Chyron **strongly suggests** installing this board in Slot #3 and moving other boards if necessary to do so. (CPCI Slot#1 is the one nearest the disk drives and the PCI buses; count from there.) Consult the documentation that accompanies field upgrade kits for installing the Squeezeback Board, or supplemental documentation provided with new Duets shipped with this option.



Signal connected to Input 1 is OUTPUT here, delayed one frame, with ancillary data intact

Squeezeback Video Input 1

Squeezeback Video Key Input 1

Squeezeback Video Input 2

Squeezeback Video Key Input 2

Squeezeback Board Back Panel

Before doing anything else, you must make sure that Duet's **Video Mixer** is set up properly. Use the Tools dropdown menu to gain access to the mixer controls.

🚍 SD Mixer Control 📃 🗖 🗙	
SD Mixer Control □ Video Source ♥ Video I/0 SD Mixer Settings Layer 1 Layer 2 FB1 FB2 FB2 FB3 Tool 100 FB1 Output 1 Output 1 FB2 Test Timel	The output of the Squeezeback Board behaves as if it were a third Frame Buffer. Therefore, Frame Buffer 3 must be selected as the contents of one of the layers in your composition. Any Frame Buffer may be assigned to any of the Mixer's three Layers. Frame Buffers 1, 2 and 3 are shown here assigned to Layers 1, 2 and 3 just to keep this illustration simple.

SD Mixer Control

- At upper right, make sure that **FB3** is selected for **Layer 3**.
- In the Output Router area at lower left, select Mix or Layer 3 and press OK.

Next, select **Squeezeback Object** from the **Tools** menu again to access the controls for the Squeezeback board.

Sque	eze Back				×
M	1ode			V	
	Region	1	•	Priority	7
A	nchor	Center	_	•	
s	ize	, 1⁄4 Scre	en		
E	ffect	None		•	
Г	Key Inpu	ut		Key Shape	
	Region	2	0	Priority	7
A	nchor	Center		7	
S	ize	1⁄4 Scre	en	V	
E	iffect	None		7	
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	OK			Cancel	1
	UN				-
	UK				_
	UK				

Squeezeback Dialog Box

The Squeezeback dialog (seen top right in the illustration above) opens. For the moment, click only the **Region 1** checkbox. Press **OK**, and on the Canvas, a *Squeezeback Region* appears (seen bottom right).

As with Lyric's Video Regions, only the object pictured above appears in the Canvas view on the VGA monitor. The image from the video source can only be seen on Duet's air/program output(s) in a region defined by the position and boundaries of the object.

Squeezeback Regions are, in most respects, normal two-dimensional Canvas objects that appear on the Scene Graph and Timeline. They can be moved around the Canvas and re-sized over time.

Scene Graph Squeeze Back Re Light 1 Global Light Camera	egion 1	<u>- 0 ×</u>		
🔲 FB1 Timeline				
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E Squeeze Back F	Region 1			
Elight 1				
🕂 📕 Global Light				

Squeezeback Objects on Scene Graph and Timeline

Note that <u>rotation</u> of the Squeezeback Region is not possible, as with other Canvas objects. Therefore, when editing a Squeezeback Region, the Rotation controls of the Properties page will be unavailable:

XYZ Lighting Surface ↓ Position × 0.000 ↓ × 0.000 ↓ × Y 0.000 ↓ × Z -2.000 ↓ × Scale × 3.600 ↓ × 3.600 ↓ × Z 1.000 ↓ × Z 1.000 ↓ × Z 1.000 ↓ × ✓ Lock Aspect Ratio ✓
Position × 0.000 Y 0.000 Z -2.000 Z -2.000 X 3.600 Y 3.240 Z 1.000 Z 1.000 Z 1.000 ✓ Lock Aspect Ratio
Position × 0.000 Y 0.000 Z -2.000 Z -2.000 Scale
Position × 0.000 Y 0.000 Y 0.000 Z 2.000 Z 2.000 Y 3.600 Y 3.240 Z 1.000 Z 1.000 ✓ Lock Aspect Ratio
Position × 0.000 Y 0.000 Z 2.000 Z 2.000 Scale × X 3.600 Y 3.240 Z 1.000 Z 1.000 Z 1.000 ✓ Lock Aspect Ratio
Position × 0.000 Y 0.000 Z -2.000 Z -2.000 Scale - × 3.600 Y 3.240 Z 1.000 Z 1.000 ✓ Lock Aspect Ratio
× 0.000 ★ Y 0.000 ★ Z 2.000 ★ X 3.600 ★ Y 3.240 ★ Z 1.000 ★ Z Lock Aspect Ratio Center × 0.000 ★
Y 0.000 ▼ Z -2.000 ▼ Scale ▼ 3.600 ▼ Y 3.240 ▼ Z 1.000 ▼ Z 1.000 ▼ ✓ Lock Aspect Ratio
Z 2.000 Scale × 3.600 × 3.240 × 3.240 × 2 1.000 ✓ Lock Aspect Ratio
Scale × 3.600 Y 3.240 Z 1.000 Z 1.000 ✓ Lock Aspect Ratio Center × × 0.000
× 3.600 Y 3.240 Z 1.000 ✓ Lock Aspect Ratio
Y 3.240 ★ Z 1.000 ≠ ✓ Lock Aspect Ratio Center X 0.000 ★
Z 1.000 + Lock Aspect Ratio
Center X 0.000
Center
× 0.000 ÷
Y 0.000
Z 0.000
Relative to Position
Reset to Default

XYZ Properties Showing Disabled Rotation

Also, a note about using Lyric's four movement cursors with Squeezeback Regions.



Transform Tools

- The Position cursor **may** be used without limitation.
- The Rotation cursor will be inactive when a Squeezeback Region is selected on the Scene Graph.
- When using the Edit Scale cursor [1], two cautions should be observed: First, maintaining the Squeezeback Region's original aspect ratio may be more difficult than if you are using the Properties Menu's **Scale** controls (with the Lock Aspect Ratio checkbox selected). Second, DO NOT shrink the Squeezeback Region to the point of infinity on the Canvas. This may have the effect of imposing rotation on the object and cause software problems with the Lyric application.
- The Edit Center of Rotation Cursor [1] may be used without limitation.

Right-clicking a Squeezeback Region on the Canvas makes available the following options:

Position Lock On Enable Bounding Box	
Squeeze Back 🔹 🕨	Display Squeeze Back Menu
Advanced Effects	Make Full Screen
Advanced Effects	Enable Clipping
Copy Animation State	Edit Clip Box
Paste Animation State	
Paint	

Squeezeback Options

• **Position Lock On** disables the Position controls, as seen below. (Remember that the **Rotation** controls are *never* present on the XYZ Properties tab for a Squeezeback Region.)

Prop	perties		- 🗆 ×
XYZ	Lighting	Surfac	e (• •
			_
- Positi	on		
{ }	0.435	4 7	
V 8	-0.192	4. 7	
2	2 -2.000	- 	
Scale			
×	0.250	•	

Position Lock On

- Enable Bounding Box allows the Squeezeback Region to be scaled uniformly or non-uniformly.
 - Selecting Squeezeback accesses a sub-menu, as seen above. The Squeezeback Clipping Region is anchored to a user-specified position, and is displayed on the Canvas ay all times. Smooth scaling is supported when Clipping is enabled.
 - Display Squeezeback Menu gives access to all Squeezeback adjustments (activating each region, keying controls, effects, Interpolation mode).
 - o Make Full Screen is self-explanatory.
 - Enable Clipping allows the Squeezeback Region to be cropped (as opposed to scaled).
 - Edit Clip Box opens the Clip Box Adjust dialog. Modify the Width and Height of the Clip Box as desired, and use the X and Y controls to position the Clip Box on the Squeezeback Region.



Setting the Clip Box

The result of your selection will be immediately apparent on Duet's output(s), but the VGA monitor displaying the Canvas will only show the outlines of the selection as a bounding box. The rest of the Canvas object that symbolizes the Squeezeback Region will remain visible (as pictured above).

As you can see from the initial dialog box, **two** regions of Squeezeback video can be placed on the Canvas at a time. When two Squeezeback regions are on the Canvas at the same time, each is at the **same** fixed distance from the viewer on the Canvas's Z axis. Therefore, you will probably wish to assign **display priority** to one of them. When the two regions overlap, the region you have designated with the **Priority** radio button always appears 'in front of' the other one.

Region 2 (Green Cross Mark)	(Red ark)
Squeeze Back 🛛 🗙	
Mode	
Region 1 O Priority	
Anchor Center	
Size Current Size	
Effect Current Effect	
🗖 Key Input 🗖 Key Shape	
Region 2	
Anchor Center	
Size Current Size	
Effect Current Effect	
🗌 Key Input 📄 Key Shape	
OK Cancel	

Placing Two Video Regions on the Canvas

Interpolation Mode

As of Lyric Version 3.2, a special **Interpolation Mode** has been added. Usable only with the **updated Squeezeback Board** (Revision H), Squeezeback Interpolation Mode provides processing in sub-pixel and sub-scanline increments for smoother movement of Squeezeback Regions.

NOTE however, that use of the Interpolation mode limits use of the Squeezeback facility to **one** Squeezeback Region at a time.

To use Interpolation Mode, the same signal must be routed to BOTH inputs of the Squeezeback Board !! If using the Keyer with an interpolation-enhanced Squeezeback region, the key signal must be routed to both of the board's Key inputs.

S8 VID DL VD	Squeeze Back
	Mode Interpolation
	 Reg<u>interpolation</u> Priority
S8 VD IN1	Anchor Center 💌
	Size 14 Screen 💌
	Effect None 💌
To use Interpolation Mode, the <i>same</i> Video signal	🗖 Key Input 🗖 Key Shape
 must be connected to both Video inputs of the Squeezeback board. 	C Priority
SAMO	Anchor Center
BV2	Size 14 Screen 💌
• • • •	Effect None
53 (EY	🗖 Key Input 🗖 Key Shape
	OK Cancel
If using the Kever with an in	nterpolation-enhanced
Squeezeback Region, the s	ame Key signal must be

Interpolation Mode Cabling

Lyric detects the presence of an appropriate Squeezeback Board, and if one is found in the system, makes this option available, as seen above right.

Also, note that activating Interpolation Mode makes the dialog's Region 2 controls unavailable, since both inputs are dedicated to the production of one interpolation-enhanced Squeezeback Region.

Squeezeback Effects

Another Squeezeback	feature new v	with Lyric 3.	2 is Squee	zeback Effects
		j		

Squeeze Back 🔀	Squeeze Back 🔀
Mode 🔽	Mode 🔽
Region 1 💿 Priority	Region 1 Priority
Anchor Center 💌	Anchor Center 💌
Size 1/4 Screen 💌	Size 14 Screen 💌
Effect ½ Screen	Effect Expand ¼ -> Full 💌
³ 4 Screen ☐ Key Input Full Screen	None Key Input Expand ¼ -> Full
C Priority	Expand ¼ -> ¾ Expand ¼ -> ½ C Priority
Anchor Center 🔽	Anchor Center 🔽
Size 1/4 Screen 💌	Size 14 Screen 🔽
Effect None 🔽	Effect None 🔽
🗖 Key Input 🗖 Key Shape	🗖 Key Input 🗖 Key Shape
OK Cancel	OK Cancel

Setting Screen Size

These effects offer four pre-defined region sizes: ¼-, ½-, ¾- and full-screen. For each, there are precomposed animations which squeeze or expand the region from its beginning size to any of the other sizes. Simply select a beginning size and one of the effects, and Lyric automatically arranges the appropriate Scale and Position values over the Region's duration on the Timeline. The **Anchor** dropdown, pictured below, fixes one corner or edge of the Squeezeback Region as the location from which scaling will begin, leaving the position of the selected Anchor unchanged. This illustration has been altered to show all of the available choices in a single view.

Squeeze Back	×
Mode	7
Region 1 [°]	Priority
Anchor	Bottom Edge 📃
Size	Center Top Left Corner
Effect	Top Edge Top Right Corner
🗖 Key Input	Bottom Right Corner
Region 2	Bottom Left Corner Left Edge
Anchor	Center
Size	14 Screen 🔽
Effect	None
🗖 Key Input	🗖 Key Shape
ОК	Cancel

Selecting an Anchor

To stop a **Squeezeback** animation in progress:

• Press Esc.

30. Video Squeezeback - Duet LE/LEX/PCI/PCI+

Overview

Tools Menu > Squeezeback Panel

Introduction

The PCI-Squeezeback board adds cutting-edge animated video effect creation capability to the Duet LE/LEX/PCI/PCI+ system. The Lyric interface provides a set of easy-to-use setup controls for the PCI-Squeezeback board. *Refer to the topic on* **Squeezeback Effects Setup**.

Note that the PCI Squeezeback Board for Duet LE/LEX/PCI/PCI+ is a completely different piece of hardware from Duet SD's Squeezeback Board. The different versions of Lyric for Duet LE/LEX/PCI/PCI+ and Duet SD offer substantially different means of controlling their systems' respective Squeezeback facilities.

About the PCI-Squeezeback Board

The PCI-Squeezeback board features four independent video layers, two of which can be resized and positioned in real time to create dynamic effects such as compression of a full-screen video image to allow for display of additional graphics in the lower third.

Both **Resizer Video** layers can be independently set for starting/ending positions and dimensions as well as effect duration. Images from the Resizers can be clipped and layered over one another. Dissolve, Fade and Ease effects can be executed between the Video Resizer layers. Resizer effects can be played in forward or reverse. Multiple PCI-Squeezeback boards in a system can simultaneously execute Video Squeezeback effects.

The PCI-Squeezeback board's **Interpolation** mode smooths out jagged motion that may be visible during a slow animation.

An internal Graphics Plane and a Background Video input provide two additional layers to enhance graphic depth. The Background Input also doubles as the digital Genlock input. All layers can be independently turned on and off. The Graphics Plane can also be displayed behind or in front of the Video Resizer layers, providing additional flexibility.

Squeezeback Effects can be triggered from within the **Squeezeback Panel** in Lyric, from outside the **Squeezeback Panel** using Lyric's **Squeezeback Kwik Tool** (outside the **Squeezeback Panel**) in Lyric, from a Lyric **Playlist**, or via **Intelligent Interface**.

Analog Genlock In can be routed to the PCI-Squeezeback board from the Analog Genlock panel. Key and Video are output from the PCI-Squeezeback board.

The PCI-Squeezeback board can operate in conjunction with any combination of three additional PCI-Squeezeback and/or Chyron digital pcCODI boards.

Unsupported Functions

Analog Monitor Out and Key In is not supported on the PCI-Squeezeback board.

NOTES

PCI-Squeezeback boards (as well as Video Processing boards) should be configured before use. See the topic VPB/PCI Squeezeback Board Setup for this procedure.

The display priority (layering order) of the VPBs and Squeezeback boards is dependent upon how they are physically cabled in the Duet LE/LEX/PCI/PCI+ system. See the topic Duet LE/LEX/PCI/PCI+ Cabling Options.

PCI-Squeezeback Board Hardware Topology

All external inputs and outputs of the PCI-Squeezeback board are 10-bit SDI (Serial Digital Interface). Only the Analog Genlock In on the Analog Genlock panel can accept an analog signal, which is routed to an internal input on the PCI-Squeezeback board.

The illustration below diagrams the hardware topology of the PCI-Squeezeback board.



」indicates an internal Mini SMB connector

NOTE

If the PCI-Squeezeback board is disabled due to power failure or other cause, a Video Bypass Relay routes the SB VID 1 (Primary Video In) path to SB VID OUT (Video Out), bypassing the Resizer. This avoids an interruption of the video signal. When power is restored, the Primary Video is automatically rerouted to the Resizer.



PCI-Squeezeback Board Hardware Topology

Duet LE/LEX/PCI/PCI+ Hardware Configuration

Config Menu > Duet Hardware

Duet Hardware Configuration is the setup facility for Duet systems. It encompasses functions such as VPB/PCI+ Squeezeback board allocations, **GPI**, **Video Standard**, **Timecode**, and much more. When **Duet Hardware Configuration** is selected from the **Config** menu, a set of configuration tabs is displayed for the system on which Lyric is installed.

To access these settings:

• Select **Duet Hardware** from the **Config** menu. The **Duet Hardware Configuration** dialog box is displayed.

et Hardware Configuration	vd Configuration Solum CPI	Timesede	
Board 1	Board 2	Board 3	Board 4
 Air Channel Preview Channel 	Air Channel Preview Channel	Air Channel Preview Channel	C Air Channel
C Link To UNLINK		C Link To UNLINK	C Link To
Serial Numbers: Board 1: Board 2: SB Board 3: SB	6A31336-E092-0212-Q 6A31311-QE03-1Q01-0 6A31331-A102-0009-D		
Board 4:			
		OK Cancel	Apply Help

Duet Hardware Configuration Dialog Box

There are four tabs, plus one optional tab, which contain configuration settings:

- Configure Board Use: Specifies how boards are used.
- Setup Board Configuration: Specifies parameters such as Video Output Standard, Genlock, etc. for the selected board.
- Setup GPI: Specifies how the GPI assignments are set up.
- Timecode: Specifies Timecode source and other parameters.
- Device Control: If the optional RS-422 Serial I/O Board and its driver are installed in the system, a Device Control tab, specifying the configuration of the board, is displayed as well. The RS-422 Serial I/O Board enables serial control of external devices using the BVW-75 protocol.

Genlocking PCI-Squeezeback Boards

The PCI-Squeezeback board can be **Genlocked** using either an analog or digital signal. **Genlock** mode is set in the **Setup Board Configuration** tab located in the **Duet Hardware Configuration** dialog box which is accessible from **Config>Duet Hardware**. The **Genlock** setting is retained after the system is turned off, and does not need to be reset when the system is powered up.

Analog Genlock

Analog Genlock is fed to the **Analog Genlock In** on the **Analog Genlock** panel. A multiple-board Duet LE/LEX/PCI/PCI+ system should already be internally wired by Chyron for analog Genlock operation. In this instance, the Genlock signal can be fed to any one Genlock input.

NOTE

Feeding separate analog Genlock signals to multiple boards through their respective GENLOCK inputs can result in output video that is not in sync and/or unstable.

Digital Genlock

To use digital Genlock sync, feed a video source to **BACKGND IN** of the PCI-Squeezeback board. This becomes the digital Genlock source. The background can also be disabled without disrupting the Genlock signal.

To sync a PCI-Squeezeback board with one or more additional PCI-Squeezeback boards and/or VPBs using digital Genlock, designate one of the boards to receive the digital Genlock signal, then route the video output of that board to the input (**BACKGND** if PCI-Squeezeback; **VIDEO IN** if VPB) of the next board. Route the video output of the receiving board to the appropriate input of the next board, and so on, until all boards are connected.

NOTES

- While any board can receive the digital Genlock signal and route it to other boards, one method of operation is to use the PCI-Squeezeback board to receive the digital Genlock signal and pass it to any other PCI-Squeezeback boards before routing to VPBs. U sing this configuration allows output from the VPBs to display on top of the PCI-Squeezeback video, and not be forced into the background. Additionally, Key Out from a PCI-Squeezeback board can be fed to a VPB, where the opposite is not possible.
- Feeding separate digital Genlock signals to multiple boards through their respective BACKGND IN or VIDEO IN inputs can result in output video that is not in sync.

Squeezeback Panel - Getting Started

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Duet's optional PCI-Squeezeback board enables the creation of resizeable video areas which can display video from independent sources such as an external video feed or the **Internal Clip Player**. The PCI-Squeezeback board features four independent video layers, two of which can be resized and positioned in real time to create dynamic effects such as compression of a full-screen video image to allow for display of additional graphics in the lower third. In addition, the PCI-Squeezeback board contains a graphics layer and a background video input to add additional graphic depth. **Squeezeback** effects are rendered independently by GPI triggers, can be programmed into **Playlists** using the **Sqz-In** and **Sqz-Out** effects and triggered by Intelligent Interface.

NOTE

Except for SQZ Kwik Tool Squeezeback effect execution, all setup and display options for each PCI-Squeezeback board must be set from within the Squeezeback Panel and/or the Squeezeback Designer (START/END) dialog boxes. If Video Resizer regions, the graphic layer and/or Background video are not displaying, check the appropriate settings in these dialog boxes. Note that Video and Graphic layer display options are not set in the Duet Hardware Configuration>Setup Board Configuration tab, as they are with VPBs.

There are two methods for displaying the **Squeezeback Panel**:

• Click on the Canvas displaying the active **Frame Buffer** (this brings the focus to the Canvas), then click **Tools > Squeezeback Panel**.

OR

- Squeezeback Panel X Effect-SQZ Board 1 (2) SQZ Board 2 (3) Active Board Video A Video B READ 1 2 3 4 Slot Starting Starting Msg Y X Y Width Height X Width Height 0 0 0 0 0 0 0 0 Ending Ending SAVE SOZ MSG Width Y Y Width Height X Height X 0 0 0 0 0 0 0 0 Clipping Clipping Store MSG Left Top Bottom Right Left Top Bottom Right 0 0 0 0 0 0 0 0 Clear MSG Hold Ctrl for both Video Hold Ctrl for both Video COPY A/B COPY START OUT OUT IN IN COPY END Ease Ease Frames: 0 Frames: 0 No Fade No Fade Fade In C T ON I ON C Fade In C Fade Out Interpolate C Fade Out PASTE END STARTING SQUEEZE VALUES ENDING SQUEEZE VALUES <---> Set Primary Video A over B Background On 🔽 Graphic On Top Clear Effect C B over A Dissolve Effect Graphic Plane On -IN 0 0 0 0 2 0 3 0 5 0 0 7 0 8 9 0 1 4 6 10 GPI: OUT 0 0 0 0 0 0 0 0 0 0 1 2 3 4 5 6 7 8 9 10 GPI: MSG: Name: Sqz Version OK. Cancel 🔲 Enable Squeezeback Kwik Tool SDRAM-MIXER
- Click on the **Designer** button in the **Squeezeback Kwik Tool**.

Squeezeback Panel

This example shows a two-PCI-Squeezeback board system. Note that there may be other VPBs in the system as well, but they do not appear in the **Squeezeback Panel**. The PCI-Squeezeback boards are numbered in order of channel assignment. For example, if the system contains two VPBs assigned to

channels 1 and 2, and two PCI-Squeezeback boards assigned to channels 3 and 4, the PCI-Squeezeback boards are numbered 1 and 2 respectively in the **Squeezeback Panel**. The channel to which each is assigned is in the parentheses to the right of the respective board number. The display priority (layering order) of the VPBs and PCI-Squeezeback boards is dependent upon how they are physically cabled in the Duet LE/LEX/PCI/PCI+ system. See **Duet LE/LEX/PCI/PCI+ Cabling Options**.

Ten **Squeezeback** effects can be set up and saved as one Lyric (*.lyr*) Message and recalled at any time. If more than ten effects are required, then additional pages of ten effects can be set up and saved as *.lyr* messages.

Each effect can use any number of available PCI-Squeezeback boards, up to four, in the Duet system. Each PCI-Squeezeback board has available two resizeable video inputs. For example, to compose a four-head shot effect, use two PCI-Squeezeback boards; for six head shots, use three boards; and for eight, use all four.

Each PCI-Squeezeback board also has a graphics layer and a background input. Start and end positions, start heights and widths of each resizeable video can be set, as well as priority, interpolation and transition effect. GPI triggers are also set in this dialog box. Multiple PCI-Squeezeback boards in a system can simultaneously execute **Squeezeback** effects.

The PCI-Squeezeback board has a Video and a Key output. It can be Genlocked using either the Analog Genlock Panel or through the Background In BNC connection for digital Genlock. See **Analog and Digital Genlock** for additional information.

Non-PCI-Squeezeback board control is not accessible from the Squeezeback Panel.

Effect Active Board Settings

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

The **Effect Active Board** settings (pictured below), located on the left side of the **Squeezeback Panel**, contains the active/inactive board information and the PCI-Squeezeback board assignments for each of the 10 **Effect Messages** slots.

Effect Active Board 1 2 3 4 Slot

Effect Dialog Box

Slot

There are ten **Squeezeback Effect** slots, each of which can hold one **Effects Message**. Each group of **Effects Messages** on this page can be saved as one Lyric (*.lyr*) message.

First, select an effect on which to work. To select a slot, click on its respective radio button.

- If the slot is already programmed, the settings for the **Effects Message** assigned to that slot are displayed. Additionally, the **Active Message Indicator** at the left end of the row turns red. If desired, the settings can be edited.
- If the slot is not already programmed, all values display at **0**, and a new Effect Message can be programmed at that slot.

The next step is to select a board on which the effect is to be executed. Continue to the next paragraph for information on **Active Board**.

Active Board

Each PCI-Squeezeback board is assigned a permanent number (1, 2, 3 or 4) by the Duet LE/LEX/PCI/PCI+ system. Up to four PCI-Squeezeback boards can be made active for an effect.

Each PCI-Squeezeback board in the system also displays a **SQZ Board** tab, located to the right of the **Effect** dialog box, in which the two **Video Resizer** effects (**Video A** and **Video B**) can be set. The illustration above shows a system with two PCI-Squeezeback boards. **SQZ Board** tab setup is described in **SQZ Board Tabs**.



SQZ Board Tabs

Select the board(s) on which the effect is to be executed. Click the checkbox(es) corresponding to the board number. As pictured above, **Effect 1** is assigned to **Board 1**, and **Effect 2** is assigned to **Board 1** and **Board 2**.

SQZ Board Tabs

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Each PCI-Squeezeback board in the system displays a **SQZ Board** tab, located to the right of the **Effect** dialog box, in which the two **Video Resizer** channels, **Video A** and **Video B**, can be set. Each channel has its own set of values with which to program an effect. **Video A** settings are on the left; **Video B** settings are on the right.



SQZ Board Tabs

A two-PCI-Squeezeback board system is shown above. The boards are numbered **1** and **2** by the system. The number in parentheses indicates the LE/LEX/PCI/PCI+ channel to which the board is assigned in the **Duet Hardware Configuration** dialog box accessed from **Config > Duet Hardware**.

• To select a board to program, click on the appropriate tab.

Video A is considered the **Primary Video Channel**. As such, Primary Video is sent both to **Resizer 1** and to a frame delay module which bypasses the Resizer, and can be sent, unmodified, to the Video output, regardless of **Video A** settings.

Additionally, ancillary data such as embedded audio and Line 21 **Closed Caption** data is carried on the frame-delayed **Primary Video** signal, and can be inserted into the PCI-Squeezeback board mixer **Video Out** stream. Note that resized **Primary** and **Secondary Video** streams are always stripped of ancillary data. *Refer* also to **Frame Delay and Ancillary Data**. Refer to **Ancillary Data** for details on selecting the PCI-Squeezeback board mixer video output with ancillary data vs. unmodified Primary Video.

The procedure for setting the values for Video A and Video B is identical except for the Interpolate function, which is described below in Interpolate.

Position: Starting/Ending X, Y

Starting and **Ending X**, **Y** values set the starting and ending positions of **Video A** and **Video B**. **X/Y** position is measured from the center of the screen. To enter a value, highlight the appropriate field, then type the desired number into the field.

- Starting X/Ending X defines the horizontal entry and exit positions respectively, in pixels, of the video image.
 Range: -720 to +720
- Accepts single-pixel entry which defaults to even number of pixels.

Starting Y/Ending Y defines the vertical entry and exit positions respectively, in scanlines, of the video image.

- Range NTSC: -244 to +244
- Range PAL: -289 to +289
- Accepts single-scanline entry which defaults to even number of scanlines.

Dimensions: Starting/Ending Width, Height

Starting and **Ending Width**, **Height** values set the starting and ending dimensions of **Video A** and **Video B**. To enter a value, highlight the appropriate field, then type the desired number into the field.

Starting/Ending Width defines the starting and ending horizontal dimensions, in pixels, of the video image. Range: **8** to **720**

Starting/Ending Height defines the starting and ending vertical dimensions, in scanlines, of the video image.

- Range NTSC: 2 to 486
- Range PAL: 2 to 576

Clipping: Left, Top, Bottom Right

The video to be used for the Video Squeezeback effect can be clipped (cropped). Note that the clipping Line 21 of the video removes Closed Caption information. This is of no consequence for **Primary Video** input, as this ancillary data is diverted to the **Frame Delay** module and can subsequently be incorporated into Video Out. Note that **Secondary Video** (**Video B**) is always stripped of ancillary data.

To enter a value, highlight the appropriate field, then type the desired number into the field.

- Left/Right dimensions can be clipped in 8-pixel increments.
- **Top/Bottom** dimensions can be clipped in **1**-scanline increments.

Hold Control for Both Video A and B

The **Hold Control** slider bar is used to manually step through and view the effect frame by frame. Each frame can be individually edited. The current frame number is displayed in the display field located between the **OUT** and **IN** buttons (see below).

To move the slide box, either click on the slider bar to jump the slide box to the clicked location, or drag the slide box to the desired position.

OUT/IN and Frame Display Field

The **OUT** and **IN** buttons are used to manually step through and view the effect frame by frame. Each frame can be individually edited. The current frame number is displayed in the display field located between the **OUT** and **IN** buttons.

- Click IN to step the effect in the forward direction.
- Click **OUT** to step the effect in the reverse direction.

Ease

Ease applies an **Ease** effect to the beginning and end of the **Video Squeezeback** effect. To apply **Ease**, click the **Ease** checkbox. Note that **Ease** is applied only to the **Video Squeezeback** regions, not to the graphic associated with the effect. See **Store MSG - Lyric Graphic** for information on stored graphics.

Fade

Fade provides a number of choices for applying a Fade effect.

- Click the **No Fade** radio button if no **Fade** effect is to be applied to the **Video Squeezeback** effect. This is the default setting.
- Click the Fade In radio button to fade in the video at the beginning of the Video Squeezeback effect.
- Click the Fade Out radio button to fade out the video at the end of the Video Squeezeback effect.

Note that **Fade** is applied only to the **Video Squeezeback** regions, not to he graphic associated with the effect. See **Store MSG - Lyric Graphic** for information on stored graphics.

Frames

The duration of the **Video Squeezeback** effect is set in the **Frames** field. To enter a value, highlight the field, then type the desired number into the field.

Range: 1 to 300 (10 seconds)

• To execute a Cut effect, set Frames to 1.

ON

The **ON** control turns the video region on or off. For example:

- If both Video A ON and Video B ON are checked, both Video A and Video B are displayed.
- If Video A ON is not checked, and Video B ON is checked, Video A is not displayed and Video B is displayed.

To toggle between on and off:

• Click the **ON** checkbox to toggle between On and Off.

Interpolate

Interpolate causes sub-scanline and sub-pixel movement to be applied during an animation, smoothing out jaggedness that sometimes occurs during slowly-moving animations.

Applying **Interpolate** requires that the same video source be fed simultaneously to *both* **Primary** and **Secondary Video** inputs. This is necessary to produce the sub-scanline and sub-pixel movements.

Interpolate can be set only from Video A. When Interpolate is enabled, Video A settings are automatically applied to Video B, and the Video B dialog region is grayed out.

• Click the Interpolate box to toggle between Enabled and Disabled.

Mixer Controls

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

The **Mixer Controls** determine how the various PCI-Squeezeback video layers display in relation to each other. The **Mixer Controls** are located below the **SQZ Board** tabs and the **STARTING/ENDING SQUEEZE** values.

STARTING SQUEEZE VA	LUES <>	ENDING SQUEEZE VALUES
A over B	🔲 Background On	🔲 Graphic On Top
C B over A	Dissolve Effect	🔲 Graphic Plane On

Mixer Controls

A Over B, B Over A

These settings determine display priority between the two resized video layers.

- Click the radio button **A Over B** to display **Video A** on top of **Video B**.
- Click the radio button **B Over A** to display Video **B** on top of Video A.

Background On

This setting indicates whether or not the Background Video In is turned On or Off.

• Click the Background On checkbox to toggle Background Video In On or Off.

Dissolve Effect

Dissolve programs a Dissolve effect between **Video A** and **Video B**. It is recommended that the two video images be the same size, and that they are positioned one directly on top of the other. When executed, the top layer dissolves into the bottom layer. See **A Over B**, **B Over A** above for details on **Video A/B** layer priority.

Graphic On Top

Graphic On Top determines the display priority between the Graphic Plane and Video A/B. The Graphic Plane can display either on top of Video A and Video B, or behind Video A and Video B. The Graphic Plane cannot display *between* Video A and Video B.

• Click the Graphic On Top checkbox to toggle Graphic On Top On or Off.

Graphic Plane On

Graphic Plane On turns the Graphic Plane display On and Off.

• Click the Graphic Plane On checkbox to toggle Graphic Plane display On or Off.

NOTE

If graphics are not reading, text input is not being accepted or importing or loading into the Squeezeback graphics buffer is inoperable, check to see if the Graphic Plane is turned off. If so, turn it back on.

STARTING/ENDING SQUEEZE VALUES - Squeezeback Designer

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

The **Squeezeback Designer** provides the ability to program a Squeezeback effects for Video A and Video B, much as it is done in the **SQZ Board** tab. The **Squeezeback Designer**, however, provides sliders and spin boxes with which to fine-tune the effects settings. There are also additional **Anchor**, **Lock Aspect** and **Justify** settings in the **Squeezeback Designer** which are not available in the **SQZ Board** tab.

To access the **Squeezeback Designer**, click **STARTING SQUEEZE VALUES** to program or display the start settings of the effect, or click **ENDING SQUEEZE VALUES** to program or display the end settings of the effect. These buttons are located directly below the **SQZ Board** tabs.

STARTING SQUEEZE VALUES	<>	ENDING SQUEEZE VALUES
STATTING SQUEEZE VALUES	\/	ENDING SQUEEZE VALUES

STARTING/ENDING SQUEEZE VALUES Buttons

- Depending on which button is selected, the **Squeezeback Designer (START)** or (**END)** dialog box is displayed.
- Clicking the center button swaps the settings in the STARTING SQUEEZE VALUES with the ENDING SQUEEZE VALUES settings.

The figure below shows the Squeezeback Designer (START) dialog box.



Squeezeback Designer (START)

The settings for **Video A** are on the left; settings for **Video B** are on the right. These two dialog areas are identical except for the **Video A ON** or **Video B ON** checkbox and **Video A Over B** or **Video B Over A** radio button found at the lower left of each dialog area.

There is also a row of checkboxes at the bottom of the **Squeezeback Designer (START)** or **(END)** dialog box where display priority is set. Each of the following procedures for setting the parameters described in the following paragraphs are, except where noted, applicable to both **Video A** and **Video B**, in both the **Squeezeback Designer (START)** and **Squeezeback Designer (END)** dialog boxes.

Position: X, Y

X and Y values set the starting or ending positions of Video A and Video B. X/Y position is measured from the center of the screen.

- The **X POSITION** slider is located at the bottom of the **Squeezeback Designer Video A** and **B** dialog boxes. The **X POSITION** spin control box is located below and at the right end of the slider.
- The **Y POSITION** slider is located at the right of the **Squeezeback Designer Video A** and **B** dialog boxes. The **Y POSITION** spin control box is located to the right and at the bottom end of the slider.



Squeezeback Designer X/Y Position

Starting X/Ending X defines the horizontal entry and exit positions respectively, in pixels, of the video image. Range: **-720 to +720**

• Accepts single-pixel entry which defaults to even number of pixels.

Starting Y/Ending Y defines the vertical entry and exit positions respectively, in scanlines, of the video image.

- Range NTSC: -244 to +244
- Range PAL: -289 to +289
- Accepts single-scanline entry which defaults to even number of scanlines.

Dimensions: Starting/Ending Width, Height

Width and Height values set the starting and ending dimensions of Video A and Video B.

- The **WIDTH** slider is located at the top of the **Squeezeback Designer Video A** and **B** dialog boxes. The **WIDTH** spin control box is located above and at the left end of the slider.
- The **HEIGHT** slider is located at the left of the **Squeezeback Designer Video A** and **B** dialog boxes. The **HEIGHT** spin control box is located to the left and at the top end of the slider.

Video A-	
[16 → □ Lock Aspect □ LL □ LR
145 - Justify Top Left Center Right	WIDTH Clipping 0 Top Y H 0 Left 0 Right 1 0 Bottom N
Bottom	X POSITION
	·
♥ Video ♥ Video	ON Over Video B

Squeezeback Designer Height/Width

Starting/Ending Width defines the starting and ending horizontal dimensions, in pixels, of the video image.

• Range: 8 to 720

Starting/Ending Height defines the starting and ending vertical dimensions, in scanlines, of the video image.

- Range NTSC: 2 to 486
- Range PAL: 2 to 576

Clipping: Left, Top, Bottom Right

The video to be used for the Video Squeezeback effect can be clipped (cropped). Note that the clipping Line 21 of the video removes Closed Caption information. This is of no consequence for **Primary Video** input, as this ancillary data is diverted to the **Frame Delay** module and can subsequently be incorporated into Video Out. Note that **Secondary Video** (**Video B**) is always stripped of ancillary data.

The **Clipping** spin control boxes are located at the center of the **Squeezeback Designer Video A** and **B** dialog boxes.

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	- Clipping	
	0 Top	Y
H E I	0 ∸ Left	P
G H T	0 • Right	S I T
	0 + Bottom	I O N
	X POSITION	

Squeezeback Designer Clipping Settings

- Left/Right dimensions can be clipped in 8-pixel increments.
- **Top/Bottom** dimensions can be clipped in **1**-scanline increments.

Lock Aspect

Lock Aspect preserves the aspect ratio of the image when setting a new height or width. When **Height** is adjusted, **Width** automatically adjusts to conform to the aspect ratio. When **Width** is adjusted, **Height** automatically adjusts to conform to the aspect ratio.

The Lock Aspect checkbox is located at the top center of the Video A/B dialog box.



Lock Aspect Checkbox

• Click the Lock Aspect checkbox to toggle Lock Aspect On or Off.

Anchor

Normally in a Squeezeback effect, the image expands from or contracts to a center point. **Anchor** provides additional points from which to expand or contract the image, as shown in the following figure. **Image Expands/Contracts To/From:**



Anchors

The Anchor checkboxes are located at the top right of the Video A/B dialog box.

- Click the appropriate Anchor checkbox to toggle it On or Off.
- If no checkbox is checked, the image expands from or contracts to the center of the image.

	Anchor:	UL	🗆 UR
Lock Aspect		Π LL	🗆 LR
		_	
WIDTH		_	

Anchor Checkboxes

Copy/Paste

Settings can be copied and pasted from one **Squeezeback Designer Video A/B** dialog box to another. The **Copy** and **Paste** buttons are located at the right side of the **Squeezeback Designer Video A/B** dialog box.

P	Сору	
	Paste	

Copy and Paste Buttons

- To copy the settings of a **Squeezeback Designer Video A/B** dialog box. The settings are stored in a **Paste** buffer. When there are contents in the **Paste** buffer, the **Paste** button is no longer grayed out.
- To paste settings, display the **Squeezeback Designer Video A/B** dialog box to which the settings are to be applied. Click the **Paste** button. Note that this can be in either a **Squeezeback Designer** (START) or (END) dialog box.

Video A/B Mixer Controls

The **Mixer Controls** determine if **Video A** and/or **B** are **ON**, and which one displays on top of the other. The **Mixer Controls** are located in the lower left corner of the **Squeezeback Designer Video A/B** dialog box. The **Video A** and **Video B Mixer Controls** differ slightly from each other as shown in the following figure.

Α	Video A ON Video A over Video B	
в	Video B ON Video B over Video A	432

Video A and Video B Mixer Controls

Video A and Video B display can be independently turned on and off.

• Click the Video A or B ON checkbox to toggle between on and off

Video A over B and Video B over A are not independent of each other. Only one video image can be set to display on top of the other.

- Click the Video A over B radio button in the Squeezeback Designer Video A dialog box to display Video A on top of Video B.
- Click the Video B over A radio button in the Squeezeback Designer Video B dialog box to display Video B on top of Video A.

Justify

Justify is a quick way to move a video image to a particular area of the display. The **Justify** buttons are located at the left side of the **Squeezeback Designer Video A/B** dialog box.



Justify Buttons

• Click the **Justify Top**, **Left**, **Center**, **Right** or **Bottom** button to move the image to the indicated location.

Graphic Plane/Background Video Mixer Controls

The Graphic Plane/Background Video Mixer Controls determine whether or not the Graphic Plane and Background video display, and if the Graphic Plane displays on top of or behind the video images. These controls are located at the bottom center of the **Squeezeback Designer** dialog box.



Graphic Plane/Background Video Mixer Controls

Graphic Plane On turns the Graphic Plane display On and Off.

• Click the Graphic Plane On checkbox to toggle Graphic Plane display On or Off.

Graphic On Top determines the display priority between the Graphic Plane and Video A/B. The Graphic Plane can display either on top of Video A and Video B, or behind Video A and Video B. The Graphic Plane cannot display *between* Video A and Video B.

• Click the Graphic On Top checkbox to toggle Graphic On Top On or Off.

NOTE

If graphics are not reading, typing importing or loading into the Squeezeback graphics buffer, check to see if the Graphic Plane is turned off. If so, turn it back on.

The Background On setting indicates whether or not the Background Video In is turned On or Off.

• Click the Background On checkbox to toggle Background Video In On or Off.

Start/End

Selecting the **Start** or **End** radio button displays the **Start** or **End** settings, respectively, for the **Squeezeback Designer**. The selected settings can then be then be edited.



Start/End Radio Buttons

OK/Cancel

The **OK** and **Cancel** buttons are located at the bottom left corner of the Squeezeback Designer dialog box.



OK and Cancel Buttons

When finished setting the parameters for both Video A and Video B:

• Click **OK** to save settings. The **Squeezeback Designer** dialog box closes, and the corresponding settings in the **Squeezeback Panel** are updated.

OR

• Click **Cancel** to close the **Squeezeback Designer** dialog box without saving settings. The settings in the **Squeezeback Designer** dialog box revert to the values that were displayed on opening the dialog box. the corresponding settings in the **Squeezeback Panel** remain unchanged.

Additional Settings

Tools Menu > Squeezeback Panel

The following settings affect the routing of the video, as well as provide the version of the SDRAM-MIXER.

Set Primary Video

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

All resizers, background and graphics turn off, allowing video to pass through the board. It is desirable to activate **Set Primary Video** when displaying full-screen video. When activated, **Video A** is passed through the **Frame Delay** module, resulting in a seamless transition between display of resized video and the unmodified full-screen video. Resized video is 8-bit, where unmodified video is 10-bit, producing superior image quality. **Set Primary Video** also disables **Video B (Secondary Video In - Resizer 2** and the **Graphics Plane**.

• Click the **Set Primary Video** checkbox, seen below to activate this function. The indicator to the right of the checkbox turns red.



Set Primary Video Checkbox

• To deactivate, Set Primary Video, click an IN or OUT button on the execution controls row.

Set Primary Video can also be activated from the SQZ Kwik Tool.

- To activate Set Primary Video, click the Set Primary Video button.
- To deactivate Set Primary Video, click an IN or OUT button.

SQZ Kwik	Tool		×			
Set Primary Video						
Designer						
Slide	1	1				
Head Shots	2	2				
Lower Corner	3	3				
	4	4				
	5	5				
	6	6				
	7	7				
	8	8				
	9	9				
	10	10				

SQZ Kwik Tool

Frame Delay and Ancillary Data

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Processing video through the Resizers adds a one-frame delay to the signals, putting them out of sync by one frame with video that is not processed through the Resizers.

Video containing ancillary data such as audio, as well as closed captioning data, does not pass through the Resizers and must be put in sync with the resized video. To compensate, video from the Primary Video input is fed to the Video 1 Resizer and to a Frame Delay processor, which adds a single frame delay to the unresized video signal. The output of the **Frame Delay** processor is then fed to a Background/Frame Delay selector and to a **Video Out/Ancillary Data** selector.

NOTE



The Frame Delay function is available only to Primary Video.

PCI-Squeezeback Board Hardware Topology

Sqz Version SDRAM-MIXER

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

SQZ Version SDRAM-MIXER indicates the version letter of the firmware used on the PCI-Squeezeback board, as shown in the figure below.

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	OK		Cancel	🔲 Enable Squeezeback Kwił	k Tool	Sqz Version SDRAM-MIXER	G-K

SQZ Version SDRAM-MIXER

Executing a Squeezeback Effect

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Triggering a Squeezeback Effect from the Squeezeback Panel or Squeezeback Kwik Tool

Effect Activation Buttons

The **Effect Activation Buttons/GPI Controls**, located directly under the **Mixer Controls**, set the triggers for the transition in and out of each of the ten effects.

G	Effect A	lumber ctivation Butte	on				Effec	t Execu In	tion IN or OUT dicator Lights
		 A over b C B over A 		i blackgrou Dissolve I	ind Un Effect	i uia L' Gra	aphic Uni i op aphic Plane C)n _	Clear Effect
GPI:		2 0 3	0_4	0 5	0 6	0 7	0 8	0 9	0 10
GPI:	0 1 0	2 0 3	0 4	0_5	0_6	0 7	0 8	0 9	0 10
MSG.			-			-			

Effect Activation Buttons, GPI Controls

There are two rows of buttons numbered **1** through **10**, each number corresponding to an effect slot as described in Squeezeback Effect Save Slots.

- The top row (**IN**) contains the triggers to activate the selected effect in the forward direction. A red indicator light shows that the effect has been executed in the forward (**IN**) direction, and therefore the **END** of the effect is now displayed.
- The bottom row (**OUT**) contains the triggers to activate the selected effect in the reverse direction. A green indicator light shows that the effect has been executed in the reverse (**OUT**) direction, and therefore the **START** of the effect is now displayed.

To activate an effect:

• Click the effect number on the IN or OUT row.

The effect can also be activated using the optional Chyron® KwiKeys keypad:

Press the key on the KwiKeys keypad that corresponds to the effect number. The KwiKeys keypad
must be configured in the Setup GPI tab of the Duet Hardware Configuration dialog box, accessible
from Config > Duet Hardware. See VPB/PCI Squeezeback Board Setup for Setup GPI procedure.
Refer to KwiKeys GPI/O Trigger Device for details on KwiKeys. Call Chyron Customer Service at
631-845-2133 for information on purchasing KwiKeys.

GPI Control

NOTES

- To use GPI Control, the GPIs must first be configured in the Setup GPI tab of the Duet Hardware Configuration dialog box, accessible from Config > Duet Hardware. See VPB/PCI Squeezeback Board Setup for Setup GPI procedure.
- The SQZ Kwik Tool must be enabled (displayed) in order for GPI Control to operate properly. See Enable Squeezeback Kwik Tool below for information on the Squeezeback Kwik Tool.

To set up GPI control of a Squeezeback effect, a GPI must be assigned to the effect **IN** and/or **OUT** that allows it to be triggered through a GPI interface. The **GPI** number should be entered in the field located to the left of the effect activation button that is to trigger the effect. This number corresponds to the **GPI** number in the **GPI** field of the **Setup GPI** tab in the **Duet Hardware Configuration** dialog box. Enter **0** if the **GPI** trigger is not to be used.



GPI Control/GPI Configuration

Enable Squeezeback Kwik Tool

The **Squeezeback Kwik Tool** provides the ability to execute Squeezeback effects from outside of the **Squeezeback Panel**. The **Squeezeback Kwik Tool** is normally displayed (and is therefore enabled) on opening Lyric on any system that contains a PCI-Squeezeback board. If the Squeezeback Kwik Tool is closed, it can be enabled as follows:

• From the Squeezeback Panel, click the Enable Squeezeback Kwik Tool checkbox located at the bottom of the Squeezeback Panel.

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Enable Squeezeback Kwik Tool Checkbox

The SQZ Kwik Tool dialog box is displayed.

SQZ Kwik	Tool		×			
Set Primary Video						
Designer	IN	OUT				
Slide	1	1				
Head Shots	2	2				
Lower Corner	3	3				
	4	4				
	5	5				
	6	6				
	7	7				
	8	8				
	9	9				
	10	10				

Squeezeback Kwik Tool

The left column displays the name previously set in the Name field for the effect in the Squeezeback Panel.

- The indicator light next to the active effect is red if the effect has been executed in the **IN** (forward) direction, therefore the **END** of the effect is now displayed.
- The indicator light is green if the effect has been executed in the **OUT** (reverse) direction, therefore the **START** of the effect is now displayed.

To trigger an effect:

• Click **IN** to activate the effect in the forward direction, or **OUT** to activate the effect in the reverse direction.

Set Primary Video can be activated from the SQZ Kwik Tool.

- Click the Set Primary Video button to activate. See Set Primary Video for details on this feature.
- Click an IN or OUT button on the Squeezeback Kwik Tool dialog box to deactivate Set Primary Video.

The Designer button returns control to the Squeezeback Panel.

Click the Designer button to return control to the Squeezeback Panel.

Triggering a Squeezeback Effect from the Playlist

A **Squeezeback Effect** can be triggered from a **Playlist**. *Refer to the chapter on* **Playlists** for additional *information.*

Triggering a Squeezeback Effect from Intelligent Interface

A Squeezeback Effect can be triggered via Intelligent Interface. Refer to Intelligent Interface V Command - Trigger Squeezeback Effect.

Squeezeback Effect Message Operations

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Effect Name

Each of the ten effects can be given a name to make it more easily identifiable. To name an effect, click on the appropriate **Name** field for the effect slot, then enter the name. The name should be alphanumeric, and can be up to 20 characters long.



Effect Name

When entered, the effect name is reflected in the Squeezeback Kwik Tool.

SAVE SQZ MSG - Save Lyric Squeezeback Effect Message

To save a Lyric Squeezeback Effect message

• Enter an unused ID number or filename in the **Msg** field (*see below*), then click the **SAVE SQZ MSG** button. The message is saved to the default **Messages** directory in the **Lyric** folder.



READ and SAVE Buttons

See the topic Message Number for additional details on file ID numbers.

READ Lyric Squeezeback Effect Message

To load a Lyric **Squeezeback Effect Message**, enter the **Message ID** number or filename in the **Msg** field, (*above*) then click the **READ** button. The effect settings for that message are loaded into the **Squeezeback Panel**. The Squeezeback effect can then be executed. If a graphic message was stored with the effect, it is displayed as well.

Note that while the graphics plane of the PCI-Squeezeback board can be used for 2- and 3-D composition and perform **Read Effects** and **Message Effects**, animations cannot be performed simultaneously with a **Squeezeback** effect on the same board.

Clear Effect

Click the **Clear Effect** button (below), found towards the bottom right of the **Squeezeback Panel** to clear all settings in the **Squeezeback Panel**. Settings are also cleared in the **Squeezeback Designer START** and **END** dialog boxes.



Clear Effect Button
OK/Cancel

When finished setting parameters for the Lyric message:

• Click **OK** as seen below to preserve settings and close the **Squeezeback Panel**. The 10 effects that are active in the Squeezeback setup can be executed from the **SQZ Kwik Tool**. Lyric retains these settings even when closed and the Duet system is turned off.

OR

• Click **Cancel** as seen below to close the **Squeezeback Panel** and revert to the last group of Squeezeback settings that were confirmed using the **OK** button.

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OK and Cancel Buttons

Copy/Paste Operations

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

Copy and **Paste** operations are performed using the buttons located at the right side of the **Squeezeback Panel**, pictured below. Note that when a **Copy** operation is performed, the **PASTE** buttons are no longer grayed out.



Copy and Paste Buttons

Settings can be pasted into the message from which it was copied, a different existing message, or a new message.

COPY A/B

Click the COPY A/B button to copy all SQZ BOARD tab, Squeezeback Designer (START) and (END) dialog boxes and Mixer Control settings for the active effect to the Paste buffer.

COPY START

Click the **COPY START** to copy all **START** settings of the Lyric Squeezeback Effect to the **Paste** buffer.

COPY END

Click COPY END to copy all END settings of the Lyric Squeezeback Effect to the Paste buffer.

PASTE A/B

Click **PASTE A/B** to paste all **SQZ BOARD** tab, **Squeezeback Designer (START)** and **(END)** dialog boxes and **Mixer Control** settings copied to the **Paste** buffer to the effect slot that is selected.

PASTE START

Click **PASTE START** to paste the contents of the **Paste** buffer settings of the Lyric Squeezeback Effect to the **START** settings of the selected effect.

- If the **Paste** buffer contains both **START** and **END** settings, the **START** settings are pasted to the **START** settings of the currently selected effect.
- If the **Paste** buffer contains only **START** settings, they are pasted to the **START** settings of the currently selected effect.
- If the **Paste** buffer contains only **END** settings, they are pasted to the **START** settings of the currently selected effect.

PASTE END

Click **PASTE END** to paste the contents of the **Paste** buffer settings of the Lyric Squeezeback Effect to the **END** settings of the selected effect.

- If the **Paste** buffer contains both **START** and **END** settings, the **END** settings are pasted to the **END** settings of the currently selected effect.
- If the **Paste** buffer contains only **START** settings, they are pasted to the **END** settings of the currently selected effect.
- If the **Paste** buffer contains only **END** settings, they are pasted to the **END** settings of the currently selected effect.

Lyric Graphic Message Import

Tools Menu > Squeezeback Panel (Duet LE/LEX/PCI/PCI+ Only)

When in the Squeezeback Panel, the graphics plane is not available for text editing or other editing functions.

It is possible, however, to compose text and/or graphics in the graphics plane of the PCI-Squeezeback board or on another board while outside the **Squeezeback Panel**, then use it as a component of the Squeezeback effect.

After creating the graphic, save it as a Lyric message before using it in a Squeezeback effect. The Lyric Message can then be read into the PCI-Squeezeback board for use with the Squeezeback effect.

READ Lyric Graphic for Effect

NOTE

Unless the desired graphic is already displayed in the output channel (not just the Canvas) of the PCI-Squeezeback board, it is necessary to perform the READ operation from within the Squeezeback Panel in order to use the Lyric message as part of a Squeezeback effect.

If the desired graphic is already displayed on the output channel (not just the Canvas), skip to Store MSG - Lyric Graphic.

To load a Lyric message, enter the message number in the **Msg** field located at the top right of the **Squeezeback Panel**, then click the **READ** button. The graphic is read from the default **Messages** directory (set in **Config > Preferences > Default Paths**) into the **Graphic Plane** and the output channel of the PCI-Squeezeback board. If the graphic does not appear, be sure that **Graphic Plane ON** is checked, and that **Video A** and/or **B** are not completely covering the **Graphic Plane**.



READ, Msg Field, Store MSG, Clear MSG

Store MSG - Lyric Graphic

Store MSG associates a graphic with a Squeezeback effect. When executed, **Store MSG** converts the contents of the PCI-Squeezeback board graphics channel output into a bitmap that is displayed along with the Squeezeback effect.

When the **Squeezeback IN** effect is executed, the graphic with the effect set in the **Squeezeback Panel** applied. Executing the **Squeezeback OUT** effect has no effect on the displayed graphic.

Once converted, the graphic cannot be edited. Additionally, if the Lyric message contains a **Template Field** tied to **Intelligent Interface**, the contents do not update each time the graphic is used for the Squeezeback effect. The original Lyric message remains untouched and can still be used as before.

NOTE

Only one graphic can be stored per Squeezeback effect. If, for example, a graphic is stored for Effect 3 when PCI-Squeezeback Board 1 is active, then storing a graphic for Effect 3 when PCI-Squeezeback Board 2 is active overwrites the stored graphic on Board 1.

It is advisable to store the all of the graphics associated with the effects in a Lyric message to a single PCI-Squeezeback board. In other words, unless there is an overriding creative reason to do so, do not store graphics in a single Lyric message to more than one board number.

Additionally, if a graphic is stored in a an effect where the graphic plane is disabled, it is advisable to clear the graphic from the effect to avoid accidental display. *Refer to Clear MSG - Lyric Graphic for information on clearing an effect.*

To associate a graphic with a Squeezeback effect:

- 1. Make sure that the graphic is loaded into the graphics buffer of the PCI-Squeezeback board using the **READ** operation, or that it is already displayed in the buffer. **Store MSG** will execute even if another board happens to be active for editing.
 - If the graphic was loaded using the **READ** button, the **Message ID** number remains displayed in the **Msg** field (illustration above). The graphic can be stored under this number, or a different number can be entered.

Note that the **Msg** number is specific only to the Squeezeback effect setup, and is completely independent of the Lyric **Message ID** number.

• If the graphic was already loaded, enter a number in the Msg field.

NOTES

- Read does not recognize alphanumeric file names.
- Do not enter an alphanumeric identifier in the Msg field.

2. Click Store MSG.

The ID number appears in the **MSG** field for the effect slot, located at the bottom of the **Squeezeback Panel**.



Graphic Message MSG ID Fields

The graphic stays on-screen until another Squeezeback effect with an associated graphic is made active.

NOTE

If a stored graphic does not display when an effect is activated, check to see if the Graphic Plane is turned off. If so, turn it back on.

Clear MSG - Lyric Graphic

Clear MSG (*see top figure*) is used to clear a stored graphic from an effect. Additionally, if a graphic is stored in a an effect where the graphic plane is disabled, it is advisable to clear the graphic from the effect to avoid accidental display. To remove a graphic from an effect:

• Click Clear MSG.

Erase/Replace a Squeezeback Graphic

To erase a graphic associated with a Squeezeback effect from an output, or to replace the graphic without disturbing the displayed Squeezeback regions, choose one of the following methods:

From within the Squeezeback Panel

A blank screen or other graphic message must be stored to an effect on a PCI-Squeezeback board. This effect can then be executed when an output erase/graphic replace is needed. For example, a blank screen or new graphic message can be stored to **Effect 5**. Whenever **Effect 5** is executed, the graphics buffer and output of the board will be erased or replaced.

To keep the current Squeezeback regions constant on the output when erasing the graphic:

 Deactivate the PCI-Squeezeback boards in the Effect dialog box for the graphic erase effect. When the graphic erase effect is executed, the current Squeezeback regions stay constant.

OR

• Copy the ENDING SQUEEZE VALUES of the previous effect to the STARTING SQUEEZE VALUES of the graphic erase/replacement effect. Set the ENDING SQUEEZE VALUES as desired.

From outside the Squeezeback Panel

- Activate the **Video Squeezeback** channel and erase the **Graphic Plane** buffer or read a new message into the buffer in the same manner as with a VPB.
- Xfer (Transfer) a blank/graphic message or blank/graphic active screen to the appropriate Squeezeback buffer.

Program a blank/graphic screen message to follow the Squeezeback effect in a **Playlist**. This works only if the **Playlist** is executed on the Squeezeback channel.

31. Intelligent Interface

Intelligent Interface®

Overview

Intelligent Interface provides a mechanism for controlling the update and display of graphics and titles through an ASCII-based command set transmitted over a serial port connection or via **Telnet**. Note that Lyric is able to receive **Intelligent Interface** commands through both of Duet's serial ports, the network or from the system running Lyric.

Many programs, including newsroom automation systems, have been written to support this protocol, and many programmers in the television broadcast industry are familiar with the command set and its functionality.

Duet/Lyric **Intelligent Interface** is a subset/extension of the **Intelligent Interface** protocol for Chyron's iNFiNiT!® Family graphics products. For those operators accustomed to the iNFiNiT! operating system, please note that the term **Tab Messages** is replaced here with the term **Template Data Messages**.

Intelligent Interface for Lyric provides the same type of functionality as **Intelligent Interface** for Chyron's iNFiNiT! family of character generators. **Template** fields in special Lyric messages can be updated with new text. In addition, commands for changing text properties and running animations may also be exchanged via the serial link.

For serial port connection, there are three steps to enable **Intelligent Interface** operation:

- 1. Connect a serial port on the external computer directly to one of Duet's serial ports. Duet's second serial port can also be connected to the same computer or to a second computer to provide an additional port for **Intelligent Interface** commands. *Connection procedure follows below.*
- 2. Configure the ports on both Duet and the external system(s) as described following the connection procedure.
- 3. Configure Intelligent Interface settings. Refer to Intelligent Interface Configuration for procedure.

For Telnet connection, there are two steps to enable Intelligent Interface operation:

- If communicating with a remote system, the system running Lyric must be properly networked. If sending commands from the same system that is running Lyric, it is not necessary that the system be on a network. In both instances, the **IP Address** of the system running Lyric must be available. When sending commands locally, however, the name **localhost** can substitute for an **IP Address**. Generally, an application running remotely sends **Intelligent Interface** commands to a system running Lyric. Intelligent Interface commands can be easily tested, however, by opening a local **Telnet** session from the same system that is running Lyric. **Opening a Telnet Session** is described at the end of this section.
- 2. Configure Intelligent Interface settings. Refer to Intelligent Interface Configuration for procedure.

In addition to **Intelligent Interface**, Lyric provides a wide variety of methods to update information displayed in a Lyric message. *For an overview, refer to Updating Messages in Lyric.*

Serial Port Connection

A Duet can be connected one or two host computers in a variety of configurations:

- A serial port on a Duet can be connected to a serial port on a host computer.
- Two serial ports on a Duet can be connected to two serial ports on a host computer.
- One serial port on a Duet can be connected to a serial port on a host computer. The second serial port on the Duet can be connected to a serial port on a second host computer.

Port COM numbers and computer operating systems do not have to match. *It is crucial, however, that the Duet Port settings and the host Port settings match.* Port setup is described following the connection information.

Refer to the following table and diagram for signal names and pinouts pertaining to the RS-232 protocol. RS-232 protocol supports cable runs of 50 feet (15.24 meters) or less.

The table outlines a typical connection from Duet to an **Intelligent Interface** host using either a **DB-25** connector or **DB-9** connector. *Please check the host computer's Serial Port pinout documentation to ensure* proper hookup!

Note that some interfaces require the **RTS** signal (**Pin 7**) to be **HIGH**. Because **Pin 7** is **LOW**, use **Pin 4** (**DTR**) instead. This may require a modification to your serial interface cable. The table below specifies typical setup for **DB-9 to DB 25** and **DB-9 to DB-9** configurations.

Duet System (DB-9)		To Host Com	Computer (DB-25) To Host Compute		puter (DB-9)	
Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	
2	RXD	2	TXD	System-Specific	TXD	
3	TXD	3	RXD	System-Specific	RXD	
5	GND	7	GND	System-Specific	GND	
		Bridge 4 - 5	RTS/CTS	Bridge Signals	DSR / DTR	
		Bridge 6 - 8 - 20	DSR / DCD / DTR	Bridge Signals	RTS / CTS	

Typical RS-232 Interface Cable Pinout: DB-9 to DB-25 and DB-9 to DB-9

The figure below shows the Serial Connector Pinout of the Duet system.



RS-232 Serial Connector Pinout - Rear View of Connector

Serial Port Communications Setup Overview

To enable serial communications between Duet and an external (host) computer(s), each system's serial **Com** port(s) *must* be set up using the same values. These values may vary with the external computer's operating system and the modem settings being used. Setup on the Duet differs slightly between Windows 2000 and Windows NT®. Procedures from both operating systems are described here. To configure **Port** settings for an external host running on a different operating system, please consult the user documentation for specific instructions. Note that the operating systems on the Duet and the host computer(s) do not have to match.

Communications Setup - Windows® 2000

After the connecting the Duet to the host computer, perform the following procedure on both machines. If dedicating two Duet ports to **Intelligent Interface**, the procedure must be performed for each port, as well as the host(s) ports.

- 1. Access Windows Start > Settings > Control Panel > System > Hardware > Device Manager > Ports (COM & LPT).
- Expand the Ports (COM & LPT) listing, then select Communications Port (Com 1) or Communications Port (Com 2). This example shows COM 2. The Communications Port (COM2) Properties dialog box is displayed.
- 3. Select the **Port Settings** tab to display the settings.

ommunia	cations Port (COM2) Propertie	:5	?)
General	Port Settings Driver Resource	es	
	<u>B</u> its per second:	19200	•
	<u>D</u> ata bits:	8	•
	Parity:	None	•
	<u>S</u> top bits:	1	•
	<u>F</u> low control:	None	•
		vanced	Restore Defaults
	<u></u>		
		OK	Cancel

COM2 Setup - Windows 2000

- 4. Enter the desired values for **Baud Rate**, **Data Bits**, **Parity**, **Stop Bits** and **Flow Control**. *Remember that the Port settings on Duet and the host system must match.* Click **OK**.
- 5. Launch Lyric. From the **Config** menu, select **Intelligent Interface**. *Refer to Intelligent Interface* **Configuration** for details on serial port setup from Lyric.

Communications Setup - Windows NT®

After the connecting the Duet to the host computer, perform the following procedure on both machines. If dedicating two Duet ports to **Intelligent Interface**, the procedure must be performed for each port, as well as the host(s) ports.

1. After the installation of the **ReCall Keys**, access **Windows Start > Settings > Control Panel > Ports**. The **Ports** dialog box is displayed. Select **Com 1** or **Com 2**. This example shows **Com 2**.



ReCall Keys - Selecting a COM Port

2. Click **Settings**. The Settings for **COM2** (or **COM1** if using **COM1**) dialog box is displayed.

Settings for COM2:						
Baud Rate:	19200 💌		ок			
<u>D</u> ata Bits:	8 🔻		Cancel			
<u>P</u> arity:	None 💌					
<u>S</u> top Bits:	1 💌		(<u>A</u> ovanceo)			
Elow Control:	None	•	<u>H</u> elp			

Recall Keys - Settings for COM2

- 3. Enter the desired values for **Baud Rate**, **Data Bits**, **Parity**, **Stop Bits** and **Flow Control**. *Remember that the Port settings on Duet and the host system must match.* Click **OK**.
- 4. Launch Lyric. From the **Config** menu, select **Intelligent Interface**. *Refer to Intelligent Interface* **Configuration** for details on serial port setup from Lyric.

Opening a Serial Port Communication Session

The presence of serial port TTY emulation software is required on the system sending Intelligent Interface commands. *Refer to the emulation software documentation for procedure on opening a communication session.*

Opening a Telnet Session

Initiating a **Telnet** session is the virtually same whether connecting from a remote system or to the same system that is running Lyric.

- 1. On the system that is to send the **Intelligent Interface** commands, open a **Command Prompt** window. This is generally available from **Start > Programs > Accessories**.
- Enter telnet open <IP Address> or telnet open <Full Computer Name>, where the IP Address or Full Computer Name is that of the system running Lyric. If the system sending the commands is the same as that running Lyric, telnet open localhost can be entered. Refer to Finding the IP Address or Computer Name of a System for additional information on IP Addresses and Full Computer Names.
- 3. Press Enter. If a login is requested, proceed to the next step. If a login is not requested, a welcome message is displayed in the Command Prompt window. The system is now ready to send Intelligent Interface commands.
- 4. Enter a login, then press Enter. A welcome message is displayed in the Command Prompt window. The system is now ready to send Intelligent Interface commands.

To close an Intelligent Interface and Telnet session:

• Close the **Command Prompt** window.

Remember that on the system running Lyric, **Intelligent Interface** must be configured to accept communications via **Telnet**. *Refer to Intelligent Interface Configuration* for information.

Intelligent Interface® Configuration

Config Menu > Intelligent Interface

Intelligent Interface commands can be sent to and from a system running Lyric via one or two serial ports, or via Telnet.

To enable Intelligent Interface operation via serial port(s):

• Serial port configuration must be performed first from the **Windows Control Panel**, then from within the Lyric **Config** menu. The system running Lyric must be connected via serial port(s) to the system(s) sending commands. *Refer to Intelligent Interface for details on connection and Control Panel* setup.

To enable Intelligent Interface operation via Telnet:

• The system running Lyric must on a network unless commands are sent from the local system (the same system running Lyric). The system must be configured from within Lyric to communicate via **Telnet**. *Refer to Intelligent Interface* for additional overview information.

This section covers configuration from within Lyric.

To configure the connection for Intelligent Interface:

1. Select **Intelligent Interface** from the **Config** menu. The **Intelligent Interface** dialog box is displayed.

<u>Option Disabled</u> Enable Serial Port <u>1</u> Enable Serial Port <u>2</u> Enable <u>B</u> oth Ports Enable <u>B</u> oth Ports	Recall Keys Enable <u>R</u> ecall Keys Serial Port 1 Serial Port 2
Message Directory	n\Lyric\Messages\

Intelligent Interface Configuration

- 2. From the **Connection** area (unlabeled) at the top left, select one of the following:
 - Option Disabled: Intelligent Interface function is disabled.
 - Enable Serial Port 1: Intelligent Interface data can be sent from Serial Port 1.
 - Enable Serial Port 2: Intelligent Interface data can be sent from Serial Port 2.
 - Enable Both Ports: Intelligent Interface data can be sent from Serial Ports 1 and 2.
 - Enable Telnet: Intelligent Interface data can be sent via a Telnet connection. This allows a user to send Intelligent Interface commands from either a remote computer system or from the same system that is running Lyric.
- 3. From the Recall Keys area at the top right:
 - Enable (check) Recall Keys or disable (uncheck) Recall Keys.

If Recall Keys is enabled, select one of the following:

- Com 1 to accept Recall Keys commands through Com 1.
- Com 2 to accept Recall Keys commands through Com 2.
- 4. The Message Directory field reflects the Default Message Directory from which Intelligent Interface will read and to which it will write messages. This directory can be changed via Config Menu > Preferences > Default Paths, or via the Intelligent Interface M Command. The Message Directory cannot be changed from the Intelligent Interface dialog box.
- 5. You can enable **Machine Code** when the **Intelligent Interface** commands are created using lowercase characters only. If **Machine Code** is specified, only those lower-case commands with the correct **Machine Code** are processed. An error message is returned if the **Machine Code** is incorrect. **Machine Code** can be disabled by checking the **Ignore Machine Code** checkbox, and all lower-case commands will be processed regardless of their **Machine Code**.

6. To review the last command received by the system, as well as the last command sent by the system, click the **Diagnostics** checkbox. The **Intelligent Interface** dialog box expands as shown below.

ingent internoce	
<u>O</u> ption Disabled Enable Serial Port <u>1</u> Enable Serial Port <u>2</u> Enable <u>B</u> oth Ports	Recall Keys Enable <u>R</u> ecall Keys C Com 1 C Com 2
Message Directory C:\Program Files\Chyror Machine Code -1 Janore Machine Code	n\Lyric\Messages\ OK Cancel
Last Input Received at: 09/06/02 R\1\Text\Text\Text\\	Diagnostics
Last Output	

Intelligent Interface Configuration Diagnostics

The last command received, as well as the last command sent by your system, are displayed, along with the time and date of each. Note that the **Diagnostics** display reflects the last commands sent and received when the **Diagnostics** display was opened. To update and view the **Diagnostics** display, click the **Diagnostics** checkbox twice. The **Diagnostics** display closes, then reopens with updated information.

7. Click **OK**. **Intelligent Interface** is now ready to exchange commands and other data with the external system.

Once Intelligent Interface has been enabled, the active connection is indicated on the Lyric Status Bar. II-1 is shown for Port 1, II-2 for Port 2, II-D for dual-port or II-T for Telnet.



Status Bar Showing Intelligent Interface Active on Port 1

Refer to Intelligent Interface for details on commands and use.

About Template Description and Template Data Messages

(See also Graphic Substitution.)

Template Description and Template Data Messages

Template Description and **Template Data** message references are major components of **Intelligent Interface** update commands. Understanding **Template Description** and **Template Data** messages is key to creating **Intelligent Interface** commands that can not only update existing messages, but that can create new messages based on existing messages.

- A **Template Description Message** is a Lyric message, which contains both static text/graphic elements, and one or more **2D Text Templates** which can be updated remotely.
- A Template Data Message is a message which is created on the fly from the external (host) computer sending a W command, or by selectively recording (Ctrl + Record + D) the message from Lyric. This message contains all of the information necessary to insert the desired text into the Template Description Message. The combination of these two messages is displayed on Lyric's video output, and appears as one complete message.

Note that an Intelligent Interface update command (U) may also be sent to a Template Description Message, without creating a Template Data Message.

Template Description Message Setup

As an example, we will create a **Template Description Message** containing two **2D Text Templates** which will be updated with text sent from the external computer.

- 1. Create a new Lyric message composed of any combination of text and graphics, including a **2D Text Window**.
- 2. In the 2D Text Window, create two 2D Text Templates, which are to be externally updated.



Sample Template Description Message

 Place the cursor in the first Template that was created. In the 2D Text Template dialog box, assign it the number 0 (see figure below), and enable the Auto Erase and II Update options (see figure below). Assign the number 1 to the second Template and also enable the Auto Erase and II Update options.



Assign Template Number

Auto Erase, II Update Enabled

- 4. Lyric should automatically number **Templates**, starting at **0**, but you may wish to confirm that the first **Template** is numbered **0** as shown above.
- 5. Enter the Message Number 1001, then record the message to the Default Message Directory.

Template Data Message Setup

The **W** command creates a **Template Data Message** in the same **Default Message Directory** on the system that is running Lyric. The file is created by the application running on the external computer in an interaction that is *initiated by the external computer*. Every new set of data generated by the external system's software creates (or updates) a message to Lyric, which can be recalled for display when needed.

Consult the external application's documentation for programming it to send Lyric the appropriate commands. Whatever the particulars of the application's operation, it must send properly formatted commands to Lyric in order for **Intelligent Interface** to function.

It is important to remember that the command described next creates a **Template Data Message** containing the text inserted into the **Templates**. The **Template Data Message** may be recalled just as any standard Lyric message, and includes the elements from the **Template Description Message** combined with the externally updated material.

NOTE: For the operator's convenience, it is recommended that the **Template Description** and **Template Data Messages** be stored under related **Message IDs**. In this example, the **Template Description Message** is stored at **1001**, and the **Template Data Message** is stored at **2001**.

The syntax for the W command is as follows:

Devementer	Description (Cattings
Parameter	Description/Settings
W	Identifies Create Template Data Message command.
<template data="" message<br="">ID></template>	ID Number of new Template Data Message.
<template description<br="">Message ID></template>	ID Number of existing Template Description Message containing graphics and Templates.
<text>\<text>\<text>\</text></text></text>	Each <text></text> parameter contains the data that is to be sent to an II Update -enabled Template . Templates are populated in their Template Number order. Up to 10,000 Template fields may exist in a single Template Description Message .

W\<Template Data Message ID>\<Template Description Message ID>\<Text>\ <Text>\<Text>\...\\<CR><LF> The following example updates **Template Description Message 1001** with new text and writes the **Template Data Message** to **2001**:

W\2001\1001\W. Fahnstock\H. Pride\\<CR><LF>

When the **W** command is sent and successfully processed, Lyric responds by returning an asterisk (*). Whether or not this response is visible on the host (external) computer depends on the setup of the system and its application.

Recalling a Combined Message

Once a **Template Data Message** has been created, as in the example above, it can be recalled like any other Lyric message. The updated text appears in the **Templates** that were originally recorded. In this example, recalling **Message ID 2001** results in the following display:

Lyric - 00002001.lyr	2D Text 2	
difference of the second	Soccer World Finals	Ē
	2D Text 2	
1	M/D. W. Fahnstock	
	Mast Savas H Pride	
	TVIOSI Javes.	

Recalled Template Data Message

Command Set and Syntax

Command Set

The **Intelligent Interface** command set consists of groups of like commands invoked by an identifying letter followed by a set of parameters. The table below outlines the command groups. Each command group is described below, following the section on *Host Acknowledgement*.

Command	Description		
С	Change color of specified field.		
E	Define Macro to read message.		
F	Change font of specified field.		
М	Set disk drive and message directory.		
Q	Resend previous response.		
U	Update one field of a Tab Data message.		
V	Special Effects and Control.		
W	Write to Tab Data message.		
X and R	Requests External Update and responds to Update Request.		
Y	Assorted.		
Embedded	Commands that are embedded in R , U or W commands to change the Font , Color , or Background of an Intelligent Interface - enabled Template .		

Command Syntax

Commands for **Intelligent Interface** consist of bidirectional data exchange between the host computer and the system. The protocol consists of a group of single-letter commands, which are followed by various modifiers and data as required.

A command string can contain numerous fields; fields are separated by a backslash (****), known as a **Command Field Separator**. The command string is always terminated by a double backslash (****), followed by an optional 2-byte **checksum**, and mandatory **Carriage Return** and **Line Feed** characters. In this documentation, they are notated by **<checksum>**, **<CR>** and **<LF>** respectively. See the end of this section for additional information on **checksum**.

In this document, program code **<xx>** refers to an eight-bit decimal or hexadecimal number equal to the **xx** value, and is used to represent non-printable characters such as **Carriage Return** and **Line Feed**. For example, to represent a carriage return, the notation **<0D>** is sometimes used. An eight-bit number equal to **0D** must be sent. *Do not* use the **ASCII** equivalents of **<**, **0**, **D** and **>**. **Carriage Return** and **Line Feed** are commonly used characters, and are also represented by **<CR>** and **<LF>** respectively, or as **CRLF**.

All ranges in the parameter descriptions are inclusive, e.g. 0 - 255 includes both 0 and 255.

The following must be observed when entering any **Intelligent Interface** commands.

- All listed parameters, except those specified as optional, must be entered.
- Parameters must be entered in the proper order.
- Lyric® Intelligent Interface® is created as an extension of the iNFiNiT!® Family Intelligent
 Interface® protocol. Please observe that parameters such as Primary/Secondary User (which have
 no meaning in Lyric) are still observed; in Lyric, any command requiring a Primary or Secondary
 User selection should be set to Primary. These cases are pointed out where applicable in this
 documentation.

Command Examples

Following are examples of Intelligent Interface commands.

To update two fields in **Template Description Message 1001**, write the **Template Data** to **Message 2001**, and verify command integrity, send the following string:

W\2001\1001\Indianapolis\Cloudy\\<checksum><CR><LF>

The W, U, C, and F commands can act on the specific **Template Fields**, leaving others unchanged. For example, to update **Fields 0**, **2**, and **6**, then a W command (Write Tab Data Message) would look like the following:

W\100\10\AAA\ \BBB\ \ \ \CCC\\<CR><LF>

Note the empty backslashes between **AAA** and **BBB**, and between **BBB** and **CCC**. Empty fields are skipped, and therefore not updated. In this example, **Fields 1**, **3**, **4** and **5** are skipped. Each empty field must contain one space character each, or else the two directly adjacent backslashes will be interpreted as the end of the command.

To directly address one **Template** field, enter the field number. For example, the **U** command that updates **Field 6** would be sent follows:

U\100\6\DDD\\<CR><LF>

Checksum Calculation (Optional)

Checksum is used to verify the integrity of the command that is sent to the system, and appears as <**checksum**> in the commands shown in this manual.

Checksum is calculated by adding the **ASCII** value of all characters in the command string, starting at the first character and ending at the second backslash. The total is computed as modulo **256** and displayed as a **2-byte** hex value in **ASCII**. A response (from Duet) **<0D><0A>** indicates that the command has been accepted with no **checksum** error.

Error Handling

If a **checksum** or other error is detected, an **8-byte ASCII** error code is transmitted, followed by a **Carriage Return** and **Line Feed**. Any errors that occur are also reported in Lyric's **Status Bar**. *Refer to the section on Intelligent Interface Error Codes for an error code list.*

Host Acknowledgment

Once the computer has received an acknowledgment of command completion from the Duet system, it can send the next command/data stream to the Duet. The acknowledgment is normally an asterisk (*).

Double-Byte Character Support

NOTE

In order for Lyric to support double-byte characters, the appropriate Chinese and/or Korean fonts must be installed in your system!

The ^ (carat) key serves as both the start and end mark for double-byte characters. When Lyric encounters two ^ characters, it processes the characters between them as double-byte characters.

All characters not enclosed by a ^ pair, but contained within the field delimiter *II* are considered single-byte characters. Space characters are also considered single-byte characters.

This convention is supported in Intelligent Interface's W, U, V and R commands.

Embedded Commands

Changing Font, Color or Background of a Template

These commands can be embedded in an R, U, or W command to dynamically change the Font, Color, or Background of an Intelligent Interface-enabled Template. All embedded commands are delimited in the Intelligent Interface message by a Tab character (ASCII value 9).

- <TAB>[fn] => changes the font of the template, where *n* is the number in the key combination ALT +
 n. Enter a number from 2 20 after the "f" to specify different fonts.
- <TAB>[cn] => changes the color of the template, where n is the number assigned to each color in the palette.
- <TAB>[bc:\bkg.tif> =] sets the background of the template to c:\bkg.tif.
- <TAB>[b-] =>\ erases the background in the template.

For example:

R\1\<TAB><f1>Duet\\<CR><LF>

provided as a response to an **X** command, would update the **Template** in the message displaying the word "**Duet**" rendered in the font assigned to hotkey **Alt + 1** in the active **Browser**.

Alternative Method for Changing Font and Color in Embedded Commands

You may use the embedded **Font/Color** specification for the Chyron iNFiNiT!® Family's **Intelligent Interface**, as specified in *Section 4.6.9* of the *iNFiNiT*!® *Options Handbook* (Chyron Pub.No.2A01996); the **Intelligent Interface** section contained within is Chyron Pub. No. 2A01989. *This document is accessible on the internet at http://www.chyron.com/support/docs/manuals/Options/Intelintfc.pdf*.

To change the font number or color index inside an R, U or W command:

• Embed the iNFiNiT! keyboard value for a **Color** key (**<A8>** through **<AF>**) or font key (**<A0>** through **<A7>**) within the data field.

Graphic Update

A 2D bitmap graphic can be updated via **Intelligent Interface**, allowing instant substitution of one graphic for another. **W**, **U** and **X** commands can be used much in the same manner as they are used to update **2D Text Templates**.

Enabling II Update and Ext. Update

There are two types of update from a remote computer: II Update and External Update.

- II Update enables the update of 2D Text Templates and/or 2D bitmaps at any time from a remote computer. W and U commands issued by the host (remote) computer are used to execute the update.
- Ext. Update enables the automatic update of a Template Description Message or Tab Data Message when it is recalled (read). An X command is issued by the Duet system requesting an update from the external computer. The external system then sends back to the Duet system an R command containing the updated data.

To enable the update of a 2D graphic and record a Template Description Message:

- 1. Select the graphic on the Canvas or the Scene Graph.
- 2. Right-click on the selected graphic or the **Scene Graph** listing for the graphic. The **2D Object Template** dialog box is displayed.



2D Object Template Dialog Box

- 3. Click the **II Update** checkbox to enable **Intelligent Interface Update**. To have Lyric send an immediate request (**X** command) for update when the message is recalled (read), click the **Ext. Update** checkbox as well. Note that enabling **Ext. Update** automatically enables **II Update**.
- 4. Record the message.
 - If **II Update** is enabled, the graphic can be updated at any time via a **W** command from the host computer.
 - If **Ext. Update** and **II Update** are enabled, a request for an update is automatically sent to the host computer by Lyric when the message is recalled (read). The graphic can also be updated at any time via a **W** command from the host computer.

2D Text Template and 2D Object Update Order

2D Object Templates are updated in much the same manner as 2D Text Templates.

- The topmost **2D Object** on the **Scene Graph** is updated (replaced) first, with each succeeding **2D Object** under it replaced in descending order.
- 2D Text Templates are then updated, in ascending numeric order.

Example

The following screen shot shows two **2D Text Templates** and **2D Object Templates**. Note that there is no border to define a **2D Object Template**. The object itself is the **Template**.

2D Text 1		chyron	NEWS channel
Stocks		chypon	STOCK channel
	Scene Graph 2D Text 2 Chyron_logo News 2D Text 1 Chyron_logo Stocks Light 1 Global Light Camera		

Text and Object Templates Before Intelligent Interface Update

- The 2D Text Window named 2D Text 1 contains a Template numbered 0. It contains the text string News.
- The 2D Text Window named 2D Text 2 contains a Template numbered 1. It contains the text string Stocks.
- The bitmap Chyron_logo News is positioned above the bitmap Chyron_logo Stocks in the Scene Graph.

For this example, assume the message **ID** is **120**. If **Ext. Update** is enabled, reading this message would trigger the following **X** command:

X\1****\0120\Chyron_Logo News.bmp\Chyron_Logo Strocks.bmp\00Template:0\01Template:1\\<CR><LF>

The host computer would reply with an R command:

R\1\Chyron_logo Sports.bmp\Chyron_logo Elections.bmp\\Sports\Elections\\<CR><LF>

2D Test 1 Sports	chyron	SPORTS channel
Elections	chyron	ELECTION channel
Scene Graph 2D Text 2 Chyron_logo Sports 2D Text 1 Chyron_logo Election Light 1 Global Light Camera	s	

Text and Object Templates After Intelligent Interface Update

The files referenced, since they are relative filenames, are taken from Lyric's "Images" default path. A relative pathname may also be used before the filename, HOWEVER, "front slashes" (\)should be used for delimiters, as in iNFiNiT![®] file and path naming. Use of backslashes should be restricted to field separation within an Intelligent Interface command. Note that the colon (:) can be omitted from a file name of an image. This allows support of the iNFiNiT! file name format.

Example: c/filefootage/washington/edole.bmp

The application running on the external system must send a properly formatted message creating a **Template Data Message** that will be recorded by Lyric. The **Template Data Message** will have its own page number (Chyron recommends making the message numbers similar) and contain the **W** command.

Example: The original Lyric message 250 contains the imported bitmap graphic "JackProfile.bmp". You wish to be able to replace with it with another graphic (JoeProfile.bmp) during a broadcast. The following W command creates Template Data Message 350 using a Bitmap Graphic Template defined in Lyric message 250.

W\350\250\JoeProfile.bmp\\

When message 350 is called up in Lyric, the new graphic will have been directly substituted for the original.

Take note of the following with regard to **Intelligent Interface** graphic update.

- The updated bitmap is scaled to the same size as the original. Any difference in the aspect ratio between the original graphic and the updated graphic will result in a distorted appearance of the updated graphic.
- If a single space character is sent within the **Graphic Template** command field, the graphic will not be changed.
- If a dash (hyphen) is sent within the field, the graphic will be marked invisible and no longer render. This is equivalent to unchecking the graphic on the **Scene Graph**.
- If the new image's file is stored in the location specified in Lyric's **Default Path** for images, the **W** command line need not specify a file path, as seen in the example above. The default path for images is set in the **Preferences** window under the **Config** menu. If the new object is stored outside of Lyric's default image file path, a path must be specified.

Example: W\350\250\[c:/filefootage/washington/edole.bmp]\\

• 2D Object Properties settings are updated after an image is updated via Intelligent Interface.

C Command - Set Font Color for Template

The C command is used to specify a new Font Color Index for a Template. The index specified overrides the default font color assignment to a particular Template. This command can only be used to modify a preexisting Template Data Message and therefore the Template Data Message ID must be specified. Color Indexes specified in this command map to the Palette entries defined in the Lyric Message and accessed via Lyric hotkeys based on the following table:

Color Index	Lyric Hotke y	Color Index	Lyric Hotke y	Color Index	Lyric Hotkey	Color Index	Lyric Hotkey
1	Ctrl + 1	5	Ctrl + 5	9	Ctrl + 9	13	Ctrl + Shift + 3
2	Ctrl + 2	6	Ctrl + 6	10	Ctrl + 0	14	Ctrl + Shift + 4
3	Ctrl + 3	7	Ctrl + 7	11	Ctrl + Shift + 1	15	Ctrl + Shift + 5
4	Ctrl + 4	8	Ctrl + 8	12	Ctrl + Shift + 2	16	Ctrl + Shift + 6

The following C command sets the font color for **Template Number 1** in **Template Data message 5401** to **Color Index 5**, which is the fifth entry in the **Palette** for character **Face** and **Edge** color:

C\5401\1\5\\<CR><LF>

E Command - Send and Execute Macros

Any VB Script command that can be executed via Lyric **Macros** may be contained in an **E** command. Each command is separated by a "tilde" (~) character.

The general syntax is as follows:

E\<Macro Command>~<Macro Command>~<Macro Command>~...\\<CR><LF>

For example, the E command to read Lyric **Message ID 4** is as follows: E\Lyric.Message 4~Lyric.Read\\<CR><LF>

OR

E\Message 4~Read\\<CR><LF>

Note that if no object (in the example above, Lyric) is specified, it is assumed that Lyric is the object.

The **E** command can also trigger the execution of a macro. The syntax is as follows:

E\<Macro Name>\\<CR><LF>

For example, to execute a macro with the name **Macro1**, send the following: E\Macro1\\<CR><LF>

A VB Script subroutine can be built and later referenced by name. A sample sequence is as follows:

E\Sub Macro2~Message 15~Read~End Sub\\

*

E\Macro2\\

*

Note the following about building macro subroutines using Intelligent Interface::

- The name of the macro subroutine that is built via **Intelligent Interface** cannot duplicate the name of any of the macros currently loaded in the **Macros** dialog box. If there is a duplication, **Intelligent Interface** returns a **000041d7** (**Duplicate Macro**) error code.
- A macro subroutine that is built via **Intelligent Interface** is not loaded into the **Macros** dialog box, and therefore does not appear in the dialog box.
- A macro subroutine that is successfully sent to Lyric can be overwritten, i.e., subsequent macros that are sent can have the same name. The name restriction applies only to macros that are listed in the **Macro** dialog box.

Additionally, if the macro engine is reset, the script must be resent.

The **E** command can also trigger a loaded macro by executing its **Hot Key**. Suppose that a macro script in Lyric is assigned the hot key trigger **Alt + 3**, meaning that it executes when **Alt + 3** is pressed. The following example uses a VB Script command to set up a shell object that passes commands to the Windows command interpreter. A second VB Script command then sends the key combination **Alt + 3**, specified in VB Script as **%3**, triggering the macro script.

E\set WshShell = CreateObject ("WScript.Shell")~WshShell.SendKeys("%3")\\<CR><LF>

Refer to Macros for information on macro commands.

F Command - Specify Font Index

The F command is used to specify a new Font Index for a Template. The index specified overrides the default font assignment for a particular Template. This command can only be used to modify a pre-existing Template Data Message and therefore the Template Data Message ID must be specified. Font Indexes specified in this command map to Lyric Font Browser hotkeys used for the Lyric message, based on the following table:

Font Inde x	Lyric Hotke y	Font Inde x	Lyric Hotke y	Font Inde x	Lyric Hotkey	Font Inde x	Lyric Hotkey
1	Alt + 1	6	Alt + 6	11	Alt + Shift + 1	16	Alt + Shift + 6
2	Alt + 2	7	Alt + 7	12	Alt + Shift + 2	17	Alt + Shift + 7
3	Alt + 3	8	Alt + 8	13	Alt + Shift + 3	18	Alt + Shift + 8
4	Alt + 4	9	Alt + 9	14	Alt + Shift + 4	19	Alt + Shift + 9
5	Alt + 5	10	Alt + 10	15	Alt + Shift + 5	20	Alt + Shift + 10

Example: The following F command sets the Font for Template Number 1 in Template Data Message 5501 to Font Index 5 (i.e. Lyric hotkey Alt 5):

F\5501\1\5\\

M Command - Select Message Directory

The **M** command is used to change/select the current drive and directory. All subsequent commands only affect messages in this directory. Note that when only a message number is provided, Lyric, by default, looks in the message directory. This behavior can be overridden by providing a full filepath specifying an alternate location for the message.

The general syntax for the **Select Message Directory** command is as follows: M\<Drive Letter>\<Directory Name>\\<checksum><CR><LF>

Parameter	Description/Settings
М	Identifies Select Message Directory command.
<drive letter=""></drive>	Set the drive on which new directory resides.
<directory name=""></directory>	Identifies the new current Message Directory.

Example: The following command changes the working drive and directory to c:\ELECTION99: M\C:\ELECTION99\\<CR><LF>

The only response to a successful disk drive selection and message directory change is an asterisk (*). If there is an error, the system sends back an error code.

Q Command - Resend Last Transmission

The external computer sends a **Q** command to Duet to request a resend of the last transmission. This transmission can be an acknowledgment (*), error codes, or the **External Update Request** response itself.

The syntax for the **Resend Request** command is as follows:

Q\\<CR><LF>

The computer then resends the last transmission.

U Commands - Update Template Data

The **U** command updates the data in a single **Template**.

Command	Description/Settings
U\	Updates the specified Template in the specified Message .
U*	Updates the specified Template in the Message currently displayed in the active frame buffer. The message is not reloaded

U Command - Update Template in Specified Message

The U command is used to update **Template** data of a single **Template** in a preexisting **Template Data Message**. The general syntax is as follows:

Parameter	Description/Settings
U	Specifies Template Update command.
<message Number></message 	Specifies Message to which the data should be sent.
<template Number></template 	Specifies Template to which the data should be sent.
<data></data>	Specifies data that is to be fed to specified Template .

U\<Message Number>\<Template Number>\<Data>\\<CR><LF>

The following U command updates Field 2 in Template Data message 5501 to "200".

U\5501\2\200\\<CR><LF>

Numbering Template Fields: The U command fills Template fields based on the order in which they were created, and/or on their order specified in the 2D Text Template dialog box Number field (*below*). Template Fields not enabled for Intelligent Interface Update are ignored.

🚥 2D Text Tem	plate
Prev/Next	me
Number Prior	ity Text Lines
	3 1 3
	· · · · · · · · · · · · · · · · · · ·
Reset to Default	Copy Paste

2D Text Template Numbering

For example, **Template Data Message 1088** contains three fields numbered **1**, **7**, and **9**. **Templates 1** and **9** are disabled (unchecked) for **External Update**. The following **U** command updates **Field #7** (the first **Template** encountered with **External Update** enabled) to display the phrase "**Field 7 Text**":

U\1088\1\Field 7 Text\\<CR><LF>

As illustrated, the U command updates the **Template** based on the order of the **Template** fields, starting with **0**. Since, however, **Templates 1** and **9** are not enabled for **External Update**, **Template 7** becomes the first **Template** to be updated. The **Template** numbers assigned in Lyric cannot be addressed specifically, but only establish the order in which the **Templates** are populated.

U* Command - Update Template in Current Message

The **U*** command is used to update **Template** data of a single **Template** in the currently displayed message in the active frame buffer without reloading the message. The general syntax is as follows:

Parameter	Description/Settings
U*	Specifies the Template Update command.
<template></template>	Indicates the number of the Template to be updated.
<data></data>	Indicates the new text to be displayed in the Template .

U*\<Template>\<Data>\\<CR><LF>

V Commands - Special Effects and Control

V commands are a series of special effect and control commands in the iNFiNiT!® Family Intelligent Interface protocol. In Lyric, V commands include the following:

Command	Description/Settings	
V\5\3	Reads message to specified target (VGA or frame buffer).	
V\5\13	Reads message and updates all fields in Template Description Message marked for Intelligent Interface Update . Note that:	
	 A single-space update within a V command skips a 2D Text Template if and only if Auto-Erase is not enabled in the 2D Text Template dialog box. The 2D Text Template dialog box is accessed by right-clicking on a 2D Text Template, then selecting Template Properties from the context- sensitive menu. 	
	 A null update (\\) within a V command skips a 2D Text Template, regardless of Auto-Erase setting. 	
V\5\14	Reads message and updates only those fields in Template Description Message marked for External Update . Note that:	
	 A single-space update within a V command skips a 2D Text Template if and only if Auto-Erase is not enabled in the 2D Text Template dialog box. The 2D Text Template dialog box is accessed by right-clicking on a 2D Text Template, then selecting Template Properties from the context- sensitive menu. 	
	 A null update (\) within a V command skips a 2D Text Template, regardless of Auto-Erase setting. 	
V\5\15	If an animation is stopped at a Pause point, this command will cause the animation to be resumed. Note: If you expect to release a Pause , the animation must be played using the Y\<d5><f3></f3></d5> command, which returns immediately.	
V\6	Triggers animation (Play command). Do not use this method of playing an animation if a Pause-Release is required later. Since the V\6\ command does not return an acknowledgment until the animation plays out, a subsequent V\5\15\ would not be processed during the animation.	
V\6\11-30	Trigger Squeezeback Effect (Duet LE/LEX/PCI/PCI+ equipped with PCI-Squeezeback Board only). <i>Refer to V Commands -</i> <i>Trigger Squeezeback Effect</i> for details.	
V\7	Multi FX Setup (Duet SD only). <i>Refer to</i> V Commands - Multi FX Setup for details.	
V\ <buffer>\U</buffer>	The Use Message effect plays the animation in the same manner in which it was originally saved in the Lyric message. Any animation in a message called up in this mode is allowed to play out before Lyric displays the next message.	

Command	Description/Settings	
Return Codes		
*V\ <buffer>\\</buffer>	Return for V\6 commands.	
*V\5\\	Return for successful V\5 command.	
V\5\ <error code>\\</error 	Return for unsuccessful V\5 command.	

V\5\3\ Command - Read

The syntax for the **Read** command is as follows:

V\5\3\1\<Buffer>\<Message>\<Display Mode>\\<CR><LF>

Parameter	Description/Settings		
V\5\3\	Specifies the Read command.		
1	Legacy parameter from the iNFiNiT!®, which specified the User ID when two keyboards controlled one iNFiNiT! system. Always keep this parameter set at 1 .		
<buffer></buffer>	Specifies destination of the message.		
	0: Reads the message to the system's VGA monitor.		
	1: Displays the message on Frame Buffer 1.		
	2: Displays the message on Frame Buffer 2.		
<message></message>	Specifies Lyric Message Number.		
<display mode=""></display>	Specifies mode of display:		
	0: Instructs the system to Read Next (in other words, prebuild the message without displaying it on Duet's output; the message will be shown on the system's VGA monitor).		
	1: Instructs the system to read and display on output		

In the following example, Message Number 9876 is displayed in Frame Buffer 1:

V\5\3\1\1\9876\1\\<CR><LF>

V\5\13 Command - Read Message, Update All Intelligent Interface Fields

The syntax for Miscellaneous Special Effects commands is as follows:

V\5\13\1\<Buffer>\<Message>\<Display Mode>\Data\Data\...\Data\\<checksum><CR><LF>

Parameter	Description/Settings	
V\5\13\1	Specifies read message and update all fields in Template Description Message marked for Intelligent Interface Update . Note that:	
	 A single-space update within a V command skips a 2D Text Template if and only if Auto-Erase is not enabled in the 2D Text Template dialog box. The 2D Text Template dialog box is accessed by right- clicking on a 2D Text Template, then selecting Template Properties from the context-sensitive menu. 	
	 A null update (\\) within a V command skips a 2D Text Template, regardless of Auto-Erase setting. 	
1	Legacy parameter from the iNFiNiT!, which specified the User ID when two keyboards controlled one iNFiNiT! system. Always keep this parameter set at 1 .	
<buffer></buffer>	Specifies destination of the message:	
	0: Reads the message to the system's VGA monitor.	
	1: Displays the message on Frame Buffer 1.	
	2: Displays the message on Frame Buffer 2.	
<message></message>	Specifies Lyric Message Number.	
<display mode=""></display>	Specifies mode of display:	
	0: Instructs the system to Read Next (in other words, prebuild the message without displaying it on Duet's output; the message will be shown on the system's VGA monitor).	
	1: Instructs the system to read and display on output.	
<data></data>	Each <data></data> string replaces the data in a Template field. Template fields are replaced in order of their numbering. Fields not enabled for Intelligent Interface update are skipped.	

The following example updates **Tab Description message #9876** with **ABC** for the first field, and **DEF** for the second field, displaying the message in **Frame Buffer 1**:

V\5\13\1\1\9876\1\ABC\DEF\\<CR><LF>

V\5\14 Command - Read Message, Update External Update Fields

This command has the same general syntax and requirements as in V\5\13, but this command updates *only* the fields which are flagged for **External Update**.

V\6 Command - Trigger Animation

The V\6 command triggers playback of the current Lyric animation in the specified frame buffer. After completion of the animation playback, Lyric sends the V6 response described below in V Commands - Completion Status. The syntax for Trigger Animation command is as follows:

Parameter	Description/Settings		
V\6	Specifies the Trigger Animation command.		
<buffer></buffer>	Specifies destination of the message.		
	0: Reads the message to the system's VGA monitor.		
	1: Displays the message on Frame Buffer 1.		
	2: Displays the message on Frame Buffer 2.		

V\6\<frame buffer>\\<CR><LF>

V\<buffer>\U Command - Use Message

In **Multi FX Mode** (Duet SD only), the **Use Message** effect plays the animation in the same manner in which it was originally saved in the Lyric message. Any animation in a message called up in this mode is allowed to play out before Lyric displays the next message. The general syntax for a **Use Message** command is as follows:

Parameter	Description/Settings			
V	Specifies Special Effect command.			
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:			
	1: Frame 2: Frame Buffer 2 Buffer 1			
U	Specifies Use Message effect.			
<control></control>	Specifies which In/Out effects are set up:			
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out			

V\<Buffer>\U\<Control>\\<CR><LF>

V Commands - Completion Status

As with all other commands, Lyric responds to **V** commands with an asterisk upon receipt. However, the program then responds with completion status when the **Read** or **Play** operation has been completed as follows:

Response	Description
*V\5\\ <checksum><cr><lf></lf></cr></checksum>	For successful V\5 commands.
V\5\ <error code>\\<checksum><cr><lf></lf></cr></checksum></error 	For failed V\5 commands.
*V\ <buffer>\\<checksum><cr><lf></lf></cr></checksum></buffer>	For V\6 commands.
(Where buffer is 01 for Frame Buffer 1, 02 for Frame Buffer 2 and 00 for the VGA monitor)	

All responses are terminated with a checksum and carriage-return/linefeed pair <checksum><CR><LF>.

V Commands - Multi FX Setup Commands (Duet SD)

Multi FX Setup Commands

Multi FX can be set up and executed via Intelligent Interface. Refer to *Multi FX* for details on *Multi FX* operation.

An individual message can be replayed starting from any segment. Pages can update multiple times without reloading the message, before starting the **Multi FX Out Effect**. Note that as of Lyric v4.0, new versions of existing **Multi FX "V**" commands have also been added. Existing "V" commands are still properly read and executed.

The **Start**, **Pause** and **End** points of **Multi FX** message define the segments of the message. To replay a message starting from the beginning of a specific segment, use the following command: V/7/T<Type><Value>\\

- V identifies that it is a special effect command.
- 7 identifies that it is a Multi FX command.
- T addresses the Transport Control, which controls playback.
- **<Type>** should be set to **S**, which identifies it as an animation segment.
- <Value> identifies the segment number at which the Multi FX should be rewound, with 1 being the first segment. Segment <Value> can also be set using the following:
 - **B** = Beginning of **Multi FX** message
 - P = Previous segment of the Multi FX message
 - N = Next segment of the Multi FX message
 - E = Ending segment of the Multi FX message

Command	Description/Settings	
V\7\B\ <buffer(s)>\\<cr><lf></lf></cr></buffer(s)>	Configures buffers for Multi FX . The available settings for <buffer></buffer> are as follows:	
	0: Hide Multi FX Control dialog box and disable Multi FX.	
	1: Display Multi FX Control dialog box and enable FB1 for Multi FX.	
	2: Display Multi FX Control dialog box and enable FB2 for Multi FX.	
	 Display Multi FX Control dialog box and enable FB1 and FB2 for Multi FX. 	
	This command supercedes V\5\16 command, which continues to work.	
Command	Description/Settings	
--	--	--
V\7\E\ <buffer>\<cr><lf></lf></cr></buffer>	Configures effect for Multi FX buffer. The available settings for <buffer></buffer> are as follows:	
	1: Effect is for FB1 .	
	2: Effect is for FB2.	
	Refer to V\1 and V\2 for any additional effect parameters	
V\7\L\ <message>\\<cr><lf></lf></cr></message>	Loads message into Multi FX and prebuild animation.	
	Message>: Indicates the name of the message to be loaded.	
	This command supercedes the Y\<message< b=""> Number><f8>\\<cr><lf></lf></cr></f8> command, which continues to work.</message<>	
V\7\M\ <mode>\\<cr><lf></lf></cr></mode>	Configures Multi FX Mode . The available settings for <mode></mode> are as follows:	
	0: Transition Mode . Multi FX is disabled and Play commands operate on one frame buffer.	
	 Normal Mode. Multi FX is enabled and Play commands operate on all frame buffers. 	
V\7\P\\ <cr><lf></lf></cr>	Plays Multi FX effect.	
	This command supercedes the Y\ <d5><f3>\\<cr><lf> command, which continues to work.</lf></cr></f3></d5>	
V\7\T\ <type>\<value>\\<cr><lf></lf></cr></value></type>	Jogs Transport Control to a new position.	
	The available setting for Type is as follows:	
	 Specifies that the parameters are applied to an animation segment. Segments are delineated by keyframes. 	
	Value represents the Segment Number to which to rewind, with 1 being the first segment of the animation.	
	Value can also be specified by one of the following settings:	
	B: Beginning segment of animation.	
	P: Previous segment of animation.	
	N: Next segment of animation.	
	E: Ending segment of animation.	

Method of Operation

Since all effects are embedded in Lyric animations, the **Use Message** effect should be specified as both the **In** and **Out** effect for both frame buffers in **Multi FX**.

The following demonstrates an Intelligent Interface command sequence:

Command	Description	
V\7\B\3\\	Configure Multi FX to use FB1 and FB2 . Use Message for In and Out effects by default.	
V\7\L\300\\	Load message 300 into FB1 and prebuild	
V\7\P\\	Play Effect In for message 300.	
V\7\M\0\\	Enter Multi FX Transition Mode.	
Repeat this b	lock as many times as necessary.	
V\7\T\S\2\\	Go to animation segment 2 .	
U*\0\Name 1\\	Update Template 0 with new contents (Templates 0 and 1 are on- screen).	
U*\1\Name 2\\	Update Template 1 with new contents.	
U*\2\Name 3\\	Update Template 2 with new contents (Templates 2 and 3 are off-screen).	
U*\3\Name 4\\	Update Template 3 with new contents.	
V\7\P\\	Play animation segment 2 .	
V\7\T\S\2\\	Go to animation segment 2 .	
U*\0\Name 3\\	Update Template 0 with new contents (Ensure that screen contents don't change).	
U*\1\Name 4\\	Update Template 1 with new contents (Ensure that screen contents don't change).	
U*\2\Name 5\\	Update Template 2 with new contents.	
U*\3\Name 6\\	Update Template 3 with new contents.	
V\7\P\\	Play animation segment 2 .	
Use this block to go to the next message.		
V\7\T\S\E\\	Go to last animation segment.	
V\7\M\1\\	Enter Multi FX Normal Mode.	
V\7\L\301\\	Load Message Number 301 into FB2 and prebuild.	
V\7\P\\	Play Effect Out for message 300 and Effect In for Message Number 301.	

About Effect Direction

For all effect setup commands, **Direction** is specified using the numbers **1** - **9**, based on the layout of the number/arrow keys of the numeric keypad of the Duet/PC. Not all **Directions** are applicable to each effect.

- 7: Upper Left 8: Up 9: Upper Right
- 4: Left 5: Center 6: Right
- 1: Lower Left 2: Down 3: Lower Right



Numeric Keypad

Direction can indicate direction of movement, or the location at which movement starts, depending upon the **Effect Type**. **Effect Types** are described in the following sections.

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

The general syntax for a Focus effect command is as follows:

V\7\E\<Buffer>\F\<Control>\<Fade>\<Ease Type>\<Ease Duration>\ <Effect Start>\<Effect Duration>\<Direction>\<Aspect>\\<CR><LF>

Parameter	Description/Settings			
V\7\E	Specifies Special Effect command.			
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:			
	1: Frame 2: Frame Buffer 2 Buffer 1			
F	Specifies Focus effect.			
<control></control>	Specifies which In/Out effects are set up:			
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out			
<fade></fade>	Specifies Automatic Fade settings:			
	0: Automatic Fade 1: Automatic Fade Enabled Disabled			
<ease type=""></ease>	Specifies Ease type:			
	0: None 1: Ease In 2: Ease Out 3: Ease In/Out			
<ease duration=""></ease>	Specifies Duration of Ease : Range = 0 - 100 Frames			
<effect start=""></effect>	Frame Number at which to start effect execution: Range = 0 - 1000 Frames			
<effect duration=""></effect>	Specifies Duration of Effect: Range = 0 - 1000 Frames			
<direction></direction>	Specifies Direction, also known as Focal Point.			
	7: Upper Left 8: Up 9: Upper Right			
	4: Left 5: Center 6: Right			
	1: Lower Left 2: Down 3: Lower Right			
<aspect></aspect>	Specifies Aspect, also known as Focal Length.			
	Aspect: 1 - 100			

Slide

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

The general syntax for a **Slide** effect command is as follows:

V\7\E\<Buffer>\S\<Control>\<Fade>\<Ease Type>\<Ease Duration>\<Effect Start>\<Effect Duration>\<Direction>\\<CR><LF>

Parameter	Description/Settings		
V\7\E	Specifies Special Effect command.		
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:		
	1: Frame _{2:} Frame Buffer 2 Buffer 1		
S	Specifies Slide effect.		
<control></control>	Specifies which In/Out effects are set up:		
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out		
<fade></fade>	Specifies Automatic Fade setting:		
	0: Automatic Fade 1: Automatic Fade Enabled Disabled		
<ease type=""></ease>	Specifies Ease type:		
	0: None 1: Ease In 2: Ease Out 3: Ease In/Out		
<ease duration=""></ease>	Specifies Duration of Ease: Range = 0 - 100 Frames		
<effect start=""></effect>	Frame Number at which to start effect execution: Range = 0 - 1000 Frames		
<effect duration=""></effect>	Specifies Duration of Effect: Range = 0 - 1000 Frames		
<direction></direction>	Specifies Direction, also known as Focal Point.		
	7: Upper Left 8: Up 9: Upper Right		
	4: Left 5: Center 6: Right		
	1: Lower Left 2: Down 3: Lower Right		

PageTurn

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

The general syntax for **PageTurn** effects commands is as follows:

V\7\E\<Buffer>\T\<Control>\<Fade>\<Ease Type>\<Ease Duration>\<Effect Duration>\<Effect Start>\<Direction><Turn Orientation>\\<CR><LF>

Parameter	Description/Settings		
V\7\E	Specifies Special Effect command.		
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:		
	1: Frame 2: Frame Buffer 2 Buffer 1		
Т	Specifies PageTurn effect.		
<control></control>	Specifies which In/Out effects are set up:		
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out		
<fade></fade>	Specifies Automatic Fade setting:		
	0: Automatic Fade 1: Automatic Fade Enabled Disabled		
<ease type=""></ease>	Specifies Ease type:		
	0: None 1: Ease In 2: Ease Out 3: Ease In/Out		
<ease duration=""></ease>	Specifies Duration of Ease : Range = 0 - 100 Frames		
<effect start=""></effect>	Frame Number at which to start effect execution: Range = 0 - 1000 Frames		
<effect duration=""></effect>	Specifies Duration of Effect: Range = 0 - 1000 Frames		
<direction></direction>	Specifies Direction, also known as Focal Point.		
	7: Upper Left 8: Up 9: Upper Right		
	4: Left 5: Center 6: Right		
	1: Lower Left 2: Down 3: Lower Right		
<turn Orientation></turn 	Specifies how PageTurn executes - from the Inside or from the Outside .		
	_{0:} Inside _{1:} Outside		

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

The **Static** effect allows the display of only the first or last frame of an animated message that performing a **Multi FX** execution. The general syntax for a **Static** effect command is as follows:

Parameter	Description/Settings	
V\7\E	Specifies Special Effect command.	
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:	
	1: Frame 2: Frame Buffer 2 Buffer 1	
Α	Specifies Static effect.	
<control></control>	Specifies which In/Out effects are set up:	
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out	
<fade></fade>	Specifies Automatic Fade setting:	
	0: Automatic Fade 1: Automatic Fade Enabled Disabled	
<ease type=""></ease>	Specifies Ease type:	
	0: None 1: Ease In 2: Ease Out 3: Ease In/Out	
<ease duration=""></ease>	Specifies Duration of Ease : Range = 0 - 100 Frames	
<effect start=""></effect>	Frame Number at which to start effect execution: Range = 0 - 1000 Frames	
<effect duration=""></effect>	Specifies Duration of Effect: Range = 0 - 1000 Frames	

V\7\E\<Buffer>\A\<Control>\<Fade>\<EaseType>\<Ease Duration>\ <Effect Start>\<Effect Duration>\\<CR><LF>

Use Message

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

In **Multi FX Mode** (Duet SD only), the **Use Message** effect plays the animation in the same manner in which it was originally saved in the Lyric message. Any animation in a message called up in this mode is allowed to play out before Lyric displays the next message. The general syntax for a **Use Message** command is as follows:

Parameter	Description/Settings		
V\7\E	Specifies Special Effect command.		
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:		
	1: Frame 2: Frame Buffer 2 Buffer 1		
U	Specifies Use Message effect.		
<control></control>	Specifies which In/Out effects are set up:		
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out		

V\7\E\<Buffer>\U\<Control>\\<CR><LF>

Zoom

NOTE

As of Lyric v4.0, the V command which configures Multi FX has been replaced by V\7\E. Multi FX V commands created for earlier versions of Lyric are still correctly read and executed by Lyric v4.0 and later.

The general syntax for a **Zoom** effect command is as follows:

V\7\E\<Buffer>\Z\<Control>\<Fade>\<Ease Type>\<Ease Duration>\ <Effect Start>\<Effect Duration>\<Direction>\\<CR><LF>

Parameter	Description/Settings			
V\7\E	Specifies Special Effect command.			
<buffer></buffer>	Specifies Frame Buffer in which the effect executes:			
	1: Frame 2: Frame Buffer 2 Buffer 1			
Z	Specifies Zoom effect.			
<control></control>	Specifies which In/Out effects are set up:			
	1: Effect In 2: Effect Out 3: Both Effect In/Effect Out			
<fade></fade>	Specifies Automatic Fade setting:			
	0: Automatic Fade 1: Automatic Fade Enabled Disabled			
<ease type=""></ease>	Specifies Ease type:			
	0: None 1: Ease In 2: Ease Out 3: Ease In/Out			
<ease duration=""></ease>	Specifies Duration of Ease: Range = 0 - 100 Frames			
<effect start=""></effect>	Frame Number at which to start effect execution: Range = 0 - 1000 Frames			
<effect duration=""></effect>	Specifies Duration of Effect: Range = 0 - 1000 Frames			
<direction></direction>	Specifies Direction, also known as Focal Point.			
	7: Upper Left 8: Up 9: Upper Right			
	4: Left 5: Center 6: Right			
	1: Lower Left 2: Down 3: Lower Right			

V Command - Trigger Squeezeback Effect

Squeezeback effects can be automated and triggered via **Intelligent Interface** commands. The general syntax is as follows:

V\6\<IN-OUT Effect Number>\\<CR><LF>

The **IN-OUT Effect Number** specifies an **Effect Number** as determined by the Slot Number to which the effect is assigned in the **Squeezeback Panel** and **Effect** direction (**IN** or **OUT**) as follows:

- Numbers 11 through 20 trigger Squeezeback IN (forward) effects 1 through 10.
- Numbers 21 through 30 trigger Squeezeback OUT (reverse) effects 1 through 10.

Examples:

- V\6\13\\ triggers Squeezeback IN effect number 3.
- V\6\28\\ triggers Squeezeback OUT effect number 8.

Refer to Intelligent Interface for additional details.

W Command - Create Template Data Message

The W command is used to create a **Template Data Message** on disk. Remember that the **Template Description Messages** from which the **Template Data Messages** are built are created within Lyric.

Example: The following W command creates **Template Data Message 5501** using **Templates** defined in Lyric **Message 5500**. **Template 0** is assigned **John Doe**. **Template 1** is assigned **100**.

W\5501\5500\John Doe\100\\<CR><LF>

The following should be noted regarding **W** commands:

- A single-space update within a W command skips a 2D Text Template if and only if Auto-Erase is not enabled in the 2D Text Template dialog box. The 2D Text Template dialog box is accessed by right-clicking on a 2D Text Template, then selecting Template Properties from the context-sensitive menu.
- A null update (\) within a W command skips a 2D Text Template, regardless of Auto-Erase setting.
- If a W command attempts to overwrite a read-only file, an error is returned.
- When a **Template Data Message** created using the **W** command is read, Lyric displays the **Message Number** of the **Template Description Message** on the **Canvas Title Bar**.

A **Template Data Message** can also be created by selectively recording (**Ctrl + Record + D**) the message from Lyric.

See also Graphic Substitution.

X and R Commands - Request for External Update, Reply

The X command (**Request for External Update**) is used to automatically request update of text and/or graphics when the message is recalled (read). When a message is recalled, the X command is automatically sent to the host computer connected to the specified **Intelligent Interface** port, when a Lyric message containing **2D Object** (bitmap graphics) and **2D Text Template** fields enabled for **External Update** is recalled (read) by the user.

One or both serial ports may be used. In *dual port operation*, both **Serial Port 1** and **Serial Port 2** can receive data simultaneously. In this configuration, Lyric transmits the **X** command *only* through **Serial Port 1**. All other commands are valid for either port.

After receiving an **X** command from Lyric, the external computer responds with an **R** (**Reply**) command carrying the file names and data to populate the Lyric **Template** fields.

The general syntax for the **X** command is as follows:

X\<Serial Port Number>\<****> or <Template Data Message Number to Read>\<Template Data Message to Which to Write>\<2D Object Template Name>\...\<2D Text Template NumberName>\...\\<CR><LF>

The general syntax for the R command is as follows:

Parameter	Description/Settings	
X	Queries the external computer for updated data.	
<serial port<br="">Number></serial>	Identifies the serial port to which the data should be sent.	
<****> or <template data<br="">Message Number to Read></template>	 The X command sends one of the following pieces of data when a message is read: If the message that is recalled (read) is a Tab Description Message, <****> is sent. It appears as ****\ in the command. If the message that is recalled (read) is a Tab Data Message, <template data="" message="" number="" read="" to=""> is sent.</template> 	
<template data<br="">Message to Which to Write></template>	Creates new Template Data Message to which to write updated data.	
The following fields requ There can be any combi The 2D Object fields sho	est update for specific 2D Object and 2D Text Templates . nation of 2D Object and 2D Text fields in the X command. ould be listed first.	
<2D Object Template Name>	Sends Name of the 2D Object Template enabled for Ext. Update. Do not confuse the Template name with the file names of the bitmaps themselves. The Name is set in the 2D Object Template dialog box, accessible by right-clicking on a 2D object on the Canvas or on its listing in the Scene Graph, then selecting Show 2D Object Properties from the context menu. For detailed information on Intelligent Interface update of 2D objects (bitmaps), refer to Graphic Update.	
<template NumberTemplate Name></template 	Update. Sends Number and Name of the 2D Text Template enabled for Ext. Update. There is no space entered between the Number and the Name, although there can be spaces within the Name itself. The Number and Name are set in the 2D Text Template dialog box, accessible by right- clicking on the Template, then selecting Template Presenting from the context means	

R\<2D Object File Name>\...\<2D Text Data>\...\\<CR><LF>

Parameter	Description/Settings	
R	Reply command from the external computer.	
2D object and text updates are sent as follows:		
<2D Object File Name>	Updated 2D object files sent to 2D Object Templates enabled for Ext. Update .	
<2D Text Data>	Updated 2D text sent to 2D Text Templates enabled for Ext. Update .	

Examples

Example 1 - Text Update:

The following **X** command requests data for two **Template** fields in a **Template** data message.

- 1. Create a **2D Text Window** containing two empty **2D Text Templates**.
- In the 2D Text Template dialog box (see figure below), enable (check) Auto Erase and External Update for each of the two 2D Text Templates. Clicking the External Update checkbox also automatically activates II Update.
- 3. Assign **0** (zero) in the **Number** window to the first **Template** that you created, and **1** to the second **Template**.
- 4. For the purpose of this exercise, record the message as Message Number 1020.

🕶 Canvas1	
	First Template, numbered "0"
	Second Template, numbered "1"
Image: Second state sta	Default Content Optional Test 1 ✓ Auto Erase Mumeric Size To Fit Size To Fit ✓ II Update Add DB Link ITV Ref Del All Caps

Templates Saved with External Update Enabled

5. Erase the message, then recall (read) it. A prompt appears on the Lyric Canvas as shown in the following figure. Do *not* click **Cancel**.



Waiting for Update Prompt

Lyric then sends the following string:

X\1****\1020\00Template:0\01Template:1\\

- X is the command itself.
- 1 identifies the system's primary user (in Lyric's command implementation, this is always 1).
- The four asterisks indicate that only a **Tab Description Message** and no other commands are being sent and no **Tab Data** message is included.
- **1020** is the number of the Lyric message requesting **External Update**.
- **00Template:0** and **01Template:1** identify the **Templates**. Note that **Template:0** and **Template:1** are taken from the **Name** field in the **2D Text Template** dialog box. Note that when setting up templates on Lyric, any name can be entered into this field.

🕶 2D Text Template			
_ Pi	ev/Next	Name	
		Template: 0	

2D Text Template Dialog Box - Template Name

The application running on the external system must respond with a string formatted in this way: R\1\<content of lowest numbered field>\<content of next-highest-numbered field>\\

Again, **R** is the command itself, **1** identifies the primary system user, forward slashes separate parts of the message, and the message must end with two forward slashes. Note that the number of **Templates** addressed by the **R** command *must* match the number of **Templates** marked for update in the Lyric message, otherwise, an error message is generated.

The Lyric page updates automatically.

Example 2 - Text and Graphics Update:

The following X command requests data to be routed through **Serial Port 1** to six **Template** fields associated with **Template Data Message 0300** using Lyric message **0301**.

X\1\0300\0301Team 1 Logo\Team 2 Logo\00Team 1\01Score 1\02Team 2\03Score 2\\<CR><LF>

Note that if a **Template Description Message** is read instead, the syntax is as follows:

X\1****\0301\Team 1 Logo\Team 2 Logo\00Team 1\01Score 1\02Team 2\03Score 2\\<CR><LF>

A typical **R** command response to the above is:

R\1\NY Logo.bmp\LA Logo.bmp\NY\100\LA\98\\<CR><LF>

Disabling External Update

Pressing Alt + U disables External Update of all Template fields. The same function, Disable Interface Fields, is also available from the Edit menu.

Y Commands - Assorted

About Y Commands

Y commands control a number of Lyric functions such as **Message Directory** and active **Frame Buffer** selection, **Erase**, displaying/playing to output and clearing **Clips**.

Command	Description/Settings	
Y\ <d5>d<message Directory>\\<cr><lf></lf></cr></message </d5>	Sets the current Message Directory to new current Message Directory . For example, to change to directory <i>C/NAB</i> , send the following command:	
	Y\ <d5>dC/NAB\\<cr><lf></lf></cr></d5>	
Y\ <d5><f3>\\<cr><lf></lf></cr></f3></d5>	animation(s) that have been set up in Multi FX (Duet SD only). On a single-VGE configuration, either the Animation In or Animation Out plays back. If a sequence of messages is to be played back, the <i>external application</i> must send appropriate commands for Pre-Building a new message after playback of the Animation Out (see Pre-Build command below). On a multiple- VGE configuration, Lyric initializes Frame Buffer 1 to Animation In and Frame Buffer 2 to Animation Out.	
	After the Trigger command is issued, Lyric toggles the Animation In and Out for each Frame Buffer .	
	If the Duet SD is not in Multi FX Mode , or the command is sent to a Duet HD or LE/LEX/PCI/PCI+, the Duet will execute the animation on the active frame buffer, without applying Multi FX .	
Y\ <d5><f3><frame Buffer>\\<cr><lf></lf></cr></frame </f3></d5>	Plays the animation on the VGA monitor or any of the available Frame Buffers .	
	<buffer> Parameters:</buffer>	
	O: Play to VGA monitor	
	• 1: Play to Frame Buffer 1	
	• 2: Play to Frame Buffer 2	
	Note that specifying a Frame Buffer value is optional. Not specifying a Frame Buffer is equivalent to specifying" 0 ", and plays the animation to the VGA monitor.	
	For example, to play the animation to Frame Buffer 1 , enter the following command:	
	Y\ <d5><f3>1\\<cr><lf></lf></cr></f3></d5>	

Command	Description/Settings
Y\ <d5><f7><buffer>\\ <cr><lf></lf></cr></buffer></f7></d5>	This command sets the active frame buffer to the buffer value specified.
	<buffer> Parameters:</buffer>
	O: Frame Buffer 1
	• 1: Frame Buffer 2
	• 2: Frame Buffer 3
Y\ <d5><f9>\\<cr><lf></lf></cr></f9></d5>	Transfers contents of the VGA Canvas to Duet output.
Y\keypad#keypad# <f8>\\ <cr><lf></lf></cr></f8>	Reads a message into the current VGE output. For example, to read Message Number 0200 , send the following command:
	Y\ <c0><c2><c0><c0><f8>\\ <cr><lf></lf></cr></f8></c0></c0></c2></c0>
Y\ <cd>\\<cr><lf></lf></cr></cd>	Erases the Canvas.
Y\ <fe>\\<cr><lf></lf></cr></fe>	Erases the Canvas.
Y\ <f9>\\<cr><lf></lf></cr></f9>	Swaps Channel 1 and Channel 2 outputs
Y\ <message number=""><f8>\\</f8></message>	Prebuild: When Duet SD is in Multi FX Mode , this command loads the Frame Buffer with the specified message in preparation for a trigger (i.e. Play) command. For multiple VGEs, Lyric automatically builds to alternating Frame Buffers each time the Prebuild command is sent. Typically, a Prebuild command is issued before each trigger command.
	If the Duet SD is not in Multi FX Mode , or the command is sent to a Duet HD or LE/LEX/PCI/PCI+, the Duet will read the specified message without a Prebuild .
Y\<1B>\\ <cr><lf></lf></cr>	Aborts the currently playing animation.
The following "Y" Commands a	re used exclusively with Duet LE/LEX/PCI/PCI+:
Y\ <d5><cf><fe><frame Buffer>\\<cr><lf></lf></cr></frame </fe></cf></d5>	Clears the current Clip from the Canvas and stops the Internal Clip Player if a clip is present on the Canvas of the specified Frame Buffer . If no Frame Buffer is specified, the operation occurs by default in the current Frame Buffer .
	This command is the equivalent to the following Duet/PC key combination:
	Ctrl + Alt + Esc + #
	where # is the Frame Buffer number.

Command	Description/Settings
Y\ <d5><fe><<i>Frame</i> <i>Buffer>\\<cr><lf></lf></cr></i></fe></d5>	Clears the current Clip from the Canvas, erases the current Frame Buffer and stops the Internal Clip Player if a clip is present on the Canvas of the specified Frame Buffer . If no Frame Buffer is specified, the operation occurs by default in the current Frame Buffer .
	This command is the equivalent to the following Duet/PC key combination:
	Ctrl + Esc + #
	where # is the Frame Buffer number.

iNFiNiT!® Family Compatibility

For compatibility with iNFiNiT!® Family Intelligent Interface®, all Y commands may be sent using the <01><Data><02> command sequence. For example, to erase the screen, send: <01><CD><02>

To read **Message Number 200**, send the following command: <01><CO><C2><CO><F8><02>

iNFiNiT!® Family Keyboard Codes

The **iNFiNiT**!® **Family Keyboard Codes** table provides the hex and decimal equivalents for each of the keys found on the iNFiNiT!, and where applicable, the Duet keyboards.

KEY	DECIMAL	HEX		KEY	DECIMAL	HEX
MODE SLCT	255	FF		SETUP	234	EA
ESC	254	FE	1	Keypad 0	192	C0
FONT 1	160	A0		Keypad 1	193	C1
FONT 2	161	A1		Keypad 2	194	C2
FONT 3	162	A2		Keypad 3	195	C3
FONT 4	163	A3		Keypad 4	196	C4
FONT 5	164	A4		Keypad 5	197	C5
FONT 6	165	A5		Keypad 6	198	C6
FONT 7	166	A6		Keypad 7	199	C7
FONT 8	167	A7		Keypad 8	200	C8
RED	168	A8		Keypad 9	201	C9
MGTA	169	A9		Keypad CLR	202	CA
BLUE	170	AA		DEL ROW	218	DA
CYAN	171	AB		INS ROW	219	DB
YEL	172	AC		CNTR ROW	220	DC
GRN	173	AD		DEL CHAR	221	DD
WHT	174	AE		INS CHAR	222	DE
BLK	175	AF		<(NEWLINE)	206	CE
CNTR PAGE	223	DF		÷	140	8C
ALT	207	CF		>	141	8D
ERASE	205	CD	1	¥	142	8E
DEL MSG	240	F0		^	143	8F

KEY	DECIMAL	HEX
RCD	241	F1
F1	208	D0
F2	209	D1
F3	210	D2
F4	211	D3
F5	212	D4
F6 (SHIFT F1)	224	E0
F7 (SHIFT F2)	225	E1
F8 (SHIFT F3)	226	E2
F9 (SHIFT F4)	227	E3
F10 (SHIFT F5)	228	E4
CNTL	213	D5
CHNG	247	F7
XFER	249	F9
HOME	203	СВ
COLOR FONT	204	CC
SHIFT PAGE + 🗲	132	84
SHIFT PAGE + ->	133	85
SHIFT PAGE + ♥	134	86
SHIFT PAGE + 🛧	135	87
SHIFT + SHIFT PAGE + ←	148	94
SHIFT + SHIFT PAGE + →	149	95

KEY	DECIMAL	HEX
SHIFT CHAR + 🗲	136	88
SHIFT CHAR + →	137	89
SHIFT CHAR + ♥	138	8A
SHIFT CHAR + 🛧	139	8B
SHIFT + SHIFT CHAR + ←	152	98
SHIFT + SHIFT CHAR + →	153	99
SHIFT + SHIFT CHAR + ♥	154	9A
SHIFT + SHIFT CHAR + ↑	155	9B
SHIFT ROW + 🗲	128	80
SHIFT ROW + →	129	81
SHIFT ROW + ♥	130	82
SHIFT ROW + 🛧	131	83
SHIFT + SHIFT ROW + ←	144	90
SHIFT + SHIFT ROW + →	145	91
SHIFT + SHIFT ROW + ↓	146	92
SHIFT + SHIFT ROW + 个	147	93
DO	243	F3
SLOW REVL	245	F5
READ NEXT	246	F6
READ	248	F8
CRAWL	216	D8
ROLL	217	D9

KEY	DECIMAL	HEX	KEY	DECIMAL
SHIFT + SHIFT PAGE + ♥	150	96	IMAGESTOR! (Key left of SPACE BAR. This command is available only on an iNFiNiT! Family system equipped with the IMAGESTOR! option.	235
SHIFT + SHIFT PAGE + ↑	151	97	SCSI Express (Key right of SPACE BAR> Available only on a MAX!> or MAXINE! system equipped with the SCSI Express option.)	236
CNVRT	214	D6	MAXINE! Preview (Key left of alphanumeric 1. Available only on a MAXINE! system equipped with MAXINE! Preview option.)	231
MIX	233	E9		

HEX

EΒ

EC

E7

Error Codes

If a **checksum** error or other error is detected, a **4-byte ASCII** error code is transmitted, followed by a **Carriage Return <CR>** and **Line Feed <LF>**. If no error is detected and the command was processed successfully, an asterisk (**ASCII 42**), followed by a **Carriage Return** and a **Line Feed** are transmitted.

Please note that these error codes are from the complete implementation of iNFiNiT!® Family **Intelligent Interface**, provided to allow for Lyric feature set expansion. A number of these errors apply to iNFiNiT! systems only.

Error Code	Description
0001	Task timed out.
0002	Unimplemented system service.
0003	Illegal service.
0004	Illegal node.
0005	Object has been deleted.
0006	Invalid object ID .
0007	Incorrect object ID.
0008	Incorrect object type.
0009	Object not found.
0014	Cannot create message - No task control blocks.
0015	Cannot create message - No stack space available.
0016	Cannot create the message -The stack space is too small.
0017	Cannot create the message -Priority out of range.
0018	Cannot start the process - Already active.
0019	Cannot restart the process - The process was never started.
0020	Cannot suspend process - Process is already suspended.
0021	Cannot resume process - It was never suspended.

Error Code	Description
0022	Cannot change priority - Out of range.
0023	Illegal task register number.
0024	Cannot delete - File is open.
0051	Cannot create - No more queue control blocks.
0052	Cannot create or send - No message buffers.
0053	Cannot send - The message queue is full.
0054	Cannot receive - The queue has been deleted.
0055	Cannot receive - There are no pending messages.
0056	Informative - There were tasks waiting when the queue was deleted.
0057	Informative - There were messages waiting when the queue was deleted.
0065	Cannot create - No more SCBs.
0066	Cannot acquire - Semaphore not available.
0067	Cannot acquire - Semaphore deleted while waiting.
0068	Informative - There were tasks waiting when the Semaphore was deleted.
2001	An invalid function number was called.
2002	pHILE failure was encountered.
2003	An inconsistent structure was found on the volume.
2004	No more TCB extensions.
2005	Init volume parameter error.
2006	No more volume table entries.
2007	Alien volume.

Error Code	Description
2008	Volume already mounted.
2009	Cannot unmount - there are files open.
200A	Device not mounted.
200B	File not found.
200C	Illegal filename.
200D	No Default Directory found.
200E	Directory file expected.
200F	Illegal annex size to create.
2010	Null filename.
2011	File already exists.
2012	F list full.
2013	File open.
2014	Directory is not empty.
2015	System or directory file.
2016	Different devices (MOVE_F).
2017	MOVE_F would result in non tree structure.
2018	No more open file entries.
2019	No more FCBs .
201A	Invalid FID , too large.
201B	Invalid FID , file closed.
201C	Indirect block full.

Error Code	Description
201D	Volume full.
201E	Bad position to Iseek .
201F	Seek past end of file.
2021	Illegal device (exceeded maximum).
2022	Data is locked.
2023	Bad fn in OPEN_VOL .
2024	Illegal flush mode to MOUNT_VOL .
2025	Illegal device name.
2026	Bad MS/DOS call.
2027	Illegal MS disk type.
2028	More than one type of MS disk type.
2040	Used Tab page
2F01	Insufficient data area.
2F0E	Check sum in pHILE .
2F0F	Check sum in pVERIFY+ .
400B	Checksum does not match computed checksum.
40B2	Requested message directory does not exist.
40B3	Requested message file does not exist.
412C	Requested description file is not a Tab Description file.
412D	Requested data file is not a Tab Data file.
412E	Requested field is not a valid field.

Error Code	Description
412F	Requested attribute (Color or Font) is not valid.
4130	Field contains too much data (limit 64 characters).
4131	Incorrect number of fields, R command does not match X command.
415E	Description message was created with old Tabs (Templates).
415F	Number of Tabs (Templates) exceeds limit (99).
4190	Desired operation is not terminated with " \\ ".
4191	The command format is incorrect.
4192	An invalid operation has been requested.
4193	An invalid Machine ID has been used.
4194	An invalid Effects ID has been used.
41C2	An invalid User ID has been used (either 1 or 2).
41C3	An invalid Keyboard ID has been used (either 1 or 2).
41C4	The command to set the active message compose frame buffer failed.
41C5	An invalid Frame Buffer ID was used (either 1 , 2 , or 3).
41C6	Error building into a non-displaying buffer; a bad message type was used or no Read Next command was issued.
41C7	Command to set Palette failed.
41C8	Color Key out of range; must be 1 - 8.
41C9	Palette Index out of range; must be 1 - 31.
41CA	Color Index out of range; must be 0 - 255.
41CB	Key out of range; must be 0 - 1.

Error Code	Description
41CC	Attempted to perform a Dual-User operation in Single-User mode.
41CD	Timed out waiting for response.
41CE	Error building Message Compose Palette.
41CF	Error erasing displayed Frame Buffer.
41D0	Display/Non-Display flag out of range, i.e., 0 - 1.
41D1	No Intelligent Interface option.
41D2	Bitmap not created.
41D3	Bitmap file not found.
41D4	Invalid Field Number .
41D5	Missing Macro .
41D6	Macro Error.
41D7	Duplicate Macro .
5000	New Playlist created.
5001	Invalid Playlist Number .
5002	No Playlist loaded.
5003	File not Playlist .
5004	Old version of Playlist .
5005	Playlist already exists.
5006	Playlist finished executing.
5010	Invalid Playlist Entry Number .
5011	Error allocating Playlist Entry .

Error Code	Description
5012	Error adding Playlist Entry .
5020	Invalid Channel allocated.
5021	No Channel allocated.
5022	No Frame Buffer allocated.
5030	Invalid Still Message Number .
5031	Still File not found.
5050	Invalid IMAGESTOR! command.
5051	Invalid Effect .
5052	Invalid Pattern .
5053	Invalid Speed .
5054	Invalid Ease parameter.
5055	Invalid Reverse parameter.
5056	Invalid Keyboard Lock Status .
7000	No memory to create outline.
7004	No Frame Buffer available for graph.
7008	No memory for the Fill Line Buffer .
7100	Line segment not between 0 and MAX_LINE_SEG .
7108	Invalid Pulse parameter specified, i.e., not _ PULSE(0) or _ NON_PULSE(1) .
710C	Invalid display buffer specified, i.e., not _DBUF(0) or _NBUF(1) .
7110	Invalid Trigger type specified, i.e., not _ REGULAR_LINE(0) , _ PULSE_LINE(1) or _ BOTH(2)

Error Code	Description
7114	Invalid Mode specified, i.e., not _ENTIRE_LINE(0) or _ LAST_SEGMENT(1) .
7118	Specified Pacing value outside of range, i.e., not between -30 and 30 .
7200	Brush not successfully created.
7204	Invalid Edge specified, i.e., not _HARD(0), _SOFT(1), _SOFT_EDGE(2) or _CLEAR(3).
7208	Invalid Transparency , i.e., not between 0 and 100 .
720C	Brush diameter out of range.
7210	Invalid RGBA file name, i.e., RGBA value has more than 8 digits.
7300	Point not added to outline.
7304	No outline exists for this line segment.
8001	Wrong Read Effect task.
8002	Bad Read Effect command.
8003	Wrong Read Effect command.
8004	Bad Read Effect Mode .
8005	Bad Read Effect Ease .
8006	Bad Read Effect Speed.
8007	Bad Read Effect Type .
8008	Bad Read Effect Reverse.
8009	Bad Read Effect Row Direction.
800A	Bad Mix Effect Percent.
800B	Bad Mix Effect Soft Edge.

Error Code	Description
800C	Rows cannot be wiped left and right on old frame buffer.
800D	Must specify one row Up or Down .
800E	Invalid Effect type.
800F	No memory available for row type.
8010	Frame buffer error occurred.
8011	Frame buffer in use by another task, e.g., Clock , Flash .
805001	Bad Transform syntax.
805002	Bad Transform script.
805003	Bad Transform directory.
805004	Bad Transform message.
805005	Bad Transform value.
805006	Ignored.
805007	Bad Transform command.
805008	Transform not available.

32. Macros

Overview

View Menu > Macros

NOTE

To use Macros, the Duet or PC on which you are running Lyric must have Microsoft Internet Explorer 6.0 or later installed.

Macros are VB Script programs that are can simplify and automate repetitive tasks for easy recall in on-air or production situations. Such tasks include reading messages, keystrokes, menu selections, etc. They can be triggered as needed, and/or a macro can be set to automatically execute at the time when the macro file is read.

This section covers the use of macro scripts as triggered from within Lyric. Individual macro commands, however, can be sent to Lyric via Intelligent Interface[®]. *Refer to Intelligent Interface: E Command - Send Macro Commands* for detailed information.

Note that not all keystrokes or mouse actions are supported in Lyric macros. *Refer to* **Specifying Characters Using SendKeys Commands** for additional information. Supported Lyric functions are listed at the end of this section.

About VB (Visual Basic) Script

Lyric macros are founded on the VB Script language, allowing sophisticated, high-level programs to be created and assigned to macros. These include custom user interfaces for data acquisition and display. The use of VB Script also enables the macro user to control custom CAL (Chyron Abstraction Layer) applications.

The Macros Dialog Box

For the purpose of the following example, make sure that the Lyric **Canvas** is empty, and does not contain a full-screen **2D Text Window**. The first step in creating a macro is to access the **Macros** dialog box. To do so:

• From the View menu, select Macros. The Macros dialog box is displayed.

Macro	Hotkey	File	Description Script Globa	als

Macros Dialog Box

The Macros dialog box is split into two panes. The left pane displays the following information for each macro:

- The name of the macro. •
- The hotkey, if specified, that executes the macro.
- The file path of the macro once it has been saved.

The right pane displays three tabs:

- Description: Displays a short description of each macro. This tab is displayed on opening the Macros dialog box.
- Script: Displays the VB Script, i.e. the program, for the selected macro. Macro scripts can be input in a variety of manners: Typing a script directly into the **Script** tab; opening an existing macro file; and recording keyboard/mouse activity.
- Globals: Displays a list of Global Variables available for use by any of the macros and by macros which are subsequently read into the Macros dialog box.

There are also a set of icons at the bottom left of the dialog box, which execute a variety of functions.

The left and right panes can be resized by clicking-and-dragging, as can the **Macro**, **Hotkey** and **File** columns:

Macros			
Macro	Hotkey	File	Description 1

Resized Macros Dialog Box

Creating and Plaving Back a Macro

The following script that you will create will open a 2D Text Window, change its position twice, and display the word "Hello!"

1. Click the Add icon 🕇 to initiate a new macro file. The default new file name appears in the **Description** tab. along with the time and date. Additional descriptive text can be typed in at any time. Text editing functions are available by right-clicking in the **Description** pane. See **Right-Pane** Context Menu later in this section for additional information on this menu.



Adding a New Macro

- 2. Click the **Record** Sicon. The right pane switches to displaying the **Script** tab. From this point on, almost any action performed on the Canvas is recorded as part of the macro. Additionally, while the macro is recording, the Macro symbol F next to the default filename blinks, and the letter M in the
- Status Bar turns red.
- 3. Click on the **Canvas** to make it the active window.

4. Open a 2D Text Window. Note that the creation of the 2D Text Window has been recorded.

Macros			<u></u>
Macro	Hotkey	File	Description Script Globals
¥ Macro1		[new]	ActiveCanvas.Scene.InsertObject(otText)

Macros Script Recording the Addition of a 2D Text Window

5. Click-and-drag the **2D Text Window** to a new position, and then click-and-drag it to still a different position. Each change in position is recorded as a pair of commands: one addressing the **X** position, and one addressing the **Y** position.

Macros	
Macro Hotkey File	Description Script Globals
¥ Macro1 [new]	ActiveCanvas.Scene.InsertObject(otText) ActiveCanvas.Scene.ActiveObject.KeyFrame kfXPos, 0, -1.626400 ActiveCanvas.Scene.ActiveObject.KeyFrame kfYPos, 0, -0.191200 ActiveCanvas.Scene.ActiveObject.KeyFrame kfYPos, 0, -1.166100 ActiveCanvas.Scene.ActiveObject.KeyFrame kfYPos, 0, -1.134400

Macros Script Recording 2D Text Window Movement

Most actions involved in creating a Lyric composition can be recorded as part of a macro. Actions not directly related to the creation of the Lyric composition, for example clicking on a window to make it active, are generally ignored. *Refer to the end of this section for a complete list of the actions that can be recorded in a macro.*

6. In the 2D Text Window, type the word "Hello!" Each character that is typed is recorded in the macro.

20	Text 1 Hello!
Macros	
Macro Hotkey File	Description Script Globals
	ActiveCanvas.Scene.InsertObject(otText) ActiveCanvas.Scene.ActiveObject.KeyFrame kfXPos, 0, -1.626400 ActiveCanvas.Scene.ActiveObject.KeyFrame kfXPos, 0, -0.191200 ActiveCanvas.Scene.ActiveObject.KeyFrame kfXPos, 0, -1.166100 ActiveCanvas.Scene.ActiveObject.KeyFrame kfYPos, 0, -1.134400 ActiveCanvas.Selection = "H" ActiveCanvas.Selection = "H" ActiveCanvas.Selection = "1" ActiveCanvas.Selection = "1" ActiveCanvas.Selection = "!"
+ - • • • • • • •	

Macros Script Recording Text Typing

- 7. Click the **Stop** icon. The **Macro** symbol \mathcal{F} does not stop flashing until the current macro is saved or abandoned. Saving macros is covered later in this section.
- 8. Press **Ctrl + Q** to erase the **Canvas**. Now that recording has stopped, the Erase command is not added to the macros script.

9. Click the **Play** icon **>** or double-click the macro name. The window containing the typed "Hello!" appears on the **Canvas**. Because no timing commands were included in this macros script, the repositioning of the **2D Text Window** and the typing of the characters may be imperceptible on playback. A macro can also be executed by pressing a **Hot Key** combination, which is a keyboard shortcut. Setting **Hot Keys** is covered later in this section.

Add additional macros and experiment with other Lyric composition tools to see how they are translated into VB Script commands.

Right-Pane Context Menu

The right-pane context menu accesses text editing functions in the **Description**, **Script** and **Globals** tabs. To display this menu:

• Right-click the right pane (displaying the **Description**, **Script** and **Globals** tab) of the **Macros** dialog box.

Undo	
Cut Copy Paste Delete	
Select All	
Right to left Reading order Show Unicode control characters Insert Unicode control character	+

Right-Pane Context Menu

Standard Windows text editing functions such as **Cut**, **Copy**, **Paste**, **Delete** and **Select All** are available from this menu. If certain language packages are installed, three additional items are displayed:

- **Right-to-Left Reading Order:** Right-justifies the text, and specifies that the text should be read from right-to-left. To toggle on/off, click **Right-to-Left Reading Order**. When active, a check is displayed next to the menu item.
- Show Unicode Control Characters: Currently not implemented.
- Insert Unicode Control Character: Currently not implemented.

Left-Pane Context Menu

The left-pane context menu accesses functions that allow one to edit, delete, save, set a hotkey or rename a macro. To display this menu:

• Right-click a macro name in the left pane of the **Macros** dialog box. The left-pane context menu is displayed. Note that the **Script Code** item is grayed out. This item only becomes active if the selected macro has been previously saved.

M _a	
Ma	Script Code
	<u>D</u> elete
	Save Macro
	Hot Key
	<u>R</u> ename

Macros Left-Pane Context Menu

The context menu items are covered in following order: **Save Macro**; **Script Code**; **Hot Key**; **Rename**; **Delete**.

Saving Macros

Macros that are listed in the **Macros** dialog box can be saved individually or together when a **Save** is executed. Macros can be saved in two different formats.

- *.Imx: The *.Imx format is a file consisting solely of ASCII text, allowing the file to be opened in any text editor for editing. Files of this format can also be used in programs outside of Lyric.
- *.lyr: The *.lyr format is executable only from Lyric. The advantage to this format is that it allows one individual macro to automatically execute upon reading the macro file. The *.lyr format also allows the file to be read as a Lyric message by entering the **Message Number**, then pressing **Read**. It should not, however, be edited outside of Lyric.

A macro script or macro name can also be embedded in a Lyric message, and is executed immediately when the message is read. *Refer to Selective Recording - Embedded Macro* for details.

To save a macro or group of macros as an *.Imx file:

 Select Save Macro from the left-pane context menu to save the selected macro, or click the Save AII Macros to File icon or press Ctrl + S to save all macros displayed in the Macros dialog box. The Save As dialog opens.

ave Macros	То		<u>? ×</u>
Save jn: 🔁	Messages	🔹 🗢 🖻 🤆	* 💷 •
File name:	Helle Cogueros Imu		Cauca I
File <u>n</u> ame:	Hello_Sequence.lmx		Save
File <u>n</u> ame: Save as <u>t</u> ype:	Hello_Sequence.lmx	_	<u>S</u> ave Cancel
File <u>n</u> ame: Save as <u>t</u> ype: Auto E <u>x</u> ecute	Hello_Sequence.lmx Lyric Macro Files (*.lmx)	¥	<u>S</u> ave Cancel
File <u>n</u> ame: Save as <u>type:</u> Auto E <u>x</u> ecute Macro1	Hello_Sequence.lmx Lyric Macro Files (*.lmx)		<u>S</u> ave Cancel

Save Macros As *.Imx

- 2. In the **Save In** field, navigate to the directory in which the macro file is to be saved.
- 3. In the **Save as Type** drop-down list box, select **Lyric Macro Files (*.Imx)**. Note that the **Auto Execute** drop-down is grayed out.
- 4. Enter a File Name.
- 5. Optional: To save **Global Variables**, select (check) the **Save Globals** check box. **Global Variables** are covered later in this section.
- 6. Click Save.

Note that the when a group of macros is saved as an *.*Imx* file, the code for each macro is displayed in order of its **Macros** dialog box listing when the *.Imx* file is opened in a text editor.

To save a macro or group of macros as a *.lyr message:

 Select Save Macro from the left-pane context menu to save the selected macro, or click the Save All Macros to File icon or press Ctrl + S to save all macros displayed in the Macros dialog box. The Save As dialog opens. It is shown with the file information already entered.

Save Macros To			? ×
Save jn: 🔂	Messages	- + E	* 🛄 *
00000000.lyr		' 00000006.lyr	0
00000001.lyr			
00000002.lyr			
00000003.lyr			
00000004.lyr			
00000005.lyr			
I			•
File <u>n</u> ame:	Hello_Sequence.lyr		<u>S</u> ave
Save as type:	Lyric Macro Files (*.lyr)	•	Cancel
Auto E <u>x</u> ecuti	e		
Macro1	•		
Macro1			
Macro2			//
Macro3			

Save Macros As *.lyr

- 2. In the Save In field, navigate to the directory in which the macro message is to be saved.
- 3. In the Save as Type drop-down list box, select Lyric Macro Files (*.Imx).
- 4. Enter a File Name.
- 5. Optional: In the **Auto Execute** drop-down list box, select the individual macro that should automatically execute when the macro message is read. This step is necessary for auto-execution even if the macro message contains only one macro. Leave the **Auto Execute** field blank if automatic macro execution should not take place.
- 6. Optional: To save **Global Variables**, select (check) the **Save Globals** check box. **Global Variables** are covered later in this section.
- 7. Click Save.

If a macro was specified in the **Auto-Execute** field, the macro will execute when the Lyric macro message is read.

Quickly Saving a Macro File (*.lyr) for Easy Recall

The following procedures save the macro file in the *.lyr* format to the current **Message Number** in the **Default Message Directory**. Using this recording method also makes allows for easy recall of the macro message, as described in **Opening/Reading a Macro** later in this section.

A quick method for recording a **Macro** file in the *.*lyr* format is as follows:

- 1. Press Ctrl + Record. The Record Only: dialog box opens.
- 2. Select Macros.
- 3. Click Record.

A shortcut key combination can also be used to record the macro:

• Press Ctrl + Record M Enter.

The above methods *cannot* be used to save **Macro** files in the .*Imx* format.
Opening/Reading a Macro

Macro files in both the *.*Imx* and *.*Iyr* formats can be opened in Lyric from **File > Open**, then by navigating to and selecting the file.

Macro files in the *.lyr format, that also are identified by numeric names of eight digits or less, and that are stored in the Lyric **Default Message Directory**, can be read in the same manner as other Lyric messages.

• Enter the Message Number, then press Read.

Note that opening a macro that has the same **Macro Name** (not file name) as a macro already listed in the window results in the newer macro overwriting the older macro in the **Macros** dialog box. This does not affect the original macro files that have been previously saved. It simply affects which macro is currently loaded. When a macro in the **Macros** dialog box has not yet been saved, the overwrite would erase it.

A macro can be embedded in a Lyric message so that it automatically executes when the message is read. *Refer to Selective Recording - Embedded Macro* for details.

Script Code Window and Editing Script

After an individual macro or group of macros is saved, the VB Script code for the entire file can be displayed and edited. The changes can then be saved.

To view and edit the macro file within Lyric:

1. Select Script Code from the left-pane context menu. The Script Code window is displayed.

Hello_Sequence.lyr			_ 0	×
Sub Macrol 'DESC:09:56:41 Jan 06, 2004 'ICON:WHITE 'HKEY:				-
ActiveCanvas.Scene.InsertObject(otText)				
ActiveCanvas.Scene.ActiveObject.KeyFrame	kfXPos,	ο,	-1.626400	
ActiveCanvas.Scene.ActiveObject.KeyFrame	kfYPos,	0,	-0.191200	
ActiveCanvas.Scene.ActiveObject.KeyFrame	kfXPos,	ο,	-1.166100	
ActiveCanvas.Scene.ActiveObject.KeyFrame	kfYPos,	ο,	-1.134400	
ActiveCanvas.Selection = "H"				
ActiveCanvas.Selection = "e"				
ActiveCanvas.Selection = "1"				-
ActiveCanvas.Selection = "1"				
ActiveCanvas.Selection = "o"				
ActiveCanvas.Selection = "!"				
End Sub				
Sub Macro2				
'DESC:14:16:58 Jan 06, 2004				
'ICON:WHITE 'HKEY:				
ActiveCanvas.Scene.InsertObject(otText)				
ActiveCanvas.Selection = "H"				
ActiveCanvas.Selection = "o"				
ActiveCanvas.Selection = "w"				
ActiveCanvas.Selection = " "				
4			Þ	F
				100 C

Script Code Window

As shown in the previous figure, each individual macro, whether saved individually or as a group, is identified as a subroutine in the VB Script. Script from any of the subroutines can be edited.

2. Make edits to the script. To access available editing functions, right-click in the Script Code window.



Script Code Edit Functions

3. When editing is complete, click the Windows **Close** Xicon. The following is displayed.



Save Changes to Macro?

4. Click **Yes** to save changes, **No** to exit the **Script Code** window without saving changes, or **Cancel** to cancel the operation and continue to edit.

An individual macro can also be edited from within the **Script** tab of the **Macros** dialog box.

- 1. Select (highlight) the macro name in the Macros dialog box.
- 2. Click the **Script** tab. The script for the selected macro is displayed.

Macro Hotke	y File	Description Script Globals	
¥ Macro1 ₩ Macro2 ₩ Macro3	C:\Progra C:\Progra C:\Progra	ActiveCanvas.Scene.InsertObject(otText) ActiveCanvas.Scene.ActiveObject.KeyFrame kfXPos, 0, -1.62640 ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Scene.ActiveObject ActiveCanvas.Selection = "H" ActiveCanvas.Selection = "e" ActiveCanvas.Selection = "1" ActiveCanvas.Selection = "1" ActiveCanvas.Selection = "1" ActiveCanvas.Selection = "0"	0
	F	ActiveCanvas.Selection = "!" Select <u>All</u>	

Editing a Macro from the Script Tab

- 3. Make edits to the script. To access available editing functions, right-click in the **Script Code** window, as shown in the preceding figure.
- 4. When editing is complete, the script can be played back. Note that when editing in this manner, the script is not saved until one of the **Save** functions is executed.

Deleting a Macro/All Macros

Macros can be deleted either individually or as a group from the **Macros** dialog box. Note that **Global Variables** are not deleted by either operation.

An individual macro can be deleted from the Macros dialog box.

- 1. Right-click the macro name in the Macros dialog box.
- 2. Select **Delete** from the context menu or press the **Delete** key. The **Confirm Delete** prompt is displayed.



Confirm Delete Prompt

3. Click **OK** to delete, or **Cancel** to cancel the deletion.

To erase all macros from the Macros dialog box:

1. Click the Clear All Macros icon *P*. The Confirm Deletion prompt is displayed.



Confirm Deletion Prompt

2. Click OK to delete all macros, or Cancel to cancel the deletion.

Setting Hot Keys and Macro Symbol Colors

A **Hot Key**, or keyboard shortcut, can be assigned to each individual macro, eliminating the need to use the mouse to execute the macro. A color can also be assigned to the **Macro** symbol for easy recognition. To set a **Hot Key** and a macro color:

- 1. Right-click the macro name in the **Macros** dialog box.
- 2. Select Hot Key from the context menu. The Macro Short Cuts dialog box opens.

1

Macro Short Cuts Dialog Box

- 3. As shown in the preceding figure, enter a key combination in the **Hot Key** field, then select a color in the Icon color list. For no color, select **<none>**.
- 4. Click **Apply**. The macro can now be executed by pressing the **Hot Key** combination. The following figure shows **Hot Keys** and **Macro** symbol colors applied to all three macros.

	Macros			
	Macro	Hotkey	File	Descripti
ľ	Macro1	Alt+1	C:\Program Files\Cl	
	F Macro2	Alt+2	C:\Program Files\Cl	15:25:0
	🐓 Macro3	Alt+3	C:\Program Files\Cl	

Hot Keys and Macro Symbol Colors Applied

Renaming a Macro

A individual macro can be renamed.

- 1. Right-click the macro name in the Macros dialog box.
- 2. Select **Rename** from the context menu. The macro name become available for editing. Type the new name of the macro. Names must be composed of alphanumeric characters and must not contain spaces or punctuation characters.

Macros			
Macro	Hotkey	File	Descript
Macro1	Alt+1	C:\Program Files\Cl	Lin on a
Macro2	Alt+2	C:\Program Files\Cl	15:25:0
Wacro3	Alt+3	C:\Program Files\Cl	

Renaming a Macro

3. Press Enter. The macro displays the new name.

E	Macros			
	Macro	Hotkey	File	Descripti
	7 Hello	Alt+1	C:\Program Files\Cl	Les on a
	F Macro2	Alt+2	C:\Program Files\Cl	15:25:0
	🐓 Macro3	Alt+3	C:\Program Files\Cl	

Renamed Macro

Global Variables

A Global Variable is a value that is available to all macros. A Global Variable can be an absolute value, or it can be determined by input from another source, i.e., a macro. For example, a Global Variable such as a price, could be input via one macro. Another macro could then display the Global Variable in a 2D Text Template on the Lyric Canvas.

Global Variables can be defined in the **Globals** tab of the **Macros** dialog box. Each **Global Variable** must be preceded by the word **public**, which indicates that it is available to all macros.

Global Variables remain active until deleted or reset (See Resetting the Macro Engine and Global Variables following this subsection).

To demonstrate a simple example, the following procedure will define a **Global Variable**. Two macros will also be created: one to take input of a number, and another to display it.

To define a **Global Variable** "a", which is to be accessed by the macros:

- 1. Click on the **Globals** tab in the **Macros** dialog box.
- 2. Type the following: public a

Description	Script Globals
La LEa a	

Defining a Global Variable

Create the input macro that displays a Windows input box. This value becomes the **Global Variable** "a" that can be accessed by other macros.

- 1. Click the Add icon 🕂. This initiates the creation of a new macro. Rename the macro as Input.
- 2. Click on the Script tab. Type the following: a = InputBox ("Enter Number")

To create the macro that displays the **Global Variable** "a" in a Windows message box.

- 1. Click the Add icon +. This initiates the creation of a new macro. Rename the macro as **Output**.
- 2. Click on the Script tab. Type the following: MsgBox (a)

The macros can now be executed.

1. Select the macro named **Input**, then double-click it or click the **Play** icon. The following is displayed:

OK
Cancel

Input Box Requesting a Value

- 2. Type a number into the field. For this example, we will use 456. Click OK.
- 3. Select the macro named Input, then double-click it or click the Play icon. The following is displayed:

456	VBScript	×
[456	

Outputting the Global Variable

Resetting the Macro Engine and Global Variables

The macro engine can be reset, clearing out the macros and bringing the VB Script processor back to its initial state. This is recommended when work with one set of macros is complete, and a new set is to be opened. In addition, if macros that normally execute properly exhibit unexpected behavior, or newly created macros are retaining and executing previously created scripts, resetting the macro engine can restore proper function.

Note that executing a reset also clears macros that have been created and sent via **Intelligent Interface**. These macros do not appear in the **Macros** dialog box. After a reset, it is necessary to resend the macros to Lyric if they are to be used.

The **Reset Macro Engine and Global Variables** can reset only the macros or the macros and **Global Variables**. Generally, it is desirable not to reset the **Global Variables**, in order to leave them available for the next set of macros.

To execute a reset:

- 1. Specify whether the macros only, or the macros and the Global Variables are to be reset.
 - To Reset Macros Only: In the right pane of the Macros dialog box, click either the Description tab or the Script tab.
 - To Reset Macros and Global Variables: In the right pane of the Macros dialog box, click Globals tab.

2. Click the **Reset Macro Engine and Globals** icon 🛂. The following is displayed.



Confirm Macro Engine and Global Variable Reset Prompt

3. Click **OK** to reset or **Cancel** to cancel the operation.

Supported Functions For Macros

The following Lyric operations can be performed using macro commands. *Refer to LEIF Help in Lyric Online Help for coding and syntax information.*

Object Maintenance

- Add 2D window (including Roll, Crawl, Type-On, Clock, Timer)
- Add 3D object (characters, Wavefront, 3DS model)
- Add 2D image
- Selection of object by name
- Delete selected object(s)
- Toggle visibility (checkbox on scene graph)

2D Text Operations

- Typing 2D characters
- Cursor movement via arrow keys, home, end
- Delete, backspace, next line
- Insert 2D Text Template
- Tab to previous/next template
- Make Window Full Screen
- Select All 2D Text
- Insert/Delete Row
- Delete to end of row
- Pickup color/font
- Apply color/font, using shortcut keys
- Renumber templates
- Shift/Super-Shift row and page
- Ctrl +Tab (inserts white space tab)
- Escape (to exit an active template)
- Font and Color Hot Keys

Lyric User Guide

Animation Operations

- Set keyframes through Canvas actions or changing values on the XYZ Properties page
- Go to Next or Previous keyframe
- Fast Forward
- Fast Reverse
- Frame Forward
- Frame Reverse
- Go to end of animation
- Keyframe all objects/selected objects
- Play or Reverse Play animation
- Copy Animation State
- Paste Animation State

Duet Operations

- Toggle Duet Live Button
- Transfer
- Channel selection/toggle
- Swap
- Transfer to next channel

Scene Operations

- Setting message number
- Read
- Record
- Alt + Record
- **Open** (specified filename)
- Erase
- Wait (pause between macro commands for a given timeout)

Advanced Macro Scripting

VBScript Built-Ins

Since Lyric macros are written in VBScript, all VBScript commands are supported. However, these commands must be entered into the macro manually through the **Macro Control Panel** or **Script Editor** windows. LMX-formatted macro files can also be edited in any Windows editor such as Word or Notepad.

Take note of the following suggestions on editing this type of file:

Dim statements allow the creation of variables. Variable names must begin with an alphabetic character, must not contain dots and must contain fewer than 256 characters. Many languages require identification of the data type for each variable. Note that VBScript supports only the variant data type (which can contain all types of data). Therefore, it is unnecessary to declare a specific data type for VBScript variables:

Dim myVariable

The **Option Explicit** statement may be added to the beginning of a script so that explicit declaration of all variables is required. Variables are named storage locations containing values that the script can modify. By default, scripts automatically create a variable upon first reference to this value. However, this methodology can mask minor typographical errors in the script. Using the Option Explicit device can help prevent problems of this type.

After creation of a new variable, the **Assignment** operator (=) may be used to assign that variable a value. The following line assigns the value of 3 to myVariable:

myVariable = 3

Math: VBScript provides support for the full range of mathematical expressions. The following line shows how to perform simple math calculations and divide the result by the contents of myVariable:

String Concatenation - A common VBScript technique is the combination of the contents of different strings. The Concatenation operator (**&**) may be used to create a new string:

myVariable = "The value of myVariable is:" & myVariable

Constants, like variables, are named values that may be used in scripts. However, the value of a constant cannot be altered like the content of a variable:

const myTitle = "VBSample"

The **MsgBox** function may be used to display messages to the user. The following example demonstrates how to display the message contained in myVariable. The message box's title bar displays the value in myTitle:

MsgBox myVariable, myTitle

The **InputBox** function may be used to prompt the user for simple input values. The function automatically assigns the value that the user enters to the variable on the left of the equal sign. Note that the InputBox function encloses its argument in parentheses:

myVariable = InputBox("Enter input here")

If...Then...Else: The If statement is an important logical-flow control function. Present in virtually all scripts, the If statement evaluates a condition, then performs an action based on whether the condition is met:

If myVariable = 1 Then

MsgBox "The value was 1"

Else

MsgBox "The value was not 1"

End if

In addition to message display, the MsgBox function is also capable of displaying buttons and returning the value of the button selected. The following example displays a message box that contains Yes, No, and Cancel buttons. The script assigns the selected button's value to nButton.

nButton = MsgBox("Click a button", vbYesNoCancel)

The **On Error** statement lets a script trap runtime errors and continue executing. A test for errors in the script can be conducted after each statement has executed.

On Error Resume Next

The **InStr** function allows the user to locate a substring within a string. The function returns the starting position of the substring or a 0 if the function does not find the string. In

nPos = InStr("123345", "33")

nPos has a value of 3 because "33" begins in the third position of "123345".

The Do Loop - This basic mechanism for repeatedly executing a set of statements can take either of two forms, a **Do Until Loop** or a **Do While Loop**. The most important distinction between the two is that the Do Until Loop always executes at least once.

Do Until myValue > 1

myValue = myValue + 1

Loop

Use the Select Case statement to compare an expression against several other expressions.

Select Case nButton

Case vbYes MsgBox "Yes"

Case vbNo MsgBox "No"

Case Else MsgBox "Cancel"

End Select

Examples of Macros

When creating macros of the following types in an **.Imx**-formatted file, all of the lines shown below should be entered, including those beginning with "**Sub**" and "**End**".

However, if the desired end result were an **.lyr**-formatted file, only the text between the "Sub" and "End" lines would be entered. (The lines beginning with "Sub" and "End Sub" would be automatically added internally). The lines beginning with a single quote denote comments, which are for informational purposes only; the single quote indicates that the macro engine should not execute these lines.

Types the word "Macros" (in 3D if a 2D Text Window is not active, 2D otherwise)

Sub TypeMacro

ActiveCanvas.Selection = "M"

ActiveCanvas.Selection = "a"

ActiveCanvas.Selection = "c"

ActiveCanvas.Selection = "r"

ActiveCanvas.Selection = "o"

ActiveCanvas.Selection = "s"

End Sub

Adds a window to the scene and makes it full screen

Sub FullScreenWnd

ActiveCanvas.Scene.InsertObject(otText)

ActiveCanvas.Selection.Execute("Make FullScreen")

End Sub

Reads message 5014 and plays it **Sub GoOlympics**

Lyric.Message 5014

Lyric.Read

ActiveCanvas.Selection.Execute("Play Animation")

End Sub

Adds a 2D window, types the word "delete", then deletes the 'd' Sub CharDelete

ActiveCanvas.Scene.InsertObject(otText)

ActiveCanvas.Selection = "d"

ActiveCanvas.Selection = "e"

ActiveCanvas.Selection = "I"

ActiveCanvas.Selection = "e"

ActiveCanvas.Selection = "t"

ActiveCanvas.Selection = "e"

ActiveCanvas.Selection.Home

ActiveCanvas.Selection.Right scShift

ActiveCanvas.Selection.Delete

End Sub

Uses VBScript built-in InputBox command to prompt user for message number to read Sub MsgNInput

Lyric.Message CInt(InputBox("Enter Message Number"))

Lyric.Read

End Sub

Using ActiveX Objects In Macros

In addition to these built-in and Lyric-based macro commands, users can also access third-party controls supported in VBScript.

To use any ActiveX object in a Lyric macro, use the CreateObject statement.

Set myObj = CreateObject("ActiveXObject.Object1")

Once the object is created, use dot notation to reference the objects' properties or methods.

myObj.Name = "NewName"

theName = myObj.GetName()

Two of the most useful of these objects are the **ActiveX Data Object** and the **Windows Scripting Host** that are supported by Microsoft.

ActiveX Data Object

Microsoft® ActiveX Data Object[™], or ADO, can be used to access ODBC-compliant databases in a manner similar to Lyric's **DB Link** feature. The ADO API reference can be found on the Microsoft® web site.

This example opens the Lyric Browser Database and displays information about messages 0 - 100 in a **2D Roll** window. The macro can be easily modified to open any ODBC-compliant database (e.g. Microsoft Access Database) and extract needed information for display as part of a Lyric message.

Dim oConn, oRS, oContent, a

'Create a roll window in canvas to hold browser database information

ActiveCanvas.Scene.Erase(EraseScene)

ActiveCanvas.Scene.InsertObject(otRoll)

ActiveCanvas.Selection.Execute("Make FullScreen")

' Create an ActiveX Data Object

Set oConn = CreateObject("ADODB.Connection")

' Open the Browser Database

oConn.Open "Browser"

'go thru all messages in Browser database between 0 and 100 and display title, author and comments in roll window

set oRS = oConn.Execute("SELECT Title,Author,PathAndFile from Messages WHERE Title >= '00000000' AND Title < '00000100'")

Do Until oRS.EOF

oContent = oRS.Fields(0).Value & chr(13) & oRS.Fields(1).Value & chr(13) & oRS.Fields(2).Value & chr(13) & chr(13)

ActiveCanvas.Selection = oContent

oRS.MoveNext

Loop

Windows Scripting Host

Microsoft[®] Windows Script Host[™] is a subset of commands that can be used to automate most Windows Explorer and Windows Shell functionality through a macro. Further information on the Windows Script Host API reference can be found on the Microsoft[®] web site.

One of the ActiveX objects within this subset is the Windows Shell ActiveX Object. One of the most important features of WshShell is found in the SendKeys function. This technique allows any key sequence to be sent to an active application. Therefore, any key sequence, including menu shortcuts, which Lyric supports can be executed within a macro using the WshShell Object. The key sequence is provided as a string argument (i.e. in quotes) to the SendKeys command. Alphanumeric keys can be provided explicitly; special-function keys are represented as follows:

- Enter key represented as ~
- Alt key represented as %
- Shift key represented as +
- Ctrl key represented as ^
- Function (and similar) keys should be contained in brackets, e.g. {F1} {BACKSPACE}

Example 1:

To open Lyric's **Clip Control Panel** via its corresponding menu item on the **Tools** menu, the use the following **Macro**:

Sub PopupCCP

'Create a Windows Shell object.

set WshShell = CreateObject ("WScript.Shell")

'F6 sets focus to the Canvas.

WshShell.SendKeys("{F6}")

'The key sequence Alt + O I, and then Enter (~) drops down the Tools menu, 'and then selects and opens the Clip Control Panel.

WshShell.SendKeys("%oi~")

End Sub

Example 2:

To set a frequently-used background color, program the following Macro:

Sub SetBackgroundBlue 'DESC:11:10:02 May 03, 2004 Sub SetBackgroundBlue 'DESC:Sets Background to a medium light blue with 25% Transparency. 'DESC:Transparency: 25 'DESC:Red: 58 'DESC:Green: 118 'DESC:Blue: 190 'ICON:AQUA 'HKEY:Alt+1

'Create a Windows Shell object.

set WshShell = CreateObject ("WScript.Shell")

'F6 sets focus to the Canvas.

WshShell.SendKeys("{F6}")

'The key sequence Alt + O B S drops down the Tools menu, 'selects Background, and then selects Solid/Ramp Color. 'The Color Select dialog box opens.

WshShell.SendKeys("%obs")

'The key sequence Tab C D 58 Tab 118 Tab 190
'moves the cursor to a location in the Select Color dialog box that allows
'Solid Color to be selected regardless of initial Ramp or Solid Color setting.
'T focuses the cursor on the Transparency field, and then the Macro sets a
'value for Transparency. Tab moves the cursor out of the Transparency field.
'D focuses the cursor on the Red field, and then the Macro sets a value for Red.
'Tab then moves the cursor to the Green field, and then

'Tab then moves the cursor to the Blue field, and then 'the Macro sets a value for Blue.

WshShell.SendKeys("{Tab}ct25{Tab}d58{Tab}118{Tab}190")

'The Tab keystroke moves the cursor out of the data fields. 'This prevents subsequent executions of the macro from producing 'unexpected results. Enter (~) applies the color to the Background.

WshShell.SendKeys("{Tab}~")

End Sub

Using SendKeys to Specify Keystrokes in a Macro Script

Each character is represented by one or more keystrokes. To specify a single keyboard character, use the character itself. For example, to represent the letter **A**, specify **A** in the **SendKeys** command. To represent more than one character, append each additional character to the one preceding it. To represent the letters **A**, **B**, and **C**, specify **ABC** in the **SendKeys** command.

The plus sign (+), caret (^), percent sign (%), tilde (~), and parentheses (()) have specialize functions with **SendKeys**. To specify one of these characters, enclose it in braces ({}). For example, to specify the plus sign, use {+}. Brackets ([]) have no specialize function with **SendKeys**, but they must be enclosed in braces. To specify brace characters, use {{} and {}}.

To specify non-display characters such as **Enter** or **Tab** and keys that represent actions rather than characters, use the codes shown below.

Keystroke	SendKeys Code	Keystroke	SendKeys Code
Backspace	{backspace}, {bs} or {bksp}	Ins or Insert	{ins} or {insert}
Break	{break}	Left Arrow	{left}
Caps Lock	{capslock}	Num Lock	{numlock}
Del or Delete	{del} or {delete}	Page Down	{pgdn}
Down Arrow	{down}	Page Up	{pgup}
End	{end}	Print Screen	{prtsc}
Enter	{enter} or ~	Right Arrow	{right}
Esc	{esc}	Scroll Lock	{scrolllock}
Help	{help}	Tab	{tab}
Home	{home}	Up Arrow	{up}

Function keys, F1 through F12, are specified as {F1} through {F12}

To specify any combination of keys using **Shift**, **Ctrl** or **Alt**, precede the key code with one or more of the following codes:

- Shift: +
- Ctrl: ^
- Alt: %

To specify that any combination of **Shift**, **Ctrl**, and **Alt** should be held down while several other keys are pressed, enclose the code for those keys in parentheses. For example:

- To hold down the Shift key while E and C are pressed, specify +(EC).
- To hold down **Shift** while **E** is pressed, followed by **C** without **Shift**, specify +**EC**.

Note that in certain situations, **SendKeys** may not work properly with certain Windows dialog boxes, such as **File Save** and **File Open**. You may circumvent this problem by using a **wait (0)** command after the dialog box is opened. For example, the following macro opens the Lyric **Save As** dialog box, and saves the composition to a file named **test**:

set WshShell=CreateObject ("WScript.Shell") WshShell.SendKeys "{F6}"

WshShell.SendKeys "%FA"

wait(0)

WshShell.SendKeys "test"

WshShell.SendKeys "{enter}"

Macro Declarations

Public	Const	scCtrl	=	1
Public	Const	scAlt	=	2
Public	Const	scCtrlAlt	=	3
Public	Const	scShift	=	4
Public	Const	scCtrlShift	=	5
Public	Const	scAltShift	=	6
Public	Const	scCtrlAltShift	=	7
Public	Const	kfXPos	=	0
Public	Const	kfYPos	=	1
Public	Const	kfZPos	=	2
Public	Const	kfXRot	=	3
Public	Const	kfYRot	=	4
Public	Const	kfZRot	=	5
Public	Const	kfXScale	=	6
Public	Const	kfYScale	=	7
Public	Const	kfZScale	=	8
Public	Const	kfXCenter	=	9
Public	Const	kfYCenter	=	10
Public	Const	kfZCenter	=	11
Public	Const	kfRGBADiffuse	=	12
Public	Const	kfFocus	=	13
Public	Const	kfShine	=	14

Public	Const	kfLoopEnabled	=	15
Public	Const	kfTransp	=	16
Public	Const	kfEffectPct	=	17
Public	Const	kfUnused	=	18
Public	Const	kfLoopFrames	=	19
Public	Const	kfLoopIterations	=	20
Public	Const	kfPauseEnabled	=	21
Public	Const	kfPauseType	=	22
Public	Const	kfPauseTimeout	=	23
Public	Const	kfLinear	=	0
Public	Const	kfSpline	=	1
Public	Const	kfJump	=	2
Public	Const	soAbsolute	=	0
Public	Const	soRelative	=	1
Public	Const	otText	=	0
Public	Const	otCrawl	=	1
Public	Const	otRoll	=	2
Public	Const	otTypeOn	=	3
Public	Const	otClock	=	4
Public	Const	otTimer	=	5
Public	Const	otImage	=	6
Public	Const	otBkgCentered	=	7
Public	Const	otBkgSizeToFit	=	8

Public	Const	otAprisa	=	9
Public	Const	otInfinitMsg	=	10
Public	Const	ot3DObj	=	11
Public	Const	EraseTextActiveWindow	=	0
Public	Const	EraseAllText	=	1
Public	Const	EraseScene	=	2
Public	Const	EraseAllOutput	=	3
Public	Const	PlayPreview	=	0
Public	Const	PlayOutput	=	1
Public	Const	PlayOutputAll	=	2
Public	Const	PlayImmediate	=	0
Public	Const	PlayWait	=	1
Public	Const	Unknown	=	0
Public	Const	ThreeDCharacter	=	1
Public	Const	WavefrontObject	=	2
Public	Const	ThreeDStudioObject	=	3
Public	Const	ImageObject	=	4
Public	Const	OrthographicCamera	=	5
Public	Const	PerspectiveCamera	=	6
Public	Const	GlobalLight	=	7
Public	Const	DirectionalLight	=	8
Public	Const	PositionalLight	=	9
Public	Const	Spotlight	=	10

Public	Const	TextWindow	=	11
Public	Const	LoopObject	=	12
Public	Const	PauseObject	=	13
Public	Const	Clip	=	14
Public	Const	VideoRegion	=	15
Public	Const	ClockTimer	=	16
Public	Const	AnimatedElement	=	17
Public	Const	Mix	=	18
Public	Const	Flipbook	=	19
Public	Const	ITVEvent	=	20
Public	Const	MultiFXObj	=	21
Public	Const	SplineWindow	=	22
Public	Const	SqueezeBackRegion	=	23
Public	Const	ThreeDTemplate	=	24
Public	Const	Custom	=	25
Public	Const	ProxyBased	=	26
Public	Const	ImageElement	=	0
Public	Const	TemplateElement	=	1
Public	Const	WindowElement	=	2
Public	Const	BrowserBitmapElement	=	3
Public	Const	BrowserMessageEleme nt	=	4
Public	Const	StaticElement	=	5

Function	ActiveCanvas			
Set	ActiveCanvas	=	Lyric. ActiveCanvas	
End	Function			

LEIF Help

LEIF Help is available by opening the *LEIF.hlp* file from within the directory in which Lyric was installed.

33. Plugins

Overview

NOTE

Online Help for most plugins is available only through the plugin application's button or the F1 key. For questions about individual plugins, contact the application's manufacturer.

The suite of plugins available for Lyric is continually upgraded. *Please contact Chyron* or visit the Chyron web site at http://www.chyron.com/products/catcd/goodies/ for up-todate product information and demo software, and http://www.chyron.com/products/gfxsw/ for additional plugin product information.

Current plugins from Chyron include the following:

- CMix: CMix is a 1RU-rack mount device providing two output channels, each displaying an independent mix of up to 4 Video/Key input layers over an optional Program video input layer, which mix to one Video/Key output. CMix is connected to a host machine via the Universal Serial Bus (USB). Originally designed for use with Duet LE/LEX/PCI/PCI+, CMix can also be used to expand the mixing capabilities of Duet SD systems, or with conventional PCs equipped with broadcast-quality video sources, for use as a standalone router/switcher. Refer to the chapter on Video Mixing for indepth information on CMix.
- Chyron MOS and Chyron XML LEIFLets: Based on Chyron's CAMIO architecture, Chyron MOS enables remote asset browsing, editing, and playout capabilities within MOS Newsroom Computer Systems (NCS) such as AP's ENPS and Avid's iNews. Chyron MOS consists of a MOS-compliant ActiveX client control interface connected to our various character generation and animation systems. Simple to use, yet powerful and flexible, Chyron MOS gives newsroom staff the ability to create and schedule template-based text and graphics for playout across our entire graphics product line, all with the real-time performance and quality you have come to expect from Chyron. When using Chyron MOS, these plugins enable Lyric to communicate with the Chyron MOS Client application through the Chyron CAMIO Server. They also enable Lyric to save assets that contain metadata necessary for MOS system integration. *Please visit http://www.chyron.com/products/mediasolutions/* for detailed product information.

Additionally, the following Chyron products can be used as plugins for outside applications:

Lyric for Plugin for Avid NLEs: This plug-in provides powerful integration between Chyron's Lyric graphics/animation software and Avid's NLE system editors. Lyric Plugin allows Avid operators to dynamically create text, graphics and templates from directly within the Avid user interface to produce lower thirds, rolls, crawls and animations, which then become components of the Avid timeline.

Lyric for Grass Valley:

Lyric for ENPS and iNews: See Chyron MOS and XML LEIFlets above.

Current third-party plugins include the following:

- Harvester Lite Patrick Graphics Systems: Harvester Lite is Included with Lyric, and enables a Lyric 2D Text Template to be linked to a text field at a remote URL for dynamic update via the Internet. Harvester Lite Help is available through *Lyric Online Help* or in the *Lyric User Guide*.
- Harvester Pro Patrick Graphics Systems: Harvester Pro is a data harvesting plugin that enables multiple Lyric 2D Text Templates to be linked to a text fields at a remote URL for dynamic update via the Internet. The user has the ability to use VB Script within Harvester Pro to also create Lyric messages and Playlists populated with data harvested from the Internet.
- **BizGraph Patrick Graphics Systems: BizGraph** enables the creation animated line and bar graphs using data from Access databases, Excel spread sheets or comma-separated text. **Graphs** can be dynamically rendered in real time using custom cursors.

- Quarterback Patrick Graphics Systems: Quarterback provides the user with a Windows[®] Explorer[®]-style view of Chyron Lyric and iNFiNiT![®] family message and image assets. Navigation through the file system is accomplished with standard tree views of folders and selected folder contents. In addition to these familiar views, Quarterback provides an additional pane that displays image thumbnails and unique mini-keyframe animation thumbnails of Lyric messages. Quarterback can connect to FTP servers, allowing easy file transfer operations. This facility allows the user to connect with any product in the Chyron iNFiNiT! family to easily browse and move files from system to system. In addition, Quarterback can be used to preview *.avi files and to preview Duet internal clip player clips on systems without a clip player.
- Twister Video Design Software: Twister is a paint, graphics content creation, and I/O application.
- StylistPro: StylistPRO is a powerful and easy-to-use 32-bit graphic application, allowing on- or offline Lyric users to speedily modify, restyle, edit and process existing graphics from within the Lyric application.

Visit http://www.chyron.com/products/gfxsw/ for information about these and other graphics products.

Lyric employs Lyric Enhancement Interface Framework (LEIF) architecture, which supports third-party plugins. The purpose of LEIF is to provide a mechanism for adding customized features and enhancements into Lyric. LEIF offers a plug-in architecture that enables specialized menu-driven functionality, user-definable object properties, and an API for integral control over the internal mechanisms of Lyric. Using LEIF, developers can create applications that perform image processing, import and export to custom file formats, automate Template field updates, implement remote application control, access Browser data, and handle numerous diverse operations.

The plugin architecture is based on COM technology and specifies one method that the plugin must have in order to be loaded. Plugins can be written using any development environment that is capable of producing COM objects. Examples of popular tools include Visual Basic[®], Delphi[®], and Visual C++[®]. Installing the plugin simply requires placing it into Lyric's plugin directory.

The API consists of a series of components that offer direct manipulation over the internal mechanisms in Lyric. Such control offers flexibility and efficiency for operations and scenarios that require customized user controls and automated processes. The API is built on COM technology and integrates seamlessly with components constructed in Visual Basic and Delphi in addition to many other Rapid Application Development tools.

User-definable object properties provide developers with the means to store specialized data with any object in a Lyric message. The data is saved with the message and is readily available upon reloading. Object properties are named and can be presented to the Lyric operator for informational and editing purposes. Provisions exist in **LEIF** to allow the developer to provide custom property editors offering a preferred presentation of data to the operator. A default property editor is also available.

Harvester Lite

2D Text/Template Right-Click Menu > Harvester Properties, then Tools Menu > Harvester Lite

The **Harvester Lite** plugin enables a Lyric **2D Text Template** to be linked to a text field at a remote URL for dynamic update via the Internet.

- 1. Place a Template within a 2D Text window, right-click and select Harvester Properties.
- 2. The **Harvester Properties window** opens. The default URL is the *http://www.yahoo.com/*. Navigate to the site from which the data is to be drawn for the update.

Browser		ww	w.patrickgraphicssystems.co
Enabled			
+ Back + 🗿 URL : http://www.srh.noaa.gov/data/forec	asts/NYZ078.php?warnc	ounty=NYC103&c	ity=Melville
Detailed 7-day Forecast	Current Condit	ions	
Tonight, cloudy with a mix of rain and sleet developing late this evening. Lows in the lower 30s. Northeast wind around 10 mph. Chance of precipitation 50 percent.	Islip, Long Last Upda	Island Mac A ite on Mar 25, 2:	rthur Airport 56 pm EST
Tuesday. Rain and sleet ending early in the morning.		Humidity:	45 %
Otherwise cloudy with rain developing late in the day. No	Mostly Cloudy	Wind Speed:	N 10 MPH
accumulation. Brisk. Highs in the lower 40s. East wind 15 to 20 mph. Chance of precipitation 60 percent		Barometer:	30.31" (1027.6 mb)
	43°F	Dewpoint:	23°F (-5°C)
Tuesday night Rain likely with a chance of thunderstorms	(6°C)	Wind Chill:	37°F (3°C)

Harvester Properties Window

Note the similarity to familiar browsers. In the **URL** field, enter the location from which you will be drawing data. After entering the URL, press **Enter/Return** to navigate to the site. The **OK** button serves another purpose, which we'll get to in a moment.

3. With the target Web page open, click and drag over any text which you wish to link to the template in your Lyric composition.

Harvester Properties	
Browser	www.patrickgraphicssystems.com
✓ Enabled	
+ Back + 🙆 URL : http://www.srh.noaa.gov/data/fored	casts/NYZ078.php?warncounty=NYC103&city=Melville
this evening. Lows in the lower 30s. Northeast wind around 10 mph. Chance of precipitation 50 percent.	Islip, Long Island Mac Arthur Airport
Tuesday . Rain and sleet ending early in the morning. Otherwise cloudy with rain developing late in the day. No accumulation. Brisk. Highs in the lower 40s. East wind 15 to 20 mph. Chance of precipitation 60 percent.	Humidity: 45 % Mostly Cloudy Wind Speed N 10 MPH Barometer: 30.31" (1027.6 mb) 43°F Dewpoint: 23°F (-5°C)
Tuesday night. Rain likely with a chance of thunderstorms	(6°C) Wind Chill: 37°F (3°C) ↓

Harvester Properties Window - Selecting Text

- 4. DON'T FORGET to click the Enabled checkbox!
- 5. Now, click the **OK** button. The Harvester window closes.

6. Next, select **Harvester Lite** from the Lyric **Tools** menu. The **Harvester Lite Control** dialog box opens.

Default URL:	
v/data/forecasts/NYZ078.ph	np?warncounty=NYC103&city=Melville
Stats Updates : 0 Field El	rrs : 0 Nav Errs :
Settings Timeout : 10	Period : 5
	Run One Shot

Harvester Lite Control Dialog Box

- 7. The **Timeout** setting determines the length of time, in seconds, that the system waits before it declares a timeout after attempting, but not succeeding, to perform an update. When the **Timeout** occurs, the system waits for the next period cycle to begin before attempting another update. To set the **Timeout**:
 - Enter a value, in seconds, in the **Timeout** field.
- 8. The Default URL field, Stats and user preferences are covered at the end of this section.
 - Press the **One Shot** button to update the display once manually while this dialog is open.
 - Press Run to launch the process of regular updates to the data in the Template field.

••• FB0 Msg: Untitled			
2D Text 1			
Barometer			
30.33" (1028.4	mb)		
National Weather Service : Zone Forecast : Northwest S	uffolk, New York - Micr	osoft Internet Exp	olorer <u> </u>
File Edit View Favorites Tools Help			10 A
← Back → → → 🙆 😰 🚰 🔞 Search 🚡 Favorites 🔅	🕅 Media 🎯 💊 - 🖉) I ·	
Address a http://www.srh.noaa.gov/data/forecasts/NYZ078.ph	p?warncounty=NYC10880	ity=Melville	▼ 🖓 Go Links »
Tonight , cloudy with a mix of rain and sleet developing late this evening. Lows in the lower 30s. Northeast wind around 10 mph. Chance of precipitation 50 percent.	Islip, Long Last Upda	Island Mac Arth ate on Mar 25, 3:56	ur Airport pm EST
Tuesday. Rain and sleet ending early in the morning.		Humidity	41 %
Otherwise cloudy with rain developing late in the day. No	Mostly Cloudy	Wind Speed	E 5 MPH
to 20 mph. Chance of precipitation 60 percent.	1005	Barometer:	30.33" (1028.4 mb)
Tuesday night. Rain likely with a chance of thunderstorms	42°F (6°C)	Dewpoint: Wind Chill:	20"F (-7"C) 39"F (4"C)
l - Ann arfala faith Data ann air le ann athliann a tair at aireith. C	15.57		Internet

Running Harvester

While Harvester is running, you will see the \mathbb{X} symbol appear every time Lyric and Harvester check the source for new data.

- 9. If for any reason you wish to halt the update process, press the **Stop** button. Click the Windows **X** control to close the Harvester Control dialog and leave the update process running.
- 10. Save the composition as you would any Lyric message. When the message is recalled, the data last harvested will be displayed in the Template.

NOTE: If you wish messages containing Harvester-linked Templates to update immediately upon read-up, the Harvester Control dialog must be open, with the Run control engaged **before** recalling the message.

In the Harvester Control dialog box, you may also enter and save preferences for:

- **Default URL:** This field sets the URL automatically opened by the Harvester Properties window. Note that the entry in this field **does not** undo the attributes you defined for the **Template** in Steps 2 and 3. In other words, you may set the **Harvester Properties** window to open on a specific URL by default, but navigate to another URL in that window and set **Harvester** attributes differently than the defaults defined here.
- **Period:** In this field, enter a value (in seconds) to determine the frequency with which **Harvester** retrieves linked information from the selected remote URL and updates the **Template** accordingly. A minimum cycle of **5 seconds** is recommended.

The **Stats** area displays the number of times the field has been updated in the current run of the program, as well as errors, if any, in navigating to the source page or in finding the desired field.

The **Save** button is used to retain the **Default URL** and **Period** settings. These values are saved in the user's registry setting, so different settings can be saved for every login account in the system.

Commonly-Used Plugins

Harvester Pro

Harvester Pro is a data harvesting plugin from Patrick Graphics Systems. Please access Harvester Pro online Help for operational information or contact PGS at inforequest@patrickgraphicssystems.com. Web Site: http://www.patrickgraphicssystems.com.

This menu item will not appear unless the Harvester Pro optional plugin is installed.

BizGraph

BizGraph is an animated graph display plugin from Patrick Graphics Systems. Please access BizGraph online Help for operational information or contact PGS at inforequest@patrickgraphicssystems.com. Web Site: http://www.patrickgraphicssystems.com.

This menu item will not appear unless the BizGraph optional plugin is installed.

Quarterback

Quarterback is a Lyric enhanced directory access optional plugin for Lyric from Patrick Graphics Systems. Please access Quarterback online Help for operational information or contact PGS at inforequest@patrickgraphicssystems.com. Web Site: http://www.patrickgraphicssystems.com.

This menu item will not appear unless the Quarterback optional plugin is installed.

Liberty Twister Paint

Liberty Twister, a paint plugin, is a product of Video Design Software. Please access Liberty Twister online Help for operational information or visit the Video Design Software web site at http://www.videodesignsoftware.com.

This menu item will not appear unless the Liberty Twister optional plugin is installed.

34. Aprisa Systems and Lyric

Aprisa Systems

Overview

Chyron provides a wide variety of clip, still and clip/still store systems that complement Duet and other Chyron graphics systems. Still files and clip file information are transmitted between the system running Lyric and the Aprisa via **Ethernet**. The clips themselves are transmitted via a video connection. The Aprisa supports both Windows® 2000 and Windows NT® operating systems.

- The Aprisa 100 is a still store system. Stills can be imported for use in a Lyric composition. Lyric compositions can also be exported to the Aprisa as stills.
- The Aprisa 200 is a clip store system and DDR. Clips stored on the Aprisa are played using the **Internal Clip Player**, which is controlled from Lyric's **Clip Control Panel**.
- The Aprisa 250 combines still store, clip store and DDR capabilities.

For information regarding Aprisa features, visit http://www.chyron.com/products/graphics/aprisa/.

Aprisa 100/250 Still Store

Still files can be imported from the Aprisa, modified, then exported back to the Aprisa via Lyric's **Browser**, or by accessing the **Import from Aprisa** and **Export to Aprisa** tools available from the **File** menu. *These functions are covered later in this chapter.*

The Aprisa 100 Still Store and the still store component of the Aprisa 250 must be configured for communication with Lyric. *Still store configuration is covered later in this chapter in the section on Aprisa Interface Configuration.*

Aprisa 200/250 DDR

The Aprisa[™] 200 is Chyron's Digital Disk Recorder (DDR), uniquely optimized for video graphics, providing unprecedented speed and flexibility in creating, storing, and playing back animated clips. The Aprisa[™] 250 combines the Aprisa 200 DDR and Aprisa 100 Still Store into one powerful playback unit. Lyric running on Duet can, via **Ethernet**, control the Aprisa systems.

The Aprisa 200 and the DDR component of the Aprisa 250 must be configured for communication with Lyric. DDRS configuration is covered later in this chapter in the section on **Aprisa Interface Configuration**.

The Aprisa 200/250 can be connected to either the **Video In** connector on Duet's internal keyer (shown below) or to the audio and video inputs of the **Internal Clip Player**.

To display a video source such as an Aprisa on Duet output, it requires that **Key In** be enabled in **Duet Hardware Configuration**. *Refer to* **Configuration for Display of Video Source - Duet SD**, **Configuration for Display of Video Source - Duet HD** or **Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+** for details.



Connecting Aprisa 200/250 to Duet's Internal Keyer

IMPORTANT

The Aprisa 200/250 software must be running in order for Lyric to establish an Ethernet connection.

Aprisa Interface Configuration

Config Menu > Aprisa Interface

NOTE

In order for Lyric to access Aprisa stills and clips, the Aprisa application must be running, even if Lyric is running on the Aprisa system.

Configuring the Aprisa Interface

To enable Lyric access to Aprisa still and/or clip assets, the system running Lyric must be networked to the Aprisa system and properly configured.

• From the **Config Menu**, select **Aprisa Interface**. The **Configure Aprisa** Interface dialog box is displayed. The figure below shows sample settings.

Co	onfigure Aprisa Interface	<u>?</u> ×
Γ	<u>H</u> ost Name	
	aprisa1	
L	Enable Browser	
100	DDR Options	
	Alternate Host Name	
	aprisa1	
	Enable DDR	
	Playlist Mode	
	🗖 Use Channel B	
1000000	OK Test Ca	ancel

Configure Aprisa Interface Dialog Box

The Configure Aprisa Interface dialog box is composed of two areas:

- Still Store Configuration (unlabeled), in which the Aprisa Still Store is configured.
- **DDR Options**, in which the Aprisa DDR (Clip Store) is configured.

The **Still Store Configuration** and **DDR Options** are independent of each other. For example, Lyric can communicate with one Aprisa for stills, and another for clips. Stills and clips must also both be configured even when connecting to an Aprisa 250 Still/Clip Store.

Additionally, if using only the still or the clip component of the Aprisa 250, only that area in the **Configure Aprisa Interface** dialog box must be configured.

Still Store Configuration

Still Store Configuration includes the following settings;

- Host Name: Must be set to the Full Computer Name or the IP address of the networked Aprisa system. If Lyric is running on the Aprisa system on which the stills are to be accessed, leave the Host Name field blank. To find the name and/or IP Address of the Aprisa system, refer to the chapter on Networking, in the section on Finding the Computer Name and IP Address of a System, for procedures for both operating systems.
- Enable Browser: Must be selected (checked) to enable Browser access, even if Lyric is running on the Aprisa system.

DDR Options

DDR Options includes the following settings:

- Alternate Host Name: Must be set to the Full Computer Name or the IP address of the networked Aprisa system. If Lyric is running on the Aprisa system on which the clips are to be accessed, leave the Host Name field blank. To find the name and/or IP Address of the Aprisa system, refer to the chapter on Networking, in the section on Finding the Computer Name and IP Address of a System, for procedures for both operating systems.
- Enable DDR: Must be selected (checked) to enable Browser access and clip playback capability, even if Lyric is running on the Aprisa system.
- Playlist Mode Event vs. Playlist Mode: The Aprisa 200 DDR and the Aprisa 250 DDR function can be run in one of two modes: Event Mode or Playlist Mode.
 - **Event Mode** results in slower load times, but provides complete **Clip Control Panel** functionality. It is best to work in this mode when setting up and previewing clips.
 - Playlist Mode provides quicker loading without degradation of video quality. Clip Control Panel functionality, however, is reduced. Only the Load, Play Clip and Transport Controls operate in this mode. The Jog/Shuttle Slide Box (see below), In Point and Out Point functions are disabled. This mode is best used for playback. Note that the Aprisa 200/250 DDR Playlist Mode has no relation to the Lyric Playlist.
- Use Channel B: By default, Lyric controls Channel A of a dual-channel Aprisa 200/250. Use Channel B assigns control of a dual-channel Aprisa 200/250 B Channel to the Duet system on which you are working. This option is intended for production situations where a dual-channel Aprisa is shared by two Duet systems or by an Aprisa operator and a Duet system. If a dual-channel Aprisa system is being shared by two Duets, *be sure not to have the Use Channel B checkbox selected on both systems!* The Aprisa DDR will execute the last command received on either of its channels, regardless of the source.

Configuration Procedure

To enable Lyric access of the Aprisa 200/250 DDR:

1. Select **Aprisa Interface** from the **Config** menu. The **Configure Aprisa Interface** dialog box appears.

Configure Aprisa Interface	<u>? ×</u>	🔲 Apr	isa Clips		×
<u>H</u> ost Name		A	🖭 🔤 👬 🗊	200 \infty 😨	7.
aprisa1					
Enable Browser			\bigcirc		
DDR Options		:::	0000	0001	
Alternate Host Name	_		(Server	0-0-	
		2↓	9500		
I♥ Enable <u>D</u> DR		Z.	0002	0003	
□ <u>P</u> laylist Mode				Markada inte	1
Use <u>C</u> hannel B			NICH	Property and	
			0004	0005	
			10001		
		<u>E</u>		SUNU	
Aprisa Test	×	88	- The second sec		
Browser: Connected - S/W Version 2	2.21.0.1303	2	UUU6	0007	
DDR: Connected - S/W Version 2.61	.0.2458			asen)	
ОК]			0008	0009	-

Enabling Lyric Control of Aprisa DDR

- 2. Under DDR Options:
 - a. Enter the **IP Address** or **Full Computer Name** of the Aprisa 200/250 in the **Alternate Host Name** field. *If necessary, refer to Finding the IP Address and Full Computer Name of a System to find out the Full Computer Name or IP Address of the Aprisa.*
 - b. Select (check) the **Enable DDR** checkbox to enable Lyric access to Aprisa clip assets.
 - c. For the purpose of trying out the **Clip Control** features, leave the **Playlist Mode** checkbox blank in order to operate in **Event Mode**. Note that is at some point you wish to change modes, the **Clip Control Panel** must first be closed, and then the settings changed in the **Configure Aprisa Interface** dialog box.
 - d. Select the **Use Channel B** checkbox to assigns control of a dual-channel Aprisa 200/250 **B Channel** to the Duet system on which you are working, or leave it blank to keep control assignment as **Channel A**.

3. Optional: Click the **Test** button to display the status of the connection between the Duet and the Aprisa. The **Aprisa Test** popup (shown above) is displayed. If the popup indicates that the DDR is connected and that at least one channel is available, then setup has been completed. If there is an error message, check the physical hookup, the network settings and the **Configure Aprisa Interface** settings. Test responses are described in the following section.

Test Responses

The connection to from the system running Lyric to the Aprisa(s) can be tested. Note that this test checks out both stills and DDR (Clips) connections. It can simultaneously test any clip and/or still combination of an Aprisa 100, 200 and/or 250.

• Click Test. The results of the test are displayed in the Aprisa Test dialog box.

The figures below show sample Aprisa Test responses.

• Both the **Browser** (stills) and **DDR** connections are successful.



Aprisa Test - Browser and DDR Connected

 Browser and DDR are not enabled for the Aprisa 100 or Aprisa 250 for stills, and the Aprisa 200 or Aprisa 250 for clips. Depending on desired connection(s), select (check) Enable Browser and/or Enable DDR. Only enable the connection(s) that is to be used.

×
d

Aprisa Test - Browser and DDR Not Enabled

• No host found for the Aprisa 100 or Aprisa 250 stills, due to incorrect or unavailable **Full Computer Name** or **IP Address**. **DDR** connection to Aprisa 200 or Aprisa 250 was successful.



Aprisa Test - No Host Found for Browser, DDR Connected

• Aprisa 100 or Aprisa 250 stills connection is successful. Target Aprisa 200 or Aprisa 250 DDR machine refused connection. The Aprisa DDR (clips) application was not launched on the Aprisa 200 or Aprisa 250. Remember that on the Aprisa 250, the stills and DDR (clips) applications are separate. The stills application must be launched to access stills, and the DDR application must be launched in order to access clips.

Aprisa Te	est X
(i)	Browser: Connected - S/W Version 2.21.0.1303
	DDR: The operation timed out - No connection could be made because the target machine actively refused it.
	<u>(ОК</u>)

Aprisa Test - Browser Connected, DDR Connection Refused

OK/Cancel

After settings are entered:

• Click **OK** to apply, or **Cancel** to cancel without change.

Aprisa Still Asset Operations

Browser > 100; Brov

; Browser Menu > Show Aprisa Stills

NOTE

Before Aprisa Browser operations within Lyric, it is necessary to configure Lyric for access to the Aprisa. *Refer to Aprisa Interface for details*. If the system running Lyric is properly networked to the Aprisa, and the Aprisa Still Assets are not displaying, make sure that Enable Browser has been selected (checked) in the Configure Aprisa Interface dialog box, accessed from Configure Menu > Aprisa Interface.

Additionally, in order for Lyric to access Aprisa stills, the Aprisa application must be running, even if Lyric is running on the Aprisa system.

Aprisa Stills are graphics stored on Chyron Aprisa systems. When imported into a Lyric **Canvas**, the still is used as any other bitmap graphic. An image on the Lyric Canvas can also be exported to the Aprisa, and added to the stills database.

The Aprisa Stills Asset Browser enables quick import of Aprisa graphics to the Canvas. The Aprisa Stills Asset Browser supports drag-and-drop of graphics to the Canvas or a 2D Text Window in the Canvas and from one Browser window to another Browser window. The Aprisa Stills Asset Browser also supports drag-and-drop of graphics into the background of the Canvas, a 2D Text Window or a 2D Text Template. Aprisa Stills assets can also be searched.

NOTE

Unlike Browser databases for Lyric TrueType® and RGB Fonts, Messages and bitmaps, which are independent of the source files, the Aprisa Stills database and the stills as stored on an Aprisa system are one and the same. Any change to metadata changes the metadata for the source file. Additionally, there is only one Aprisa stills database per Aprisa system.

In order for Lyric to have the ability to access remote Aprisa assets:

- The Aprisa software must be running on the Aprisa platform.
- The system on which Lyric is running must be properly networked to the Aprisa. *Refer to Importing from Aprisa* and for information on establishing a network connection.

If Lyric is running on the Aprisa platform itself, the Lyric **Browser** may be used instead of Aprisa's own browser.

The following should be noted about **Aprisa Still Asset** view options and file names:

- Only the **Icon View** is available. **Text Only** and Icon **Text Views** are inactive. Metadata is displayed in the **Aprisa Export** dialog box (*described below*).
- File Names are always of the format xxxx, where xxxx is a four-digit number. In the Browser, the leading "." is not displayed. Starting the number with zeroes is permitted.
- The **Sort A-Z/Sort Z-A** selection does not have an affect on the order of display. The stills are always displayed in file name, i.e., numerical order.



Aprisa Stills Browser

Loading an Aprisa Still from the Browser

Loading an Aprisa Still from the Browser to the Canvas or 2D Text Window

To load an Aprisa Still Asset from the Browser to the Canvas or a 2D Text Window, make the Canvas or 2D Text Window in the Canvas active, then choose one of the following methods:

- Double-click the icon/text listing for the still.
- Select (click or by cursor) the icon for the Aprisa Still Asset, then click or select Load from Database from the Browser menu.
- Select (click or by cursor) the icon for the Aprisa Still Asset, then press Enter.
- Drag-and-drop the Aprisa Still Asset to the Canvas or into the 2D Text Window.

The Aprisa Still Asset loads to the Canvas.

- If the still is loaded to the Canvas as a 2D bitmap, it can be moved and scaled using Transform Tools or from Properties > XYZ.
- If the still is loaded to a 2D Text Window, it can be scaled using the same functions used to modify 2D text. Refer to Selecting and Modifying 2D Text or Keyboard Shortcuts 2D/3D Text, Text Templates and Row Tabs for additional information.

Note that a still cannot be loaded into a **2D Text Template** as an object, but can, as a **Background** (see *following*).

Loading an Aprisa Still as a Background

To use an Aprisa Still Asset as a background for the Canvas, a 2D Text Window or 2D Text Template:

1. Hold the Alt key while dragging-and-dropping an Aprisa Still Asset into the Canvas, a 2D Text Window or 2D Text Template. If loading into the Background of a 2D Text Template, make sure that the cursor is on a row of the Template, not the 2D Text Window, or the still will load to the Background of the 2D Text Window instead of the Template. The following menu is displayed.



Background Menu

- 2. Select one of the two options from the **Background** menu.
 - Select **Stretch to Fit** to stretch the still to fill the **Canvas**, **2D Text Window** or **2D Text Template**. Note that the aspect ratio of the still may change, distorting its appearance.
 - Select **Center** to place the still in center of the background of the **Canvas**, **2D Text Window** or **2D Text Template**. The size and aspect ratio of the still remain unchanged.

For additional information on backgrounds, refer to the section on **Background**.

Loading an Aprisa Still Using the File Menu

An Aprisa still can also be loaded from outside of the **Browser**:

- 1. Place the cursor at the location where the still is to be placed:
 - Anywhere in the **Canvas** outside of a **2D Text Window** to place as a 2D bitmap object or **Background** of the entire **Canvas**.
 - Inside of a **2D Text Window** to place in a row-based 2D bitmap object or **Background** of the **2D Text Window**.
 - Inside of a **2D Text Template** to place as the **Background** of the **Template**. Note that the still cannot be placed in the **Template** as a row-based 2D bitmap object. To do so would require that the still is converted into an **RGB Font** character.
- 2. Pull down the Lyric File menu, and then select Import from Aprisa. The Aprisa Import dialog box opens.

Aprisa Import 🔀	
Source File	
Still ID 0008	Air Channel 1 Air Channel 2 Air Channel 3
 Insert as <u>D</u>bject Insert as Background 	File Preview Channel 1 Preview Channel 2 Preview Channel 2
	Virtual Channel 3 Virtual Channel 1 Virtual Channel 2 Virtual Channel 3
	Virtual Channel 4 Virtual Channel 5

Aprisa Import Dialog Box

- 3. Select a **Source** from which the still is to be imported from the **Source** drop-down list box.
- 4. Enter the **Still ID** of the still.
- 5. Select (click) either Insert as Object or Insert as Background.
- 6. Click **Import**. The Aprisa still is displayed in the Lyric Canvas as an **Object** or **Background** as specified, and at the location as specified by the cursor position. A still imported as a **Background** stretches to fit the **Canvas**, **2D Text Window** or **2D Text Template**.
- 7. Click the close icon to exit the Aprisa Import dialog box.

Applying an Aprisa Still Asset as a Texture for a 3D Character or 3D Object

To apply an Aprisa Still asset as a Texture for a 3D character or 3D object:

Drag-and-drop the Aprisa Still asset to the Texture Chip in the Properties > Surface tab. Refer to Surface Properties for additional details.



Dragging-and-Dropping a Texture from the Browser

The Aprisa Still Asset Context Menu

Information (metadata) about the **Aprisa Still Asset** can be edited via the **Aprisa Still Asset** context menu. An **Aprisa Still Asset** can also be updated or added to the Aprisa database. To access this menu:

• Right-click on the **Aprisa Still Asset**.



Aprisa Still Asset Context Menu

<u>Edit</u>

Edit is not available in this menu. Editing metadata is performed in the **Aprisa Export** dialog box, accessed from the **Update** function (*described below*).

<u>Delete</u>

Delete is not available from this menu. Stills can be deleted from the database via the Aprisa interface on the Aprisa system.

<u>Update</u>

A still can be updated, its metadata edited, or a new still can be added to the Aprisa still database from this **Aprisa Export** dialog box which is accessed from **Update**. These functions are described in more detail later in this section.

Descr, Field 1, Field 2, Field 3, Field 4

These fields are informational only, and can be edited in the Aprisa Export dialog box.

The Aprisa Export Dialog Box

The Aprisa Export dialog box accessed from the Browser is the same in both appearance and function as the Aprisa Export dialog box accessed from File Menu > Export to Aprisa. To open the dialog box from the Aprisa Still Assets Browser, right-click on a still, then select Update from the context menu.

prisa Export		×	
C	estination File	_	► File
Still ID	.0015		Air Channel 1 Air Channel 2 Air Channel 3
Description	Sports - Football		File Preview Channel 1
Field 1	Fld2		Preview Channel 2 Preview Channel 3 Virtual Channel 1
Field 2	Fld4		Virtual Channel 2
Field 3	FId6		Virtual Channel 3 Virtual Channel 4 Virtual Channel 5
Field 4	FId8		
Field 5	09/09/2003		
Field 6	11:46:54		
Field 7			
Field 8			
	Export Ca	ncel	
	Export La	ncel	

Aprisa Export Dialog Box

Still ID identifies the **File Name** of the still. As mentioned above, **File Names** are always of the format **xxxx**, where **xxxx** is a four-digit number. This field can be edited, which results in the addition of a new still to the Aprisa database, or the replacement of an existing still of the same **File Name**. Adding a still is described in detail later in this section.

- A **Description** can be selected for the still.
- Fields 1 through 8 enable additional descriptive information to be entered.
- The **Destination** drop-down list box allows selection of the target for the exported Aprisa still. There is a choice of three **Air Channels**, three **Preview Channels**, five **Virtual Channels** or **File**. For the purposes of describing **Browser** operations, **File** will always be selected.

Updating a Still

Unlike Lyric **Font**, **Message** and **Bitmap Browser** databases, where editing metadata is a separate operation from updating the file itself, editing and updating **Aprisa Still Assets** from the **Browser** are contained in one operation.

CAUTION!

If editing metadata only, make sure that the graphic on the Lyric Canvas has not changed, as the change will be applied to the Aprisa still on the Aprisa system.

To update the still:

- 1. Optional: Modify the graphic on the **Canvas**.
- 2. Open the Aprisa Export dialog box.
- 3. If appropriate, select a **Destination** from the **Destination** drop-down list box
- 4. Edit the Description and numbered fields as desired. Do not change the Still ID.

Aprisa Export	×
[Destination File
Still ID	.0015
Description	Sports - Football
Field 1	Sports
Field 2	Football
Field 3	Touchdown
Field 4	Fld8
Field 5	09/09/2003
Field 6	11:46:54
Field 7	
Field 8	
	Export Cancel

Aprisa Export Dialog Box - Edited

- 5. When editing is complete, click **Export**. The dialog box closes.
- 6. Click the **Refresh Database** icon or select **Refresh Database** from the **Browser** menu. The changes are reflected in the **Browser**. Editing only metadata will not change the appearance of the **Browser**. The updated edits can be reviewed in the context menu by right-clicking the asset. If the graphic was modified as well, the change is reflected in the **Browser** icon.



Aprisa Stills Context Menu - Edited

Adding a Still

A graphic composition can be created in the Lyric **Canvas**, and exported to the Aprisa as a new still. On export, the graphics on the Lyric **Canvas** are converted into a 2D graphic in the Aprisa still format. When the exported graphic is then imported from the Aprisa from the **Browser** or **File Menu > Import from Aprisa**, the original elements are no longer separate, and 3D characters and objects are converted into 2D images.

There are two methods for adding a still to the Aprisa database: From the **Browser** and from the **File** menu.

- 1. Create the composition in the Lyric Canvas.
- 2. Use one of the following methods to open the Aprisa Export dialog box:
 - Right-click on any still in the **Browser**. The file name in the **Still ID** field reflects the currently selected still in the **Browser**.
 - Select **Export to Aprisa** from the **File** menu to open the **Aprisa Export** dialog box. The file name in the **Still ID** field reflects the currently selected still in the **Browser**, even if the **Browser** is closed.
- 3. Change the **Still ID** to an unused **Still ID**. This is crucially important as the existing still will otherwise be overwritten when exported. The format of the **Still ID** must be **xxxx**, where **xxxx** is a four-digit number.
- 4. If appropriate, select a **Destination** from the **Destination** drop-down list box.
- 5. Edit or enter information into the **Description** and numbered fields.
- 6. Click Export. The Aprisa Export dialog box closes.
- 7. Click the **Refresh Database** icon or select **Refresh Database** from the **Browser** menu. The new still appears in the **Browser**.

Searching Aprisa Still Assets

To narrow down the assets in a **Browser** database, **Aprisa Still Assets** can be searched, based on a search strings (**Still IDs**, **Description**, information in **Fields 1** through **8**), **Modification Date**, etc. *Refer to* **Searching the Browser** for details on the **Search** tool.

For additional information on Aprisa operations, refer to the documentation that accompanies the Aprisa hardware and software.

Import from Aprisa

File Menu > Import from Aprisa

An Aprisa still can be imported as an object or a **Background** from an Aprisa system into Lyric.

The import and export processes entail complete conversion to and from the Lyric format. Once an Aprisa still is imported from into Lyric, it becomes part of a Lyric graphic object or **Background**. When it is exported back to the Aprisa, the entire Lyric graphic is exported as an Aprisa still.

Running on Duet or a PC, Lyric can connect to the Aprisa over a network and open stills chosen from the Aprisa database. The image can be titled or otherwise manipulated in Lyric and then networked back to the Aprisa system for storage and use as an Aprisa still. Note that the Aprisa image can also be stored as a standard Lyric message on the Duet or PC.

Before performing import and export operations within Lyric, it is necessary to configure Lyric for access to the Aprisa. *Refer to Aprisa Interface Configuration* for details.

NOTE

A still can also be quickly imported from the Aprisa via the Aprisa Still Assets Browser Window. *Refer to Aprisa Still Asset Operations for details.*

To import a still from an Aprisa system:

1. From the File menu, select Import from Aprisa. The Aprisa Import dialog box opens.

Aprisa Import	×
Source File	File
Stjill ID 0008 C Insert as <u>O</u> bject Insert as <u>B</u> ackground	Air Channel 1 Air Channel 2 Air Channel 3 File Preview Channel 1 Preview Channel 2 Preview Channel 3 Virtual Channel 1
Import Cancel	Virtual Channel 2 Virtual Channel 3 Virtual Channel 4 Virtual Channel 5

Aprisa Import Dialog Box

- 2. In the **Source** drop-down list box, specify the source of the file:
 - File: From Aprisa database. If the file is to be selected from the database, enter the Still ID. Note that all available still files are also displayed in Lyric's Aprisa Still Asset Browser Window. Refer to Aprisa Still Asset Operations for details.



Aprisa Stills Browser

- Directly from the current image on one of Aprisa's three **Air Channels**, three **Preview Channels** or five **Virtual Channels**.
- 3. Select the Insert as Object or Insert as Background radio button.
 - If the image is imported as an **Object**, the image is placed on the Lyric Canvas as a 2D bitmap object that can be repositioned, rotated, scaled, etc.
 - If the image is imported as a **Background**, it is centered on the Lyric **Canvas**. Note that there is no **Stretch to Fit** option when using this import method. Stretching the image to fit the **Canvas** size is available from the **Browser**. *Refer to Aprisa Still Asset Operations for details*.
- 4. Click the Import button. The image appears on the Canvas as specified.
- 5. Modify the composition by adding text and/or objects, resizing, rotating, scaling, etc.
- 6. When composition is complete, it can be saved as a Lyric message and/or exported back to the Aprisa. *Refer to File Menu: Export to Aprisa* for information.

For additional information on Aprisa operations, refer to the documentation that accompanies the Aprisa hardware and software.

Export to Aprisa

File Menu > Export to Aprisa

Graphics created in Lyric can be exported as an Aprisa still to an Aprisa system.

The import and export processes entail complete conversion to and from the Lyric format. Once an Aprisa still is imported from into Lyric, it becomes part of a Lyric graphic object or **Background**. When it is exported back to the Aprisa, the entire Lyric graphic is exported as an Aprisa still.

Before performing import and export operations within Lyric, it is necessary to configure Lyric for access to the Aprisa. *Refer to Aprisa Interface Configuration* for details.

1. From the **File** menu, select **Export to Aprisa**. The **Aprisa Export** dialog box is displayed. The following figure shows the **Destination** drop-down list box expanded.

<u>D</u> estination	File
	Air Channel 1 Air Channel 2
	Air Channel 3
escription	Preview Channel 1
Field 1	Preview Channel 2 Preview Channel 3
Field 2	Virtual Channel 1 Virtual Channel 2
	Virtual Channel 3 Virtual Channel 4
Field 3	Virtual Channel 5
Field <u>4</u>	
Field 5	
Field 6	
Field 8	

Aprisa Export

- 2. If saving as a **File**, enter a **Still ID** number. **File Names** are always of the format **xxxx**, where **xxxx** is a four-digit number.
- 3. Optional: Enter a **Description** for the still.
- 4. Optional: Enter additional descriptive information in Fields 1 through 8.

5. Select a destination for the still from the **Destination** drop-down list box. There is a choice of three **Air Channels**, three **Preview Channels**, five **Virtual Channels** or **File**. If **File** is selected, the composition is saved to the Aprisa database. The following figure shows parameters entered.

Aprisa Export	×
ſ	Destination File
Still ID	.0015
Description	Sports - Football
Field 1	Sports
Field 2	Football
Field 3	Touchdown
Field 4	Fld8
Field 5	09/09/2003
Field 6	11:46:54
Field 7	
Field 8	
	Export Cancel

Aprisa Export Dialog Box - Parameters Entered

6. Click **Export**. If the destination of the composition is a channel, the composition appears on the channel. If the destination is a file, the composition is saved as a still to the Aprisa database, and the file appears in the **Aprisa Still Assets Browser Window**. *Refer to Aprisa Still Asset Operations for information on the Browser.*

The **Export to Aprisa** procedure can also be used to update an existing still file. *Refer to Aprisa Still Asset Operations* for details.

For additional information on Aprisa operations, refer to the documentation that accompanies the Aprisa hardware and software.

Aprisa Clip Asset Operations

Browser >

; Browser Menu > Show Aprisa Clips

NOTES

- Before Aprisa Browser operations within Lyric, it is necessary to configure Lyric for access to the Aprisa. *Refer to Aprisa Interface for details.* If the system running Lyric is properly networked to the Aprisa, and the Aprisa Clip Assets are not displaying, make sure that Enable DDR has been selected (checked) in the Configure Aprisa Interface dialog box, accessed from Configure Menu > Aprisa Interface.
- In order for Lyric to access Aprisa Clips, an Internal Clip Player must be present in the system, and the Aprisa application must be running, even if Lyric is running on the Aprisa system.
- Duet HD systems, if properly configured in the Configure Aprisa Interface dialog box, accessed from Configure Menu > Aprisa Interface, can display Aprisa Clip Assets in the Browser. The Duet HD cannot, however, play them, as the system does not have an Internal Clip Payer.

Aprisa Clips are sets of animations also known as **Events**, which are stored on Chyron Aprisa systems. For example, an **Event** can be comprised of a **Key** animation and a **Fill** animation that are played concurrently. They are played back on the **Internal Clip Player**, controlled by Lyric's **Clip Control Panel**.

The Aprisa Clips Asset Browser is used strictly for viewing and a simple search based on the Description.

NOTE

Unlike Browser databases for Lyric TrueType® and RGB Fonts, Messages and bitmaps, which are independent of the source files, the Aprisa Clips database and the clips as stored on an Aprisa system are one and the same. There is only one Aprisa clips database per Aprisa system.

In order for Lyric to have the ability to access remote Aprisa assets:

- The Aprisa software must be running on the Aprisa platform.
- The system on which Lyric is running must be properly networked to the Aprisa. Refer to **Aprisa** Interface and for information on establishing a network connection.

The following should be noted about Aprisa Clip Asset view options and file names:

- Only the **Icon View** is available. **Text Only** and Icon **Text Views** are inactive. Metadata is displayed in the **Aprisa Export** dialog box (*described below*).
- File Names are always of the format .xxxx, where xxxx is a four-digit number. Starting the number with zeroes is permitted.
- The **Sort A-Z/Sort Z-A** selection does not have an affect on the order of display. The stills are always displayed in file name, i.e., numerical order.



Aprisa Clip Assets

Refer to Aprisa 200 DDR and Aprisa 250 Stillstore/DDR for details on clip playback.

To view an Aprisa Clip Asset's context menu:

• Right-click on the asset.



Aprisa Clip Asset Context Menu

The menu items are all descriptive, and can be edited only from within the Aprisa interface on the Aprisa system. There are no **Edit** or **Update** functions available from within the Lyric interface.

- Descr: Description of the clip.
- Strm 1: Specifies a file that is a component of a clip.
- Strm 2: Specifies a file that is a component of a clip.
- **Duration:** Length of the clip. Note that the within the **Clip Control Panel** in Lyric, **Clip** files can be created which determine where the clip starts and stops, but that has no effect on the Aprisa clip itself. The clip can also be saved as part of a Lyric message. Again, this has no effect on the Aprisa clip. *Refer to Aprisa Systems* for additional information.

Searching Aprisa Clip Assets

To narrow down the assets in a **Browser** database, **Aprisa Clip Assets** can be searched based on **Description**. *Refer to Searching the Browser* for details on the **Search** tool.

For additional information on Aprisa operations, refer to the documentation that accompanies the Aprisa hardware and software.

35. External VTR/DDR Systems and Lyric

External VTR and DDR Systems

External video from a VTR or DDR can provide be input to Duet to be used in Lyric compositions. Lyric can also control playback from these devices. Note that an **RS-422 Serial I/O & GPI/O Board** must be installed in the Duet in order that Lyric controls the VTR or DDR. *Refer to the section on the RS-422 Serial I/O & GPI/O Board for additional information.*

Setup, Digital vs. Analog Video

Duet accommodates only **10-bit SDI** video inputs. If you are using an analog VTR, an analog-to-digital converter must be used upstream of the Duet. If you're using digital VTR, make sure that its output is compatible with Duet. Conventionally, the source machine or an analog-to-digital converter processing its output should be connected to the **Video In** connector on Duet's **Internal Keyer**.



Connecting External VTR or DDR to Duet's Internal Keyer

Connect the DB-25 input connector of Duet's **GPI/O** board to the VTR or DDR. This also serves to test the serial connection established in the section on **GPIs and Serial Control of External Devices**. For complete information on Duet's GPIO facility and its connections, refer to Section 6 in the Duet Hardware Reference Manual. Also refer to the section covering the **RS-422 Serial I/O & GPI/O Board**.

Displaying VTR Video with Duet Output

In order to display a video source such as a VTR, specific configuration is required. *Refer to* **Configuration** for Display of Video Source - Duet SD, Configuration for Display of Video Source - Duet HD or Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+ for details.

Refer to **Clip Control Panel** for information on controlling the external VTR or DDR from Lyric, and on recording clip files. Note that when playing back clip files, the VTR or DDR, as well as the source video, must be available to the Duet system. Refer to **Recording Clips to Animation and Audio File Formats** for information on recording standalone *.avi and *.wav files.

36. iNFiNiT! Family Systems and Lyric

iNFiNiT!® Font Asset Operations

Browser > ¹⁰⁰; Browser Menu > Show iNFiNiT! Fonts

iNFiNiT! fonts can be used by Lyric to create compositions which can be exported to iNFiNiT! systems. Lyric fonts can also be created in the **Custom Font Editor**, saved as iNFiNiT! fonts, and then added to the **iNFiNiT! Fonts Assets** in the **Browser**.

The following should be noted about iNFiNiT! Font Asset view options, file names and functions:

- Only the Icon View is available. Text Only and Icon Text Views are inactive. Metadata is displayed in the Browse for iNFiNiT! Fonts dialog box (described below).
- iNFiNiT! font names always have the format .xxxx.fnt where xxxx represent numerals. Only the numeric portion of the File Name is displayed in the Browse for iNFiNiT! Fonts dialog box; .fnt does not appear in the File Name. See About iNFiNiT! Font Names at the end of this section for additional information.
- iNFiNiT! fonts can be used only for typing 2D text, not 3D characters. If an attempt is made to type a 3D character using an iNFiNiT! font, the following is displayed:



3D Character iNFiNiT! Font Warning

- The Sort A-Z/Sort Z-A selection does not have an affect on the order of display. As described below in the section on Hotkeys and Font Keys, iNFiNiT! Font Asset positions are absolute, and are based on Font Key assignment.
- The Save to Database function is not available to the iNFiNiT! Font Asset Browser.
- Search kis not currently implemented for iNFiNiT! assets.

NOTE

Unlike Browser databases for Lyric TrueType® and RGB Fonts, Messages and bitmaps, which are independent of the source files, any change to iNFiNiT! Font metadata changes the metadata for the source file.

About iNFiNiT! Font Hotkeys and Font Keys

Hotkey combinations are used to quickly load fonts when a PC keyboard is controlling the Duet, as opposed top a Duet keyboard. Unlike Lyric Font Assets, which encompass both TrueType and RGB Fonts, a Hotkey combination is not assigned to the font through its context menu. Rather, a Hotkey combination is assigned based on its position in the iNFiNiT! Font Browser. Hotkeys are assigned in the following order: Alt + 1 through Alt + 8; then Alt + Shift + 1 through Alt + Shift + 8. In the iNFiNiT! Font Browser, they appear from left-to-right, and top-to-bottom. Alt + 0, Alt + Shift + 0, Alt + 9 and Alt + Shift + 9, which can access Lyric font assets, are not used to access iNFiNiT! fonts. The following table shows the relationship between the Hotkeys and the Font Keys on the Duet and iNFiNiT! keyboards. The Font Number in the Lyric Font Tools Font Facename field is described later in this section.

Hotkey	Alt +							
	1	2	3	4	5	6	7	8
Duet Keyboard	1	2	3	4	5	6	7	8
iNFiNiT! Keyboard	1	2	3	4	5	6	7	8
Font Number in Lyric Font Tools Font Facename Field	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hotkey	Alt +							
	Shift							
	+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8
Duet	Shift							
Keyboard	+1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8
iNFiNiT!	ALT							
Keyboard	1	2	3	4	5	6	7	8
Font Number in Lyric Font Tools Font Facename Field	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

The **Font Asset** positions in the i**NFiNiT! Fonts Browser** are absolute and correspond to the **Font Keys** found on an iNFiNiT! Family system. There is a limit of sixteen fonts in an **iNFiNiT! Font Browser** database.

iNF	iNiT!								
A			Q						
	.1002 Alt + 1	.0015 Alt+2	.0318 Alt + 3	.0320 Alt + 4	.0326 Alt + 5	.0332 Alt + 6	.0338 Alt + 7	.0420 Alt + 8	
111 111									
A ↓	.0424 Alt + Shift + 1	.0518 Alt + Shift + 2	.0599 Alt + Shift + 3	.0622 Alt + Shift + 4					-

iNFiNiT! Font Assets

The figure shows twelve of the sixteen font positions assigned. Note that font positions can be assigned in any order, and do not have to be filled consecutively. For example, if the rightmost font position in the second row is the next font assigned, it would correspond to **Shift + Font Key 8** on the Duet keyboard, and **ALT Font Key 8** on the iNFiNiT! keyboard. Its Lyric PC **Hotkey** combination would be **Alt + Shift + 8**.

The iNFiNiT! Fonts Context Menu

There are two context menus available from within the **iNFiNiT! Font Assets Browser**, depending on the cursor position when accessed:

- **iNFiNiT! Font Browser Context Menu:** Accessed by right-clicking a blank **iNFiNiT!** icon/text listing, or on a blank area of the **Browser**. **Browse for Fonts**, **Delete iNFiNiT! Font** and **Custom Font Editor** are available from this menu. *Refer to Custom Font Editor* for information on using this tool.
- **iNFiNiT! Font Context Menu:** Accessed by right-clicking an **iNFiNiT! Font Asset** in the **Browser**. **Browse for Fonts, Delete iNFiNiT! Font**, and **Custom Font Editor** are available from this menu, as well as descriptive items **Font File**, **Typeface**, **Name 1** and **Name 2**.



iNFiNiT! Font Context Menu

Browse for Fonts - Loading iNFiNiT! Fonts

iNFiNiT! fonts may be loaded directly into the Lyric **Browser**. You may load these assets from a local or networked Windows directory where iNFiNiT! fonts are stored. Messages composed in Lyric using iNFiNiT! fonts can easily be exported for display on iNFiNiT! systems.

To load an iNFiNiT! font into the Browser:

- 1. Click the **iNFiNiT! Fonts** control panel.
- 2. In the Browser, right-click on an available blank icon.

iNF	iNiT!							_10	
A	1		Q						
									-
	.1002 Alt + 1	.0015 Alt + 2	.0318 Alt + 3	.0320 Alt + 4	.0326 Alt + 5	.0332 Alt + 6	.0338 Alt + 7	.0420 Alt + 8	
	.0424 Alt - Shift - 1	.0518 Alt - Shift - 2	.0599 Alt - Shift - 3	.0622 Alt + Shift + 4					

Selecting a Blank Font Icon

3. The **Browse for iNFiNiT! Fonts** dialog box is displayed. Navigate to the directory in which the iNFiNiT! fonts are stored.

ont Directory			- 12
\emerald\lyric\	Sports\INF_Machine	Browse <u>R</u> efresh Lis	t
File Name	Name 1	Name 2	1
.0320	Swiss 721(TM)	20 scanlines No edge	
.0326	Swiss 721(TM)	26 scanlines No edge	
.0332	Blk Univers 75	32 scanlines Drop Shadov	v 2
.0338	Blk Univers 75	38 scanlines Drop Shadov	v 2
.0420	Blk Univers 75	20 scanlines Drop Shadov	v 2
.0424	Blk Univers 75	24 scanlines Drop Shadov	v 2
.0518	Blk Univers 75	18 scanlines No edge	
.0599	Blk Univers 75	16 scanlines No edge	
.0622	Blk Univers 75	22 scanlines Drop Shadov	v 2
.0715	Swiss 721(TM)	15 scanlines Drop Shadov	v 2
.1002	SKATING FLAGS	RGB and alpha image	

Selecting an iNFiNiT! Font to Load

- 4. Double-click the listed font to load it into the **Browser**. If the font does not load, it may be improperly named. *Refer to* **About iNFiNiT! Font Names** at the end of this section for details on renaming an *iNFiNiT! font file*.
- 5. Repeat Steps 2 through 4 to load additional fonts.
- 6. Once the all fonts are loaded, click the **Close** icon to close the **Browse for iNFiNiT! Fonts** dialog box.

To use an iNFiNiT! font in Lyric composition:

• Click on the font icon in the **Browser**, and then click the **Load from Database** icon B, or double-click the font icon in the **Browser**.

iNFiNiT! fonts can be used only for typing 2D text, not 3D characters. If an attempt is made to type a 3D character using an iNFiNiT! font, the following message is displayed:



3D Character iNFiNiT! Font Warning

In the figure below, note that the name and size of the font appear in the **Font Facename** and **Font Size** fields, respectively, of Lyric's **Font Toolbar**. The number in parentheses indicates the **Font Key** position, minus **1**, on both the Duet and iNFiNiT! keyboards. The number **(2)** shown below corresponds to **Font Key 3**. The table at the beginning of this section demonstrates the relationship between the number shown in the **Font Facename** field, and the **Font Keys**.

	the state of the
<u>File Edit View Config Tools Windo</u>	ow Help
	× × × × × × × × × × × × × × × × × × ×
iNFiNiT! (12) Sv	wiss 721 ▼ 18 ▼ B I U ≣ ≣ ≣ ■ <u>B</u> # #3 771
	Msg: Untitled Dir: C:\Program Files\Chyron\Lyric\Messages FB0
▲ ■ ■ ∞ Q .0424 .0424 .0518 Alt + Shift + 1 Alt + Shift + 2 .0500 00000	Font .0715 Swiss 721(TM)
2↓ Alt + Shift + 3 Alt + Shift + 4 ▲↓ .0715 ▲lt + Shift + 5	15 Scanlines Drop Shadow

Applying an iNFiNiT! Font

The Font Face Name, Font Variation and Font Sample and other characteristics are also displayed in the Font Properties and 2D Font FX Properties tabs. The Font Variation is specified as iNFiNiT! Machine Font. Refer to Font Properties and 2D Font FX Properties for additional information.

The **Status Bar** may display a warning that the iNFiNiT! font does not exist. It is not of concern. It just indicates that the iNFiNiT! font is not in the system's **TrueType** font list.

Delete iNFiNiT! Font

Delete iNFiNiT! Font removes the font from the **Browser** database, without disturbing the original font file. To delete an iNFiNiT! font from the **Browser**:

• Right-click on the font in the **Browser**, then select **Delete iNFiNiT! Font** from the context menu. The font is deleted without a request for confirmation.

Custom Font Editor

About the Custom Font Editor

The **Custom Font Editor** provides the ability to edit the characters. It also enables the ability to edit iNFiNiT! font metadata. *Refer to Custom Font Editor* for information on this tool.

Editing iNFiNiT! Font Asset Information (Metadata)

Unlike Lyric Font Assets, which encompass both TrueType and RGB Fonts, iNFiNiT! font metadata is not edited from a context menu-accessed Lyric dialog box. The metadata is instead, edited from the iNFiNiT! system, or from within the Custom Font Editor. To access the Custom Font Editor:

- 1. Right-click on a font icon in the **Browser**. During the editing procedure, do *not* move the cursor to another font icon in the **Browser**.
- 2. Select Custom Font Editor from the context menu. The Custom Font Editor opens.
- 3. Pull down the Tools menu, and then select Edit Font Name. The Edit Font Name dialog box opens.

dit Font Name		X
<u>File Header Name:</u>	JELEMENTS2	7
Effect Name:	RGB and alpha image	
Font Header Name:	ELEMENTS2]
-	O <u>k</u> <u>C</u> ancel	

Custom Font Editor - Edit Font Name

The following fields can be edited:

- File Header Name: Corresponds to Name 1 on the Browse for iNFiNiT! Fonts dialog box.
- Effect Name: Corresponds to Name 2 on the Browse for iNFiNiT! Fonts dialog box.
- Font Header Name: If the link icon is active 8, the Font Header Name always reflects

the **File Header Name**, and is not editable. If the link icon is inactive _____, the **Font Header Name** can be edited. Note that when the link icon is active (*as shown in the previous figure*), a bracket connects the **File Header Name** with the **Font Header Name**.

- 4. Click OK to apply edits. The Edit Font Name dialog box closes.
- 5. Optional: Perform edits to the font characters in the **Custom Font Editor**.
- 6. Pull down the **File** menu in the **Custom Font Editor**, then select **Save**. The **Custom Font Editor** can be closed at his point, although it is not necessary to do so.

- 7. In the Browse for iNFiNiT! Fonts dialog box, click Refresh List to apply changes to the font.
- 8. In the **Browse for iNFiNiT! Fonts** dialog box, double-click on the font listing to apply the changes to the **iNFiNiT! Font Asset** in the **Browser**. There will be no visible change to the font icon in the **Browser**, but the edits will have been applied.

Refer to **Custom Font Editor** for additional information on this tool.

About iNFiNiT! Font Names

iNFiNiT! font names always have the format **.xxxxxxx.fnt** where **xxxxxxxx** represent numerals. Only the numeric portion of the **File Name** is displayed in the **Browse for iNFiNiT! Fonts** dialog box; **.fnt** does not appear in the **File Name**. If a font is not loading into the **Browser** from the **Browse for iNFiNiT! Fonts** dialog box, it could be due to an incorrectly formatted name.

This may have occurred if saving the iNFiNiT! font under an incorrectly-formatted name in the **Custom Font Editor**. The font is recognized by and appears in the **Browse for iNFiNiT! Fonts** dialog box, but does not load to the **Browser**. If this is the case, the name must be changed.

Windows does not allow a file to be renamed with "." as the first character in the **File Name**, so it must be renamed using the **DOS** utility.

- 1. Open a **DOS** window.
- Use the cd command the change to the directory in which the font file is located. The syntax is as follows: cd <New Directory Path>. Press Enter.
- 3. Use the **ren** command to rename the file. The syntax is as follows:

ren "<Original File Name>" .xxxxxxxx

The quotes enclosing the **<Original File Name>** are necessary only if the name contains spaces. The **<>** brackets are not typed. **.xxxxxxxx** is the **New File Name**, where **xxxxxxxx** represents numerals. Note that leading **zeroes** can be omitted.

4. Press Enter. The file is now renamed and should load to the Browser.

Transferring Fonts to the iNFiNiT!

Transferring fonts to an iNFiNiT! Family system is accomplished by using **FTP**. Chyron recommends using CuteFTP to execute the file transfer. *This procedure is described in* **FTP** - **Transferring Files to/from an** *iNFiNiT!* **System**.

Import from iNFiNiT!

File Menu > Import from iNFiNiT!

Copying iNFiNiT!® Files to Windows-Formatted Directories

Lyric's power and flexibility includes the ability to import and read message created on Chyron[®] iNFiNiT![®] Family systems, which include the iNFiNiT![®], MAX>![®] and MAXINE![®]. In order for Lyric to read iNFiNiT!formatted messages, both the iNFiNiT! messages and the iNFiNiT! fonts associated with the messages must be copied to Windows-formatted directories that reside locally on the system running Lyric.

Once the iNFiNiT! messages and their fonts are copied to Lyric, they can be read in Lyric using the following methods:

- The iNFiNiT!-formatted messages can be read to the **Canvas** using the **Read** function accessed from the **iNFiNiT! Message Import** dialog box.
- The copied iNFiNiT! messages can be converted into Lyric-formatted messages, where they can be read to the **Canvas** in the same manner as other Lyric messages.

Lyric provides two methods for copying the files from an iNFiNiT! system to the Windows-formatted directories:

- Direct copy from an iNFiNiT!-formatted ZIP[®] or JAZ[®] disk inserted in a local ZIP[®] or JAZ[®] drive. Note that iNFiNiT!-formatted floppy disks cannot be accessed by Lyric.
- Copy via FTP.

Creating Windows-Formatted Message and Font Directories

Two Windows-formatted directories should be created for the storage of the iNFiNiT! message and font files. It is possible to copy both message and font files to a single Windows-formatted directory, but for ease of organization, it is recommended that they be stored in separate directories. In addition, it allows the use of the same **ID** number for both a message and a font, as they reside in different directories.

- Before copying files from the iNFiNiT!, create a Windows-formatted directory to accept message files, and a Windows-formatted directory to accept font files. In the following example, the directories used are as follows:
 - C:\iNFiNiT\MESSAGE
 - C:\iNFiNiT\FONT
- 2. If there are no files in either or both of the directories, place a dummy file in each directory. It need not be an iNFiNiT! message or iNFiNiT! font file. This is necessary in order to select a directory if using the **Browse** function described below.

Copying Files from an iNFiNiT! ZIP® or JAZ® Disk

iNFiNiT! files that are stored on an iNFiNiT!-formatted ZIP[®] or JAZ[®] disk can be imported into Lyric via **FTP** (*covered later in this section*) if the ZIP or JAZ disk is inserted into an iNFiNiT! Family system SCSI ZIP or JAZ drive at the time of import. If, however, the ZIP or JAZ disk is available, but an iNFiNiT! Family system is not available, Lyric provides a procedure for importing these files from a local ZIP or JAZ drive installed on the system which is running Lyric.

WARNING!!!

If an attempt is made to use Windows Explorer, My Computer or other Windows directory viewing utility to view iNFiNiT!-formatted files on a ZIP[®] or JAZ[®] disk, the following error message is displayed:

Disk is n	ot formatted		×
	The disk in dri Do you want	ve D is not for to format it no	rmatted. pw?
	Yes	No]

Windows Error Message

DO NOT CLICK "Yes!!!" If Copy Protection is not set on the ZIP or JAZ disk, it will then be reformatted and all file data will be lost!!! Click "No" to exit the error message. Use the following procedure instead to view and copy files.

NOTE

The only type of ZIP drive on which the iNFiNiT! can record is a SCSI ZIP drive. This restriction does not extend to viewing and/or copying iNFiNiT! files from a ZIP drive connected to a Windows[®] 2000 or NT[®] system running Lyric. In this instance, the ZIP drive can be SCSI, IDE, parallel or USB (Windows[®] 2000 only). On a system running a different operating system, there may be restrictions as to which ZIP drive types are supported for iNFiNiT! file viewing/copy operations. All JAZ drives are SCSI, and iNFiNiT!-formatted files can be accessed from Windows[®] 2000 and Windows NT[®] systems running Lyric.

Additionally, the presence of an older lomega[®] ZIP[®] driver on a system can interfere with Lyric's ability to read an iNFiNiT!-formatted ZIP drive. Either use system drivers if possible, or download a newer driver from lomega instead. The following table shows driver requirements.

Drive Type	Operating System	Requires Iomega [®] Driver?	
	Windows [®] 2000	No	
	Windows NT [®]	Yes	
Parallel ZIP [®]	Windows [®] 2000	Yes	
	Windows NT [®]	Yes	
SCSI ZIP®	Windows [®] 2000	Νο	
	Windows NT [®]	No	
	Windows [®] 2000	Yes	
	Windows NT [®]	Not Supported	
SCSI JAZ®	Windows [®] 2000	No	
	Windows NT [®]	No	

To copy the files from an iNFiNiT!-formatted ZIP or JAZ disk to a local, Windows-formatted directory:

1. From the Lyric File menu, select Import from iNFiNiT!. The iNFiNiT! Message Import dialog box opens.

Import From Local Drive			1	
Eont Dir :	_	Browse Font	Copy files from iNFiNiT! Disk	Cancel
Msg Dir :		Brows <u>e</u> Msg		- Options
Msg I <u>D</u> :	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	☐ Skip <u>W</u> arnings

iNFiNiT! Message Import Dialog Box

2. Click the Copy Files from iNFiNiT! Disk button. The Copy iNFiNiT! Files dialog box opens.

Copy iNFiNiT! Files	The second s	×
Source List (iNFiNiT! Disk)	Target List (Lyric Drive)	Cancel
Name	Name	<u>С</u> ору
Eile Name:	Iarget Path:	
Press F5 to F	REFRESH	

Copy iNFiNiT! Files Dialog Box

- 3. The dialog box is divided into two main sections:
 - The **Source List (iNFiNiT! Disk):** Specifies the iNFiNiT!-formatted ZIP or JAZ directory from which the files are to be imported.
 - **Target List (Lyric Drive):** Specifies the Windows-formatted directory into which the files are to be copied.

Select the **Source** and **Target** drives as follows:

- From the **Select Drive** drop-down list box on the **Source List** side, select the ZIP or JAZ drive from which the file is to be copied.
- From the **Select Drive** drop-down list box on the **Target List** side, select the local, Windowsformatted drive to which the file is to be copied.

Copy iNFiNiT! Files	isk)	Target List (Lyric Driv	/e)	Cancel
Select Drive: JF:	Name MAXINE SAMPLES SYSTEM WEATHER BITMAP.SYS FLIST.SYS		Name CAMIO_Files CAMIO_Files CHYMOX Chyron_MOS Documents an HPro_Files LEIF_Informati LyricDemo Lyric_4pt1 Mv Download	Сору
Eile Name: F:*		Iarget Path: C:		
	Press F	5 to REFRESH		

Selecting Source and Target Drives

- 4. Navigate to the Source file(s) that is to be copied to the Windows-formatted file. When navigating to the Source directory, all directory selection must take place in the left panel of the Source side. Only the file(s) is selected on the right side. Note that multiple files can be selected in a normal Windows fashion, or the file names, each separated by a semi-colon ;, can be entered into the File Name field. Note that in the figure following the next step, a range of files is selected.
- 5. Navigate to the **Target** Windows-formatted directory to which the iNFiNiT! file is to be copied. When navigating to the **Target** directory, *all* directory selection must take place in the left panel of the **Target** side.

Copy iNFiNiT! Files	×
Source List (INFINIT! Disk) Select Drive: F: MAXINE MACHINE MAXINE MAXINE	Cancel <u>C</u> opy

Note that if it is necessary to refresh the view of the directories and files, press F5.

Selecting Files to Copy

6. Click **Copy**. The progress of the copy operation is tracked in normal Windows fashion.



Files Copying from ZIP or JAZ Drive

When the Copy operation is complete, the Target List shows the newly copied files.

Copy iNFiNiT! Files		×
Source List (iNFINIT! Disk) Select Drive: F: MAXINE SAMPLES SYSTEM WEATHER MACHINE MACHINE MESSAGE 0000 </td <td>Target List (Lyric Drive) Select Drive: C: CAMIO_Files CHYMOX Chyron_MOS Documents and Se HPro_Files N033 Documents and Se HPro_Files N035 MACHINE MACHINE MACHINE MACHINE MESSAGE N080 MESSAGE N080 MESSAGE N080 MACHINE N080 MESSAGE N090 LEIF_Information LUNE N090 Larget Path: C.VINFINIT/MESSAGE</td> <td>Cancel</td>	Target List (Lyric Drive) Select Drive: C: CAMIO_Files CHYMOX Chyron_MOS Documents and Se HPro_Files N033 Documents and Se HPro_Files N035 MACHINE MACHINE MACHINE MACHINE MESSAGE N080 MESSAGE N080 MESSAGE N080 MACHINE N080 MESSAGE N090 LEIF_Information LUNE N090 Larget Path: C.VINFINIT/MESSAGE	Cancel

File Copy Complete

7. If necessary, repeat the **Copy** operation to copy additional files. Remember that when copying **Message** files, the accompanying **Font** files must be copied as well. When all **Copy** operations are complete, click the **Close** icon in the **Copy** iNFiNiT! Files dialog box. Copied **Message** files can now be read into Lyric. See **Reading iNFiNiT! Messages without Conversion to Lyric Format** *later in this section. Copied Font files can now also be loaded into the Browser for use in building Lyric and iNFiNiT! compositions. Refer to Browser: iNFiNiT! Font Asset Operations for additional information.*

Disk Copy Error Messages

The following errors and/or warnings may be displayed during a **Copy** operation:

Message and Description/Fix
Error Error while reading the source drive OK
Error Reading from Source Drive
The disk may not be a valid iNFiNiT!-formatted ZIP or JAZ disk.
Error Failed to open the device, Service not started or disk is not mounted
Failed to Open Device
Device may not be supported for this operation. For example, this error is generated if attempting to read an iNFiNiT!-formatted floppy disk.

Copying Files from an iNFiNiT! Disk via FTP

Files can be copied from any onboard or connected drive on an iNFiNiT! family system to a local, Windows-formatted drive. To copy the files via FTP from an iNFiNiT! drive to a local drive:

1. From the Lyric File menu, select Import from iNFiNiT!. The iNFiNiT! Message Import dialog box opens.

Import From Local Drive				
Eont Dir :	<u>_</u>	Browse Font	Copy files from iNFiNiT! Disk	Cancel
<u>M</u> sg Dir :		Brows <u>e</u> Msg		- Options
Msg I <u>D</u> :	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	Skip Warnings

iNFiNiT! Message Import Dialog Box

2. Click the Copy iNFiNiT! files via FTP button. The Copy iNFiNiT! Files via FTP dialog box opens.

Local Dir :		✓ <u>B</u> rowse
<u>R</u> emote Dir :	11	Browse
Eile : P Address : Username : Password :	Save	Options Skip Warnings
		[/= // FOIL F // //

Copy iNFiNiT! Files via FTP Dialog Box

- 3. Enter the **IP Address** or select from the drop-down. If necessary, enter a **Username** and a **Password**. To save this information for future use, select (check) the **Save** checkbox.
- 4. Enter the Local Directory (i.e., the Windows-formatted directory) to which the file is to be copied. The directory also may be available from the Local Dir drop-down. It can, as well, be located by clicking the Browse button and navigating to the directory. In this instance, it is necessary to select a file in order to select the directory, which is why there must be a file in the directory. Note that if a file format other than an iNFiNiT! message or iNFiNiT! font file is selected, the directory name is entered into the Local Dir field, but the File field remains blank. This is fine, as a different File ID will be entered.

5. Enter the **Remote Directory** (i.e. the iNFiNiT! system directory) from which the file is to be copied. Note that a forward slash at the end of **Directory** name is optional. The directory also may be available from the **Local Dir** drop-down. It can, as well, be located by clicking the **Browse** button and navigating to the directory. In this instance, a **File**, a range of files, or non-contiguous files to copy can be selected as well. See the next step for details.



Select Server Folder Window

- 6. Use one of the following methods to enter a File ID or multiple File IDs:
 - Enter (type) the file names by typing into the **File** field. It can be formatted **xxxx** or **.xxxx**, where **x** is a numeral. A range of **File IDs** can also be entered using the format **xxxx-yyyy**, or **.xxxx-.yyyy**. Note that thumbnail files (**xxxx.TN**) can be copied as well. The thumbnail file can be formatted **xxxx.TN** or **.xxxx.TN**.
 - Use the Browse function, as shown in the previous figure, to navigate to the directory that contains the file or files that are to be copied. Select (check) Show Files in order to display files. To select a single file, click a File ID. To select a range of files, hold the Shift key while clicking the first, then the last (or vice versa) file in the range. To select non-contiguous files, press and hold the Ctrl key, then click the File IDs. When file selection is complete, click OK. If a single file is selected, it is in the displayed in the format .xxxx in the File field. If a range of files or non-contiguous files are selected, SELECTED FILES is displayed in the File field.

- 7. There are three options in the **Options Area**. Each can be made active by selecting (checking) or made inactive by deselecting (unchecking):
 - Skip Warnings: Select Skip Warnings to prevent the display of overwrite and other warnings when the FTP operation is executed. Note, however, that warnings will be displayed regardless of the Skip Warnings setting unless such warnings have been disabled in the Preferences menu.
 - **Overwrite All:** Select **Overwrite All** if all files in the local target directory which have matching file IDs as the incoming files are automatically overwritten when the **FTP** operation is executed.
 - **Passive FTP:** Select **Passive FTP** to have the data transfer initiated by the **File Transfer Program** client, rather than the **FTP** server program. This is recommended where security is a concern, as it ensures that all data flow initiation comes from inside, rather than outside, the network. It has no visible effect on the file transfer operation.
- 8. A sample **Copy iNFiNiT! Files via FTP** dialog box is shown in the following figure. Click **FTP Execute**. The files are copied from the iNFiNiT! **Remote Directory** to the target **Local Directory**.

Local Dir :	C:\infinit\message			Browse
<u>R</u> emote Dir :	C/INFINIT/MESSAGE/		-	Brows <u>e</u>
<u>F</u> ile :	.00010010.TN			
P Address :	55.5.5.555		- Options	Warnings
<u>U</u> sername :			□ <u>O</u> ver	write All
Password :		▼ <u>S</u> ave	🗖 Pass	i <u>v</u> e FTP

Copy iNFiNiT! Files via FTP

9. If necessary, repeat the FTP Execute to copy additional files. Remember that when copying Message files, the accompanying Font files must be copied as well. When all FTP operations are complete, click Close. Copied Message files can now be read into Lyric. See Reading iNFiNiT! Messages without Conversion to Lyric Format later in this section. Copied Font files can now also be loaded into the Browser for use in building Lyric and iNFiNiT! compositions. Refer to Browser: iNFiNiT! Font Asset Operations for additional information.

FTP Execute Error Messages

The following errors and/or warnings may be displayed during an **FTP Execute**:

Message and Description/Fix
Lyric Fror Opening FTP Connection Image: Construction Image: Construction Image: Construction Image: Construction
Image: Server name or address could not be resolved OK Server Name and Address Not Resolved This error message can be generated by a variety of network-related problems,
 including the following: The iNFiNiT! may not be not properly connected to the network. If using a Computer Name instead of an IP Address to identify the iNFiNiT!, the name may not be properly mapped to the IP Address.
Remote Directory Not Found The iNFiNiT! Remote Directory name is invalid.

Message and Description/Fix
Image: Second systems are turned on, properly networked and that the IP Address and directory names entered in the Copy iNFiNiT! Files via FTP dialog box are valid
Lyric Image: Second state
Lyric C:\iNFiNIT\MESSAGE\.0001 exists, Overwrite ? <u>Yes</u> <u>No</u> <u>Cancel</u> Overwrite Warning
This warning is displayed if there is a file of the same File ID in the target directory as the File ID of an incoming file. Select Yes to overwrite, No to prohibit the overwrite, or Cancel to cancel the FTP Execute operation. Note that any files that were copied to the target Local Directory before an FTP Execute is cancelled are not deleted or changed to the pre-overwrite state.
Lyric The process cannot access the file because it is being used by another process.
File Used by Another Process
The file has already been imported and is currently in use. Close the file in Lyric.

Reading iNFiNiT! Messages without Conversion to Lyric Format

Lyric can read and properly display iNFiNiT! message files as long as the message's accompanying font files are available. To read an iNFiNiT! message in Lyric:

 Copy iNFiNiT! message and iNFiNiT! font files to a Local Directory as previously described, and then close the Copy iNFiNiT! Files via FTP dialog box. The iNFiNiT! Message Import dialog box is displayed.

Import From Local Drive		-	Com Bar front	
Eont Dir :	<u> </u>	Browse Font	iNFiNiT! Disk	Cancel
<u>M</u> sg Dir:		Brows <u>e</u> Msg		- Options
Msg I <u>D</u> :	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	Skip Warnings

iNFiNiT! Message Import Dialog Box

- 2. In the Font Dir field, enter the Windows-formatted directory in which the iNFiNiT! fonts were copied. Note that a forward slash at the end of Font Directory name is optional. The directory also may be available from the Font Dir drop-down. It can, as well, be located by clicking the Browse button and navigating to the directory, then selecting any file. This is necessary in order to select the directory. Note that if a file format other than an iNFiNiT! message or iNFiNiT! font file is selected, the directory name is entered into the Font Dir field, but the Msg ID field remains blank. This is fine, as a Message ID will eventually be entered.
- 3. In the **Msg Dir** field, enter the name of the Windows-formatted directory into which the iNFiNiT! fonts were copied. Note that a forward slash at the end of **Message Directory** name is optional. The directory also may be available from the **Msg Dir** drop-down. It can, as well, be located by clicking the **Browse** button and navigating to the directory. Select a message file. Note that for proper display of the message file, all associated fonts must be resident in the selected **Font Directory**.
- 4. If the Message ID has not yet been entered, enter a Message ID in the Msg ID field.
- 5. Optional: Select (check) **Skip Warnings** to prevent the display of warnings when the **FTP** operation is executed. Note, however, that warnings will be displayed regardless of the **Skip Warnings** setting unless such warnings have been disabled in the **Preferences** menu.
- 6. A sample iNFiNiT! Message Import dialog box is shown in the following figure. Click Read, press the Duet Read key or press Enter on the PC keyboard. If the selected iNFiNiT! message is a text message, the file is read to the Lyric Canvas. If the selected iNFiNiT! message is an RGB message, continue to the next step.

Import From Local	Drive				1
Eont Dir : C:\iNFiN	IIT\MACHINE		Browse Font	Copy files from iNFiNiT! Disk	Cancel
Msg Dir : C:\iNFiN	IT\MESSAGE	•	Browse Msg		- Options
Msg I <u>D</u> : 0009	6	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	Skip <u>W</u> arnings

iNFiNiT! Message Import Dialog Box

7. If the message is an RGB message, the iNFiNiT! RGBA Import dialog box is displayed. Select Insert as Object to place the file in the Lyric Canvas as an object, or select Insert as Background to place the file as a Background. The message is placed on the Lyric Canvas as specified.

NFINIT! RGBA In	nport 🔀
Insert a C Insert a	s <u>O</u> bject s <u>B</u> ackground
Οκ	Cancel

iNFiNiT! RGBA Import Dialog Box

If the message is a **Text** message, the message is read to the Lyric **Canvas**, and the **Machine** fonts are loaded to the Lyric **Browser** in the **iNFiNiT! Font Assets Window**.

Various error and/or warning messages may be displayed during a **Read** operation. *Refer to iNFiNiT! Message Import Read and Batch Convert Errors later in this section for details.*

The following occurs when an iNFiNiT! message is read in Lyric:

- **iNFiNiT! Message Import** opens a new **2D Text Window** on the **Canvas**, into which all text from the iNFiNiT! message is placed.
- All available fonts that are associated with the message, and stored in the selected Local Font
 Directory, are loaded into Browser's iNFiNiT! Asset Window. Hotkeys are automatically assigned
 to the fonts, in order of the Font ID numbers. Refer to Browser: iNFiNiT! Asset Operations for
 information on Browsers.
- The Msg ID in the iNFiNiT! Message Import dialog box increments to the next Message ID found in the Local Directory.
- If the cursor is on text that has been created using an iNFiNiT! font, the name and size of the font are displayed in the **Font Toolbar**.

NOTE

Remember that the Canvas Resolution setting, accessed from Lyric's Config menu, affects how accurately Lyric reproduces an iNFiNiT! message on the Lyric Canvas, and subsequently, on output. Specifically, most iNFiNiT! messages are composed for display in 4:3, therefore import into a 16:9 Lyric Canvas may yield undesirable results. It is recommended that graphics that are to be used for 16:9 output from Lyric, be created on the iNFiNiT! in 16:9 format.

Converting iNFiNiT! Messages to the Lyric Format

Converting a Single Message

To convert a single iNFiNiT! message to Lyric format:

- 1. Use the **iNFiNiT! Message Import Read** function to read an iNFiNiT! message to the **Canvas**.
- 2. Use one of the Lyric **Save** functions to record the message in the Lyric format to the current Lyric **Default Message Directory**. *Refer to File: Save, File: Save As, Recording/Reading Messages* for additional information on **Save** functions.

Remember that editing a Lyric message converted from the iNFiNiT! format requires **Machine Fonts** associated with the original iNFiNiT! messages.

Converting Multiple Messages - Batch Convert

To convert multiple iNFiNiT! messages to Lyric format:

- 1. Select a Font Dir and a Msg Dir as previously described in Performing an iNFiNiT! Message Import Read Operation, but do not enter a Msg File ID. If a Msg File ID is present, delete it from the Msg File field.
- 2. Click the Batch Convert button. The Import Batch Convert dialog box opens.

Import Batch Conve	rt 🔀
<u>S</u> tart ID: .0001	ОК
End ID: .0020	Cancel
	Press ESC to exit conversion.

Import Batch Convert

- 3. In the Start ID and End ID fields, enter a range of File IDs for the files that are to be converted.
- 4. Optional: Select (check) **Skip Warnings** to prevent the display of warnings when the **FTP** operation is executed. Note, however, that warnings will be displayed regardless of the **Skip Warnings** setting unless such warnings have been disabled in the **Preferences** menu.
- 5. Click **OK** to convert the selected messages. The messages are saved to the current Lyric **Default Message Directory**.

iNFiNiT! Message Import Read, Save and Batch Convert Errors

The following errors and/or warnings may be displayed during an **iNFiNiT! Message Import Read** or **Batch Convert** operation:

Message and Description/Fix				
iNFiNiT! Import Error				
Couldn't open iNFiNiT! Message File: C:\iNFiNiT\MESSAGE\.0012 The system cannot find the file specified.				
System Couldn't Find File Specified				
iNFiNiT! message file not found in specified directory.				
 If Displayed During a Read or Save Operation: Click OK to cancel the Read operation. 				
If Displayed During a Batch Convert Operation: Click OK to skip and continue to the next file.				
Couldn't Find Font File				
Couldn't Find iNFiNiT! Font File: C:\iNFiNiT\Machine\.0100 Would you like to browse for this file?				
<u>Yes</u> <u>No</u> Cancel				
Couldn't Find iNFiNiT! Font File				
The specified iNFiNiT! Machine Font file not found in specified directory.				
• If Displayed During a Read or Save Operation: Select Yes to browse for the file; No to ignore the font and continue the Read or Save operation; or Cancel to cancel the Read or Save operation. If the specified Machine Font is not found, the text using the font is not displayed.				
• If Displayed During a Batch Convert Operation: Select Yes to browse for the file; No to ignore the Machine Font and continue the Batch Convert operation; or Cancel to cancel the Batch Convert operation. If the specified Machine Font is not found, the text using the font is not displayed when the message is read.				


Message and Description/Fix				
A number of iNFiNiT! additional message types are not supported for conversion to Lyric. Examples are as follows:				
Couldn't Read the iNFiNiT! File				
iNFiNiT! 'Lyric Text & Graphics Message' not supported: C:\iNFiNiT\MESSAGE\.9004				
OK				
iNFiNiT! 'Lyric Text and Graphics Message' Not Supported				
Couldn't Read the iNFiNiT! File				
iNFINIT! 'Single Function Key Message' not supported: G:\iNFINIT\MESSAGE\.0001				
OK]				
iNFiNiT! 'Single Function Key Message' Not Supported				
Couldn't Read the iNFiNiT! File				
iNFINIT! 'Multi FX Message' not supported: G:\iNFINIT\MESSAGE\.0022				
OK]				
iNFiNiT! 'Multi FX Message' Not Supported				
The specified message type is not supported for conversion to a Lyric message.				
 If Displayed During a Read or Save Operation: Click OK to cancel the Read or Save operation. 				
• If Displayed During a Batch Convert Operation: Click OK to skip this message and continue to the next file.				



Using Tab/Template Description and Data Messages in Lyric

Before describing the procedure used to import and use iNFiNiT! **Tab Description** and **Tab Data** messages in Lyric, the following equivalent terms used in iNFiNiT! Message Compose and Duet Lyric operations should be reviewed:

Message Compose	Lyric			
Tab	Template			
A Message Compose Tab field or Lyric Template field can be individually formatted for Font , Color , Justification , etc. It can also be updated using Intelligent Interface or by reading a Tab Data message (iNFiNiT!) or Template Data message (Lyric) based on a Tab Description message (iNFiNiT!) or Template Description message (Lyric).				
Tab Description Message	Template Description Message			
This type of message contains one or more graphics and text not contained in Tab/Tem	Tab/Template fields, and can also contain plate fields.			
Tab Data Message	Template Data Message			
A Tab/Template Data message contains text data that is used to update a specific Tab/Template Description message. It also contains information referencing it to the specific Tab/Template Description message.				
A Tab /Template Data message can be created on the fly via Intelligent Interface or from within Lyric using the selective record (Ctrl + Record) function.				

NOTE

The term Tab has a different definition with regard to Lyric, and is not to be confused with the iNFiNiT! Tab, which is equivalent to a Lyric Template. In Lyric, a Tab, also referred to as a Row Tab, is a column delineator similar to that found on a typewriter. *Refer to Row Tab Functions for additional information.*

To import a Message Compose Tab Description message into Lyric:

- 1. On the iNFiNiT! system, make sure that each **Tab** field in the **Tab Description** message contains at least one character. This ensures that the **Palette** is properly imported into Lyric. Also set each **Tab** field to **Auto-Erase**.
- 2. Import the message using the FTP or ZIP copy procedure as previously described.
- 3. Using the **Reading iNFiNiT! Messages without Conversion to Lyric Format** procedure described above, read the message file to the **Canvas**.

New Tab/Template Data messages based on this message can be created via Intelligent Interface.

An iNFiNiT! **Tab Description** message can also be saved as a Lyric **Template Description** message. To save as a Lyric message:

Enter a message number, then press Duet Record or the PC numeric keypad minus (-) key. If using the File > Save or File > Save As function, save as a Lyric (*.lyr) file in the format xxxxxxx.lyr, where x represents a numeral. Note that leading digits *must* be included in the file name, or the file will not be recognized by Intelligent Interface when referencing it to create a Template Data message.

Once the **Tab Description** message has been recorded in the Lyric format, **Template Data** messages based on the new **Template Description** message can be created via **Intelligent Interface**. When reading Lyricformatted **Template Description** messages or referencing them from an **Intelligent Interface** command, it is not necessary to include the leading zeroes in the file name.

Remember that unless otherwise changed using the **M** command, **Intelligent Interface** records the **Template Data** messages to the **Default Message Directory** set in Lyric. Make sure that the **Template Description** message is saved to this directory as well. *Refer to* **Preferences - Default Paths** for details on setting this directory. This directory is also reflected in the **Intelligent Interface** dialog box, accessed from **Config Menu** > **Intelligent Interface**. *Refer to* **Intelligent Interface** for additional information.

Export To iNFiNiT!

File Menu > Export to iNFiNiT!

Lyric compositions may be exported as iNFiNiT! **Text** or **RGB** messages using the **Export to iNFiNiT!** function. Before setting up an export:

 If there is no file in the Local Save Directory, place a dummy file in the directory. It need not be an iNFiNiT! message file. This is necessary in order to select a Local Save Directory if using the Browse function described below.

NOTE ON EXPORTING MESSAGES AND FONTS

An Export operation exports only the message(s), and not its associated fonts. It is crucial that the fonts used to create the message are resident on the iNFiNiT!, or the message will not properly display. iNFiNiT! fonts can be exported using an FTP utility. Using FTP to copy files is described in FTP - Transferring Files to/from an iNFiNiT!® System.

About Fonts and 2D Text Windows/Templates

iNFiNiT! messages can be composed only using **Machine Fonts** or **FlashFonts**. Each **Machine Font** character is a separate bitmap. When imported, **FlashFont** characters are ignored. There is no facility with which to create or interpret **FlashFonts** within Lyric.

In messages created in Lyric and destined for iNFiNiT! system playback, *only* iNFiNiT! **Machine Fonts** may be used during composition in Lyric. When an iNFiNiT! message is imported and edited within Lyric, text composed using **Machine Fonts** is transferred correctly back to the iNFiNiT! when the message is exported. If export of a message incorporating TrueType[®] fonts is attempted, the TrueType characters are ignored.

iNFiNiT! fonts can be used only for typing 2D text, not 3D characters. If an attempt is made to type a 3D character using an iNFiNiT! font, the following is displayed:



3D Character iNFiNiT! Font Warning

While Machine Fonts can be resized and otherwise modified within Lyric, the following must be noted:

- When **Machine Font** characters are resized within Lyric, they are interpolated, and are therefore not of as high a quality as **TrueType** fonts that have been resized through **Font Tools** or **Font Properties**.
- When resized **Machine Font** characters are contained in a message that is exported to the iNFiNiT!, the resizing information is ignored, and the characters are displayed in the original size of the **Machine Font**.

RGB Fonts can be created in Lyric using the **Custom Font Editor** and saved as **iNFiNiT! RGB Machine Fonts**. For information on accessing the **Custom Font Editor** and creating **RGB Fonts**, refer to **Browser: RGB Font Assets** and **Custom Font Editor**.

There a number of additional considerations which must be noted with regard to iNFiNiT! message export.

• Only the first eight **Face** and first eight **Edge** colors in the Lyric **Palette** are exported to the iNFiNiT!, in correspondence with iNFiNiT!'s eight color keys. If any of the first eight **Face** or **Edge Palette** colors are changed after the message has been imported, a warning message is displayed upon export, requesting if the user wishes to export the current **Palette** (as seen in Lyric) or the **Palette** as originally imported.

- 2D Text Windows created on the Lyric Canvas must be full-screen to maintain the proper positioning of text on export to the iNFiNiT!. Non-full-screen 2D Text Windows are repositioned to the upper left corner of the screen upon export to the iNFiNiT! system.
- It is advisable to avoid using multiple 2D Text Windows on one Canvas, as the results can be unpredictable.
- **2D Text Templates** shifted vertically off of their row's baselines in Lyric are not supported for iNFiNiT! reproduction. Upon export, the **Templates** snap vertically to a row baseline.
- Text that is positioned beyond the boundaries of the Lyric Canvas may not export to the iNFiNiT! file format.

Exporting a Single File

The currently displayed composition on the **Canvas** can be exported to an iNFiNiT! family system. To execute an export:

1. From Lyric's File menu, select Export To iNFiNiT!. The iNFiNiT! File Save Options dialog box is displayed.

File Type :	💿 <u>T</u> ext Message	○ <u>R</u> GB Message	
Description			_
<u>M</u> sg Number			
Local Save			
✓ Enable			
Directory		•	Bro <u>w</u> se
	Сору	Eiles	
FTP Save			
🔽 E <u>n</u> able			
Dire <u>c</u> tory			Br <u>o</u> wse
IP Address			
Username			-
Password			□ Save
Export Options -			
	🗖 All Flash Font	☐ S <u>k</u> ip Warnings	

iNFiNiT! File Save Options

- 2. Choose the **File Type** for the file to be exported by selecting one of the following radio buttons:
 - Text Message: Text, Palettes and Templates can be edited on iNFiNiT! Family systems
 - RGB Message: The message is saved as a full-screen image.
- 3. In the **Description** field, enter identifying information to be recorded to the iNFiNiT! database.
- 4. Optional: In the Local Save area, select (check) Enable to save a copy of the message in the iNFiNiT! RGB message format to a PC, Duet or Aprisa system. Enter a Directory Name, or click Browse to navigate to a directory. Note that if using Browse, a file must be selected from the directory. This file name can be changed in the next step.
- In the Msg Number field, enter an iNFiNiT! message number, omitting the leading decimal point. Note that PC file name dialog boxes do not accept a leading decimal in a file name. The range is from 0 - 9999 inclusive.
- 6. Copy Files has not yet been implemented.
- 7. To enable transfer of the file to an iNFiNiT! system, in the FTP Save area, select (check) Enable.
- 8. Use one of the following methods to select a target directory on the iNFiNiT!
 - In the **Directory** field, enter a filepath. Note that a forward slash at the end of **Directory** name is optional.
 - Use the **Browse** function to navigate to the directory. Click the **Browse** button. The **Select Server Folder** window is displayed. Select the target directory folder, and then click **OK**.

Select Server Folder	X
⊡	-
.0010	
E ANDREA	
🖮 🗉 ANGELS	
BITMAP.SYS	
DU.V1	
- FLIST.SYS	
🗄 🗉 FOLD	
🗄 🗉 FOLD1	
	-
🗄 🗉 INFINIT	
EFFECT	
🗄 🗄 MACHINE	
H- MESSAGE	
⊨ ISBTV	-
Files OK Cancel	Ì

Select Server Folder Window

9. Enter the iNFiNiT! system's **IP Address**. If necessary, enter a **Username** and a **Password**. To save this information for future use, select (check) the **Save** checkbox.

- 10. Optional: Select **Skip Warnings** to prevent the display of overwrite and other warnings when the **Export** operation is executed.
- 11. All Flash Font has not yet been implemented.
- 12. A sample iNFiNiT! File Save Options dialog box is shown in the following figure. Click OK to close dialog box and save settings. Click Export to export the file to the iNFiNiT!, and if specified, to copy it locally. The message is saved in the iNFiNiT! message format.

File Type :		age
<u>D</u> escription	Lyric iNFiNiT! Export test message	
<u>M</u> sg Number	9001	
Local Save —		
Directory	C:\infinit\message	▼ Bro <u>w</u> se
	Copy <u>Files</u>	
FTP Save		
Dire <u>c</u> tory	C/INFINIT/MESSAGE	Browse
IP Address	55.55.5.555	
<u>U</u> sername		
Password		🔽 Save
Export Option	All Flash Font 🗖 Skip Warning]\$

iNFiNiT! File Save Options

When the message is read on the iNFiNiT! system, the **Description** entered in Lyric is reflected in the **Description** field at the bottom of the iNFiNiT! interface.

\$55.55.5.555	_ 🗆 ×
Infinit/060 Message Compose Betaver 12.01	12:00 2/22/02
	CNTL Font Load
	Palette
1 2 3 4 5 6 7 8 Mesa Dir: C/INFINIT Font Dir: C/INFINIT	Read FX R
Color:WHITE Char: Row:O Mode:LOCKED	Block Mesg Ц
Last Mesg:9001 Buffer:1 A AIR	Multi FX
Insert Mode:OFF Word Wrap:OFF	Image Tools G
	Transform
9001 Lyric iNFiNiT! Export test message read	Video Input

iNFiNiT! Interface

Batch Export

Multiple files can be exported to the iNFiNiT! in one operation, making it unnecessary to read and export each file individually. The files can be a mix of **Text Messages** and **RGB Messages**. To execute a **Batch Export**:

1. From Lyric's **File** menu, select **Export To iNFiNiT!**. The **iNFiNiT! File Save Options** dialog box is displayed. Do not enter **File Type**, **Description** or **Msg Number** information. Since a **File Type** is always selected, the **File Type** setting is ignored in a **Batch Export** operation.

File Type :	💿 <u>T</u> ext Message	C <u>R</u> GB Message	
Description			_
Msg Number			
Local Save —			
✓ Enable		-W	
Directory		¥	Bro <u>w</u> se
	Сору	Eiles	
FTP Save			
✓ Enable			
Dire <u>c</u> tory			Browse
Username			
Password			☐ Save
Export Options -			
	All Flash Font	☐ S <u>k</u> ip Warnings	

iNFiNiT! File Save Options

- Optional: In the Local Save area, select (check) Enable to save a copy of each message in the iNFiNiT! RGB message format to a PC, Duet or Aprisa system. Enter a Directory Name, or click Browse to navigate to a directory. Note that if using Browse, a file must be selected from the directory. This file name should then be deleted.
- 3. Copy Files has not yet been implemented.
- 4. To enable transfer of the files to an iNFiNiT! system, in the **FTP Save** area, select (check) **Enable**, then select an iNFiNiT! target directory as described in the previous procedure.
- 5. Enter the iNFiNiT! system's **IP Address**. If necessary, enter a **Username** and a **Password**. To save this information for future use, select (check) the **Save** checkbox.
- 6. Optional: Select **Skip Warnings** to prevent the display of overwrite and other warnings when the **Export** operation is executed.
- 7. All Flash Font has not yet been implemented.

8. A sample **iNFiNiT! File Save Options** dialog box is shown in the following figure. Click **OK** to close dialog box and save settings. Click **Export** to export the file to the iNFiNiT!, and if specified, to copy it locally. The message is saved in the iNFiNiT! message format.

File Type :	Iext Message	C <u>R</u> GB Messag	je
Description			
⊻sg Number [
Local Save			
Directory	NINFINIT\MESSAGE		✓ Browse
	Co	opy Eiles	
FTP Save			
Enable			
Dire <u>c</u> tory	/INFINIT/MESSAGE		Browse
P Address 5	5.55.5.555		
Jsername			
Password			Save
Export Options	-	East	
	All Flash Font	I S <u>k</u> ip Warnings	
	2010	100 m	

iNFiNiT! File Save Options for Batch Export

9. Click **Batch Export**. The **Batch Export** dialog box opens.

Batch Export	×
<u>S</u> tart ID:	ОК
End ID:	Cancel
	Press ESC to exit conversion.

Batch Export Dialog Box

10. Enter a Start ID and End ID.

<u>S</u> tart ID:	.0001	ОК
<u>E</u> nd ID:	.0020	Cancel

Start and End Files Entered

11. Click **OK**. The files are copied to the selected local and iNFiNiT! directories. The status of the transfer is shown in at the bottom of the **Batch Export** dialog box.

Export Errors

The following errors/warnings may be displayed when executing a Text message export.

Message and Description/Fix			
Lyric X			
Error Opening FTP Connection			
OK			
FTP Open Error			
One or more of the FTP parameters, including IP Address , Username , Password or Directory may not be correct.			
Single Message Only:			
Lyric			
Message number range is 0-9999			
ОК			
Message Number Out of Range			
The entered Message Number (Msg Number) is outside the range of 0 - 9999 inclusive.			



Message and Description/Fix				
Lyric				
C:\iNFiNiT\MESSAGE\.9001 exists, Overwrite ?				
Yes No				
Overwrite Warning				
This warning is displayed if there is a file of the same File ID in the target iNFiNiT! directory as the File ID of an incoming file. Select Yes to overwrite, No to Cancel to cancel the Export operation.				
Overwrite Warnings are displayed regardless of the Skip Warnings checkbox unless such warnings have been disabled in the Preferences menu.				
Text Message Only:				
Lyric				
Current Lyric palette does not match current iNFiNiT! palette Would you like to use the current iNFiNiT! palette for export?				
<u>Yes</u> <u>N</u> o				
Lyric Palette Does Not Match iNFiNiT! Palette				
Only the first eight Face and first eight Edge colors in the Lyric Palette are exported to the iNFiNiT!, in correspondence with iNFiNiT!'s eight color keys.				
If any of the first eight Face or Edge Palette colors are changed after the message has been imported, a warning message is displayed upon export, asking if the user wishes to export the current Palette (as seen in Lyric) or the Palette as originally imported.				
Select Yes to export the modified Palette, or No to preserve the original Palette.				
Text Message Only:				
Warning X				
Not all Lyric palette entries have been converted to iNFiNiT! format. Invalid character colors default to white.				
☐ <u>S</u> kip Warnings				
Not All Palette Entries Converted				
One or more Palette entries are not valid. Invalid character colors default to white. Click OK to continue.				

Message and Description/Fix
Text Message Only:
Warning X
TrueType characters found in message will be ignored
☐ <u>S</u> kip Warnings <u>□</u> K
TrueType [®] Characters are Ignored
TrueType characters in the exported message are not supported by the iNFiNiT! and are not recorded with the iNFiNiT! message. Click OK to continue.
Lyric
Error During FTP Transfer
OK
Error During FTP Transfer
The target disk or directory may be full.
 If Displayed During a Single Message Export Operation: Click OK to cancel the Export operation.
• If Displayed During a Batch Export Operation: Click OK to continue to the next message. If this error message is repeatedly displayed, press ESC to cancel the Export operation.

iNFiNiT! Import/Export Example

File Menu > Import from iNFiNiT!

File Menu > Export to iNFiNiT!

The following procedures demonstrate common uses of the **Import from iNFiNiT!** and **Export to INFiNiT!** functions. An iNFiNiT! message is imported into Lyric, and then edited, and then saved as a Lyric message or sent back to the iNFiNiT!. Before starting, review the sections on **Import from iNFiNiT!**, **Export to iNFiNiT!** and **Browser: iNFiNiT! Font Asset Operations**.

Importing and Modifying an iNFiNiT! Message

To import an iNFiNiT! message:

- 1. If not already created, set up two Windows-formatted local or network directories. One should be dedicated to storing iNFiNiT! font files, and the other to storing iNFiNiT! message files. For this example, the two directories are C:\iNFiNiT\MESSAGE and C:\iNFiNiT\FONT.
- From the File menu, select Import from iNFiNiT! The iNFiNiT! Message Import dialog box is displayed.

Import From Local Drive				
Eont Dir :	_	Browse Font	iNFiNiT! Disk	Cancel
<u>M</u> sg Dir:		Brows <u>e</u> Msg		- Options
visg I <u>D</u> :	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	Skip Warnings

iNFiNiT! Message Import Dialog Box

 Use either the Copy Files from iNFiNiT! Disk or Copy iNFiNiT! Files via FTP functions to copy both an iNFiNiT! text message containing Tabs, and its associated fonts, to the Windows-formatted local or network message and font directories.

-Import Fro	m Local Drive			1	1
Eont Dir :	C:\infinit\machine		Browse Font	Copy files from iNFiNiT! Disk	Cancel
<u>M</u> sg Dir:	C:\iNFiNiT\MESSAGE		Brows <u>e</u> Msg		- Options
Msg I <u>D</u> :	.0009	<u>R</u> ead	Batch Convert	Copy iNFiNiT! files via FTP	Skip Warnings

iNFiNiT! Message Import Dialog Box

4. Click **Read**. The selected file is displayed on the Lyric **Canvas**. Note that the **Title Bar** does not reflect information about the file that has been read. The information from the last-read Lyric file remains displayed.

🏎 FB0 Msg: Untitled	
SECOND LINE	
	•

iNFiNiT! News Super - Unedited

- 5. Click on the "News Super" text. The cursor is now positioned within a Lyric 2D Text Template that corresponds directly to an iNFiNiT! Tab field. *Refer to 2D Text Templates for additional information on Lyric 2D Text Templates.*
- Right-click on the 2D Text Template containing the "News Super" text. From the context menu, select Template Properties. The 2D Text Template dialog box opens. The 2D Text Template is identified by a Number.

Prev/Next	DB Link	COptional J
Number Priority Text Lines	efault Content	✓ Auto Erase (Auto Erase ✓ Word Wrap ✓ ✓ Numeric (Auto Erase ✓ Size To Fit (Auto Erase ✓ II Update (Auto Erase ✓ Ext. Update (Auto Erase

2D Text Template Dialog Box

- 7. In the **Optional** area, select (check) **Auto Erase**. This sets the currently selected **2D Text Template** to erase the current contents any time it is updated, either externally or by typing.
- 8. Click the **Next** arrow icon at the upper left corner of the **2D Text Template** dialog box. This toggles to the next-numbered **2D Text Template** on the **Canvas**, which contains the text, "**SECOND LINE**."
- 9. In the **Optional** area, select (check) **Auto Erase**.
- Optional: The 2D Text Template dialog box can be closed at this time. Otherwise, continue to the next step. For additional information on the 2D Text Template dialog box, refer to 2D Text Templates.
- Click in the 2D Text Template containing the "News Super" text. Type "Joe Newsguy." Click in the 2D Text Template containing the "SECOND LINE" text. Type "Crisisville, NY." Both 2D Text Templates have now been updated.
- 12. To view the modified message without baselines and 2D Text Template frames, click the

Text/Window Frames Off icon *I*, located on the Chyron **Toolbar**. Note that the icon changes to



Modified iNFiNiT! Message

To return the baselines and 2D Text Template frames to view, click

13. The message can now be saved as a Lyric message, or exported back to the iNFiNiT!.

Saving the iNFiNiT! Message as a Lyric Message

To save the modified iNFiNiT! message as a Lyric message:

1. From the Lyric File menu, select Save As. The Save Animation dialog box opens.

			<u></u>
Start Frame 0 End Frame 150	Image <u>W</u> idth 720 Image <u>H</u> eight 486	Save <u>B</u> GB	₩ Save Alpha
Save jn: 🔂 Messages	•	- 🗈 📸 🖬 -	
	00000006.lyr	r	
		r	
** 00000002.lyr		r	
		r	
*** 00000004.lyr		r	
*** 00000005.lyr	00000011.lyr	r	
•			•
File name: Untitled.lyr	\$	<u>S</u> ave	
Save as type: Lyric (*.lyr)		✓ Cancel	

Save as Lyric Message

- 1. Leave **Start Frame** and **End Frame** settings as is, as this is a static message.
- 2. If not already selected, select Lyric (*.lyr) from the Save as Type drop-down list box.
- 3. Enter a **File Name**. Note that adding the **.lyr** extension is optional in the **File Name** field, as it is automatically attached when the **.lyr** file type is selected.
- 4. Click **Save**. The iNFiNiT! file is saved as a Lyric file that can be edited and played back on a Duet system.

Exporting the Modified iNFiNiT! Message

To export the modified iNFiNiT! message back to the iNFiNiT!:

1. Once the imported message has been modified as previously described, select **Export to iNFiNiT!**. The **iNFiNIT! File Save Options** dialog box is displayed.

rile type.	• <u>I</u> ext Message	C <u>R</u> GB Message	
Description			
Msg Number			
Local Save			
✓ Enable		-W	
Directory		•	Bro <u>w</u> se
	Сору	Eiles	
FTP Save		<u>.</u>	
🔽 Enable			
			Browse
Directory			0.00
Dire <u>c</u> tory			
Dire <u>c</u> tory			
Dire <u>c</u> tory			Signed
Dire <u>c</u> tory			Save
Dire <u>c</u> tory	All Flash Font	□ S <u>k</u> ip Warnings	Save

iNFiNiT! File Save Options

- 2. Select (check) the Text Message radio button as the File Type.
- 3. In the **Description** field, enter identifying information to be recorded to the iNFiNiT! database.
- 4. Optional: In the Local Save area, select (check) Enable to save a copy of the message in the iNFiNiT! message format to a PC, Duet or Aprisa system. Enter a Directory Name, or click Browse to navigate to a directory. Note that if using Browse, a file must be selected from the directory. This file name can be changed in the next step.
- 5. In the **Msg Number** field, enter an iNFiNiT! message number, omitting the leading decimal point. Note that PC file name dialog boxes do not accept a leading decimal in a file name.
- 6. Copy Files has not yet been implemented.
- 7. To enable transfer of the file to an iNFiNiT! system, in the FTP Save area, select (check) Enable.

- 8. Use one of the following methods to select a target directory on the iNFiNiT!
 - In the **Directory** field, enter a filepath. Note that a forward slash at the end of **Directory** name is optional.
 - Use the **Browse** function to navigate to the directory. Click the **Browse** button. The **Select Server Folder** window is displayed. Select the target directory folder, and then click **OK**.

lect Server Folder	2
⊡≣ C/	
.0010	
🖻 🗉 ANDREA	
🗄 🗉 ANGELS	
BITMAP.SYS	
DU.V1	
FLIST.SYS	
🗄 🗄 FOLD	
主 🗉 FOLD1	
Ē. FOX	
Ē- 🗄 INDY2001	
🗄 🗉 🗉 INF97	
🗄 🗉 🗉 INFINIT	
庄 🗄 EFFECT	
庄 🗉 MACHINE	
庄 📃 MESSAGE	
庄 🗉 OBJECT	
🗄 🗄 SCRIPT	
⊨ ISBTV	-

Select Server Folder Window

- 9. Enter the iNFiNiT! system's **IP Address**. If necessary, enter a **Username** and a **Password**. To save this information for future use, select (check) the **Save** checkbox.
- 10. Optional: Select **Skip Warnings** to prevent the display of overwrite and other warnings when the **Export** operation is executed.
- 11. All Flash Font has not yet been implemented.

12. The following figure shows the entered information in the iNFiNiT! **File Save Options** dialog box. Click **OK** to close dialog box and save settings. Click **Export** to export the file to the iNFiNiT!, and if selected, to copy it locally. The message is saved in the iNFiNiT! message format.

File Type :	● <u>T</u> ext Message ● <u>R</u> GB Messag	je .
<u>D</u> escription	News Super/Location - Joe Newsguy/Crisisville,	NY
local Save	3001	
Enable		
Directory	C:\infinit\message	▼ Bro <u>w</u> se
	Copy Files	
FTP Save — FTP Save —		
– Dire <u>c</u> tory	C/INFINIT/MESSAGE	Browse
IP Address	55.55.5.555	
<u>U</u> sername		
<u>P</u> assword	2	Save
Export Option	3	
	All Flash Font Skip Warnings	

iNFiNiT! File Save Options

When the message is read on the iNFiNiT! system, the **Description** entered in Lyric is reflected in the **Description** field at the bottom of the iNFiNiT! interface. The modified iNFiNiT! message can be edited and/or played back on the iNFiNiT! family system.

FTP - Transferring Files to/from an iNFiNiT!® System

About FTP File Transfer

FTP (**File Transfer Protocol**) is one of a number of methods that can be used to transfer files between systems. In this section, transfer of iNFiNiT! family (iNFiNiT![®] MAX!>[®] or MAXINE![®]) font files to and from a Duet/Aprisa/PC running Lyric is highlighted, as **FTP** is the required method for copying iNFiNiT! font files between an outside system and an iNFiNiT!. The procedure described below can, however, be adapted to file transfers in general.

Chyron recommends the use of GlobalScape's CuteFTP (available at http://www.globalscape.com/) software. The procedure documented below uses CuteFTP Version 4.2. Refer to CuteFTP documentation for information regarding the **Quick Connect** and **Site Manager** functions.

If CuteFTP is not available, FTP transfer can be accomplished via DOS. This method is described at the end of this section.

Duet/Aprisa/PC-to-iNFiNiT! Family System File Transfer

Lyric can create iNFiNiT! **RGB Fonts** using the **Custom Font Editor**. In general, these are the files are most likely to be transferred using this method. To execute a transfer:

- 1. Launch CuteFTP.
- 2. Open CuteFTP's "Quick Connect" feature by pulling down the **File** menu and selecting **Quick Connect** or by pressing **Ctrl + F4**. The following parameters appear beneath the toolbar:

Host: 206.	User Name:	Password:	Port: 21	X
------------	------------	-----------	----------	---

Quick Connect Parameters

- 3. In the **Host** field, enter the **IP** address of the iNFiNiT! Family system to which the files are to be transferred. If necessary, enter a **User Name** and **Password**. Enter a **Port** number.
- 4. Click the **Connect** icon. The connection is made to the iNFiNiT! system, and the root level directories of the iNFiNiT! are displayed in the right pane of the CuteFTP interface.

U.U/INFINIT						
Name	Size	Date	Time	Attr	Description	
🗋 DB	32	5/3/2001		drwx	12 I.I.	
EFFECT	16	11/3/2000		drwx		
🗀 MACHINE	720	2/11/2002	12:27 PM	drwx		
MESSAGE	976	1/15/2002	3:48 PM	drwx		
🗋 OBJECT	16	11/3/2000		drwx		
🗋 SCRIPT	16	11/3/2000		drwx		
a						1

Destination Pane

5. Double-click the **MACHINE** folder icon to open the iNFiNiT! system's **Machine Fonts** directory. A list of files in the **MACHINE** directory is displayed.

0.0/INFINIT/MACHINE					
Name	Size	Date	Time	Attr	Description
.9501	12,441KB	2/11/2002	12:27 PM	-rwx	
.9500	1,008KB	2/11/2002	12:20 PM	-rwx	
.1234	172KB	2/4/2002	1:40 PM	-nwx	
🛋 .0999	3,822KB	7/31/2000		-rwx	
7	0.440KD	2.04.0000			

Machine Directory Contents

6. In the left pane, which for this operation is the source pane, navigate to the Windows-formatted directory from which the file is to be copied. Click-and-drag the **RGB Font** file from this directory to the target iNFiNiT! system (right pane).

C:\iNFiNiT	\Machine		▼ 1	0.0/INFINIT,	/MACHINE		
Name	Size	Date	Time	Name	Size	Date	Time
.2001	9,529KB	2/7/2002	2:39 PM	.9501	12,441KB	2/11/2002	12:27 PM
.2002 🖻	9,513KB	2/7/2002	2:40 PM	.9500	1,008KB	2/11/2002	12:20 PM
.9501	12,441KB	2/11/2002	11:34 AM	.1234	172KB	2/4/2002	1:40 PM
9502	12,441KB	2/11/2002	11:44 AM	.0999	3,822KB	7/31/2000	
				0080. 🗖	, 3,442KB	7/31/2000	
		Local Sector		.0720	城_ 10,383KB	7/31/2000	
				J.071-	^{™1±]} 7,624KB	7/31/2000	
				.0708	10,899KB	7/31/2000	
				.0700	7,624KB	7/31/2000	
				.0699	14,391KB	7/31/2000	
				.0692	375KB	7/31/2000	
				.0690	85KB	7/31/2000	
•			I	1	4 007/0	4 100 10004	

Transferring a File from a Windows Directory to an iNFiNiT!

7. The following prompt is displayed. Click Yes.



FTP Confirm

Transfer commences. CuteFTP displays the progress of the transfer at the bottom of the screen. When the transfer is complete, the transferred iNFiNiT! **RGB Font** may be used as usual on an iNFiNiT![®] MAX!>[®] or MAXINE![®] system.

0:00:01 Elapsed	0:00:01 Left	70%	741376 (724.00 KB/s)
] 70%]		

FTP Transfer Progress

Using iNFiNiT! Machine Fonts in Lyric

An iNFiNiT! **Machine Font** can be used in Lyric. First, it must be transferred via **FTP** from the iNFiNiT! system to a local or networked Windows-formatted directory. In the following example, CuteFTP is used to execute the transfer.

- 1. Launch CuteFTP and connect to the iNFiNiT! system as described in the previous procedure. The connection is made to the iNFiNiT! system. The root level directories of the iNFiNiT! are displayed in the right pane of the CuteFTP interface.
- 2. In the left pane, which for this operation is the destination pane, navigate to the Windows-formatted directory to which the file is to be copied.
- 3. Click-and-drag the **Machine Font** file from the iNFiNiT! system directory (right pane) to the Windowsformatted directory (left pane).

🗀 C:\iNFiNiT\Machine 📃 🔳 📘		0.0/INFINIT/MACHINE							
Name	Size	Date	Time	Name	Size	Date	Time		
.2001	9,529KB	2/7/2002	2:39 PM	.9503	12,441KB	2/11/2002	12:27 PM		
.2002	9,513KB	2/7/2002	2:40 PM	.9500	1,008KB	2/11/2002	12:20 PM		
9501	12,441KB	2/11/2002	11:34 AM	.1234	172KB	2/4/2002	1:40 PM		
.9502	12,441KB	2/11/2002	11:44 M	.0999	3,822KB	7/31/2000			
				00800. 💽	3,442KB	7/31/2000			
				.0720	10,383KB	7/31/2000			
				.0717	7,624KB	7/31/2000			
				.0708	10,899KB	7/31/2000			
		南		.0700	7,624KB	7/31/2000			
				.0699	14,391KB	7/31/2000			
				.0692	375KB	7/31/2000			
				.0690	85KB	7/31/2000			
•			Þ	1	4 007KD	4 100 10004			

Transferring a File from the iNFiNiT to a Windows Directory

4. The following prompt is displayed. Click Yes.



FTP Confirm

Transfer commences. CuteFTP displays the progress of the transfer at the bottom of the screen.

0:00:01 Elapsed	0:00:01 Left	70%	741376 (724.00 KB/s)
3 70%]		

FTP Transfer Progress

- 5. If the font is a Text Machine Font, or an RGB Machine Font that is to be used "as is," the font can now be accessed from the iNFiNiT! Font Assets Browser. Refer to Browser: iNFiNiT! Font Asset Operations for additional information. If the font is an RGB Machine Font that is to be modified within the Custom Font Editor, continue to the next step.
- 6. When transfer is complete, right-click on the **RGB Machine Font File Name**, then select **Rename** from the context menu.



Renaming the iNFiNiT! RGB Machine Font File

7. To make the RGB Machine Font usable within the Custom Font Editor, add the extension .fnt to the file name, and then click outside of the File Name field or press Enter. The file that has just been transferred and renamed can be read into the Custom Font Editor and/or saved as a Lyric RGB Font for use in Lyric.



Renaming Machine Font File for Use by Custom Font Editor

NOTES

To access the transferred Text or RGB Machine Font file from within the iNFiNiT! Font Browser Assets, the file name cannot be changed. *Refer to Browser: iNFiNiT! Font Asset Operations for additional information.*

Using DOS to Execute FTP Operations

In the absence of CuteFTP, DOS can be used to execute FTP operations. The following procedures are representative of DOS-FTP command sequences for most, if not all applicable Windows operating systems. *Refer to DOS documentation for additional information on procedures and advanced file operations.*

It is important to note that files transferred using this method should be done so in **Binary**, as opposed to **ASCII** mode. The **Binary** command appears in the following procedures.

After entering each command, press Return.

Transferring a File to the iNFiNiT!

To transfer from a file from a Windows-formatted directory to the iNFiNiT!:

- 1. Select **Start > Run**, and then enter **cmd** to open a DOS window.
- 2. In the **Command Line** window, change the directory to the one from which the file is to be copied:

C:\Chyron MOS>cd C:\iNFiNiT\MACHIINE

3. Connect to the iNFiNiT! Family system:

C:\iNFiNiT\MACHINE>ftp 55.55.5.555

- 4. When prompted, enter a **Username**, and then press **Return**.
- 5. When prompted, enter a **Password**, and then press Return.
- 6. When connection is successful, enter the following command to specify binary data transfer:

ftp> binary

7. Specify the directory on the iNFiNiT! system to which the file is to be copied:

ftp> cd C/NEWS/MACHINE

8. Enter the following command to copy the file to the iNFiNiT!:

ftp> put .9999

The system displays the progress of the file transfer and prompts when the **FTP** operation is complete. The following figure demonstrates a typical **FTP** "**put**" operation to an iNFiNiT! system.

C:\WINNT\system32\cmd.exe - ftp 10.10.2.3	
C:\Chyron MOS≻cd C:\iNFiNiT\MACHINE	
C:\iNFiNiT\MACHINE>ftp 55.55.5.555	_
220 service ready for new user	
User (55.55.5.555:(none)):	
331 user name ok – need password	
Password:	
230 user logged in	
ftp> binary	
200 command ok	
ftp> cd C/NEWS/MACHINE	
250 CWD command successful.	
ftp> put .9999	
200 PORT command successful.	
150 ready for file, opening data port	
226 closing data connection, file ok	
ftp: 890152 bytes sent in 1.30Seconds 683.68Kbytes/se	ec.
ftp>_	
	-
•	• /

Typical FTP "Put" Operation to iNFiNiT! System

If it is not expedient to change to current directories (**cd** command) for both the Windows-formatted source and iNFiNiT! destination, the **put** command can be executed using full filepaths for both source and destination. After the **binary** command has been entered, the following command can be entered, based on the filename and directories used above:

ftp> put C:\iNFiNiT\MACHINE\.9999 C/NEWS/MACHINE

A **put** command must name an existing directory on the iNFiNiT! family system as a destination. If a previously non-existing directory is entered as a destination, a new directory is not created, nor is an error message generated with regard to the directory name.

Transferring a File from the iNFiNiT!

To transfer from a file from a Windows-formatted directory to the iNFiNiT!:

- 1. Select **Start > Run**, and then enter **cmd** to open a DOS window.
- 2. In the **Command Line** window, change the directory to the one to which the file is to be copied:

C:\Chyron MOS>cd C:\iNFiNiT\MACHINE

3. Connect to the iNFiNiT! Family system:

C:\iNFiNiT\MACHINE>ftp 55.55.5.555

- 4. When prompted, enter a **Username**, then press **Return**.
- 5. When prompted, enter a **Password**, then press **Return**.
- 6. When connection is successful, enter the following command to specify binary data transfer:

ftp> binary

7. Specify the directory on the iNFiNiT! system from which the file is to be copied:

ftp> cd C/NEWS/MACHINE

8. Enter the following command to copy the file to the Windows-formatted directory:

ftp> get .9999

The system displays the progress of the file transfer and prompts when the **FTP** operation is complete. The following figure demonstrates a typical **FTP** "get" operation from an iNFiNiT! system.

C:\WINNT\system32\cmd.exe - ftp 10.10.2.3	
C:\Chyron MOS>cd C:\iNFiNiT\MACHINE	<u> </u>
C:\iNFiNiT\MACHINE>ftp_55.55.5.555	
Connected to 55.55.55.55. 220 service ready for new user	
User (55.55.5.555:(none)):	
331 user name ok – need password	
Password:	
230 user logged in	
ftp> binary	
200 command ok	
ftp> cd C/NEWS/MACHINE	
250 CWD command successful.	
ftp> get .9999	
200 PORT command successful.	
150 file found, opening data port	
226 closing data connection, file ok	
ftp: 890152 bytes received in 30.69Seconds 29.00Kbytes/s	ec.
ftp>_	
•	• /

Typical FTP "Get" Operation from iNFiNiT! System

If it is not expedient to change to current directories (**cd** command) for both the iNFiNiT! source and the Windows-formatted destination, the **get** command can be executed using full filepaths for both source and destination. After the **binary** command has been entered, the following command can be entered, based on the filename and directories used above:

ftp> get C/NEWS/MACHINE/.9999 C:\iNFiNiT\MACHINE

If a previously non-existent Windows-formatted directory is named as the destination, it is created when the file is copied.

Exiting the FTP Session and the Command Prompt

To exit the **FTP** session:

• Enter quit, then press Enter. The FTP session closes.

To exit the command prompt:

• Enter **exit**, then press **Enter**, or click the **Close** icon **X** for the window.

37. Quantel Systems and Lyric

Quantel® Interface Configuration

Config Menu > Quantel® Interface

Lyric can access the assets of Quantel® systems for use in Lyric compositions, as well as export Lyric messages back to the Quantel systems. To enable communications between Lyric and Quantel systems, the Quantel Interface must be configured in Lyric. If there are multiple Quantel systems configured in Lyric, a system must be selected in order for its contents to be displayed in the **Browser**. *Refer to Quantel documentation for information on Quantel system operation.*

• From the **Config Menu**, select **Quantel Interface**. The **Configure Quantel Interface** dialog box opens. If Quantel systems are already configured, they are listed in the **Host Table** (unlabeled). **Editbox** is the default **Host Name** and **IP Address** when, as shown below, no systems are listed.

<u>I</u> P Address
IP Address
Editbox
IP Address
<u>D</u> elete
Cancel

Configure Quantel® Interface Dialog Box

If the there are already Quantel systems available to Lyric, the dialog box could appear as follows:

lost Name	IP Address
100000	1 1000.00.000
Host Name	IP Address
EditBay1	XXX. XX. XX. XXX
EditBay2	XXX. XX. XX. XXX
EditBay3	XXX. XX. XX. XXX
Newsbu Newsbu	XXX.XX.XX.XXX
110/13002	000-00-00-000
Add	Delete

Configure Quantel® Interface - System List

This is the same list that is displayed in the **Host Name** drop-down list box in the **Quantel Import** dialog box. *Refer to File: Import from Quantel for additional information.*

Adding/Deleting a Quantel System

To add a Quantel system to this list:

- 1. Enter the name of the Quantel system in the Host Name field.
- 2. Enter the IP address of the Quantel system in the IP Address field.
- 3. Click Add. The name of the new system now appears in the Host Table.

To delete a Quantel system from the list:

- 1. Click on the name of the Quantel system in the Host Table.
- 2. Click **Delete**. The Quantel system is removed from the **Host Table** and is no longer available to Lyric.

Enabling/Disabling the Browser

To enable Lyric to access the Quantel images, the **Browser** must be enabled:

• Select (check) the **Enable Browser** checkbox. The **Quantel** asset icon **W** in the **Browser** becomes active.

To disable Lyric to access the Quantel images, the Browser must be disabled:

• Select (check) the Enable Browser checkbox. The Quantel asset icon becomes grayed out.

Selecting a Quantel System for Lyric Operations

When a Quantel system is selected, its contents can be accessed from the **Browser**. The selected system also becomes the default system for **File Menu > Import from Quantel/Export to Quantel** operations. Note that a system can also be selected from within the **Import from Quantel** dialog box.

To select a Quantel system for **Browser** access and **File Menu > Import/Export** operations:

 Click on a system name in the Host Table. The system name appears in the Host Name and IP Address fields.

NOTE

Configure Quantel Interface does not perform a check on the validity of the Quantel Host Name and/or IP Address. The connection is validated when Browsing or performing import/export operations. If a warning message is displayed, confirm that the system is available and that the Host Name and IP Address are correctly entered. An error message may be displayed when:

• Accessing Quantel Assets in a Browser or refreshing the Browser to display the contents of a different system.



Cannot Query Quantel

Accessing Quantel Assets in a Browser, when displayed assets are no longer

available. Refresh $\stackrel{\frown}{\blacktriangleright}$ the Browser. If an error message is still displayed, then confirm that the system is available and that the Host Name and IP Address are correctly entered.



Could Not Create Object

• Performing a connection from within the Import from Quantel Import dialog box, accessed from File Menu > Import from Quantel.



Connect Failed

• Performing a connection or attempting to import an unavailable file from within the Quantel Import dialog box, accessed from File Menu > Import from Quantel.



Connect Failed

• Performing an export to a Quantel system from the Quantel Export dialog box,

accessed from File Menu > Export to Quantel or a Save to Database from the Browser.

FTP Connect Failed!		Lyric	×
Command timed out	Click OK, then the following is displayed.		Export to Quantel failed!
OK	→		OK

FTP Connect Failed

Export to Quantel Failed

Applying/Canceling Configuration Settings

To apply configuration all settings:

• Click OK.

To cancel configuration settings:

• Click Cancel.

Quantel® Asset Operations

Browser > Q; Browser Menu > Show Quantel Images

Lyric's **Browser** can import graphics from Quantel® systems, as well as export Lyric messages to Quantel systems. To access a Quantel system from the **Browser**, it must be first configured and selected in the **Configure Quantel Interface** dialog box. *Refer to Quantel® Interface Configuration* for details on configuration, and to Quantel documentation for information on Quantel system operation.

NOTE

Configure Quantel Interface does not perform a check on the validity of the Quantel Host Name and/or IP Address. The connection is validated when Browsing or performing import/export operations. If a warning message is displayed, refresh the Browser. If error messages are still generated, confirm that the system is available and that the Host Name and IP Address are correctly entered. *Refer to Quantel® Interface Configuration for additional details on interpreting error messages.*

The following describes terms that are specific to Quantel operations:

- **Volume**: Quantel's equivalent of a directory within a Windows PC.
- FID: File or Message ID.
- List Max: Limits the number of results per page that may be returned by a search operation.
- Image Type: Quantel systems store three image types:
 - Pictures, which are YUV images.
 - **Stencils**, which are **Alpha** channel-only images.
 - Cuts or Cutouts, which are complete YUV-A or RGB-A images.



Quantel Browser Assets

About Viewing and Updating Quantel Assets

The following should be noted about the Quantel Asset Browser options:

- Only the Icon View is available. Text Only and Icon Text Views are inactive.
- The **Sort A-Z/Sort Z-A** selection does not have an affect on the order of display. The order of display is determined by the Quantel system.
- The icons always display at Medium icon size.
- A Quantel Asset cannot be dragged-and-dropped into the Lyric Canvas. See below for import procedures.
- Quantel Assets are always imported at output pixel size, regardless of the Use 1:1 Pixel Aspect for Graphic Import setting, accessed from Config Menu > Canvas Resolution. This results in the aspect ratio of the image always being correct.

NOTE

Settings within the Quantel Import dialog box, accessed from File Menu > Import from Quantel directly affect the number and types of files displayed in the Browser. The Search parameters present in the fields in the Search By dialog box both from the Quantel Import dialog box and from the Browser are *always* applied when generating the list of files that are displayed in the Browser. If it seems that files are missing, or that the wrong type of file is displayed, open the Quantel Import dialog box. If necessary, reset parameters, including those in the Search By dialog box, then click List Next. A list of files based on the modified parameters is displayed. *Refer to File Menu: Import from Quantel for additional information.* After any change or Search is performed in the Quantel Import dialog box, the Browser

does not automatically update, even when it is refreshed (Solar Browser Menu > Refresh).

- 1. Close the Browser, then open a new Browser from either File > New > Browser or View > Browsers.
- 2. Open the Quantel Assets within the Browser. The Browser display should be updated.

The Quantel Assets Context Menu

Information about a **Quantel Asset** can be viewed, but not edited in the **Browser**. This information can be edited only from the Quantel system.

Left-click the asset to display the context menu:



Quantel Asset Context Menu

The context menu displays the following:

- File ID: The ID number of the Quantel graphic. This number is automatically assigned when a graphic is created on the Quantel system. This occurs when a graphic is exported to the Quantel either from the Quantel Export dialog box (accessed from File Menu > Export to Quantel), or from the Browser Save to Database function.
- Volume: The directory on the Quantel in which the file is stored.
- Size: The Width-by-Height dimensions in pixels.
- **Owner:** The author of the graphic.
- **Description:** The description of the graphic.
- **Updated:** Date of last update to the file.

Importing a Quantel Graphic

To import a graphic from the **Browser** to the **Canvas**, select one of the following methods:

- Double-click on the icon for the file.
- Click on the icon for the file, then click the Load from Database icon.

A Quantel graphic can also be imported to the **Canvas** from **File Menu > Import from Quantel**. *Refer to File Menu: Import from Quantel* for details.

Exporting a Lyric Message to Quantel

To save the current contents of the Canvas to the Quantel system:

• Click or select **Save to Database**. Lyric compositions are exported to a Quantel system as fullscreen-sized 32-bit images, and are saved to the Quantel system as **Cuts, also known as Cutouts**.

Searching Quantel Assets in the Browser

Quantel Assets displayed in the Browser can be searched based on a variety of parameters. The Browser Search function differs from the Search function is available in the Quantel Import dialog box in that the Browser Search function searches only the Quantel files already displayed in the Browser, whereas the Quantel Import Search function searches the selected directory on the Quantel system. *Refer to File Menu: Import from Quantel for additional information on the Quantel Import Search function.* To execute a Browser Search:

1. Display the Quantel® Asset Q database in the Browser, then click the Search Database icon

displayed: • Search Browser from the Browser menu. The Search By dialog box is displayed:

Search By:	<u>></u>	<u><</u>							
Author:	Wolf								
<u>T</u> itle:	×								
Category:	Sports								
<u>D</u> ate:	Tuesday , September 30, 200 💌 -		•	S	epte	mber,	200	3	E
		1	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			31	1	2	3	4	5	6
			7	8	9	10	11	12	13
			14	15	16	17	18	19	20
			21	22	23	24	25	26	27
			28	29	SU.	1	2	3	4
			5	6	1	8	а	10	11
-			0) Tod	ay: S	9/30/	2003	<u> </u>	
OK	Clear Cancel								

Search by Dialog Box

- 2. A Quantel Asset can be searched by Author, Title, Category, and Date. Specify all or part of an Author, Title and or Category in their respective fields.
- 3. The **Date** field reflects the current date. A different date can be selected from the drop-down calendar as shown above. To disable the **Date** as a search condition, deselect (uncheck) the checkbox located within the **Date** field.
- 4. Click OK. The Search By dialog box closes.
- 5. Click Refresh Database from the Browser menu. The results of the search are displayed in the Browser.
To clear the search fields in the **Search By** dialog box and return the **Browser** display to its original state on opening the **Browser**:

- 1. Click Clear. The Search By dialog box closes.
- 2. Click Click conselect Refresh Database from the Browser menu.

To cancel the search:

• Click Cancel in the Search By dialog box.

Import from Quantel®

File Menu > Import from Quantel

Also: Browser > Q > 📴; Browser Menu > Show Quantel Assets > Load from Database

Images produced on Quantel® systems can be imported to the Lyric **Canvas**. Graphic compositions created in Lyric can also be exported back to the Quantel system. The Duet or PC running Lyric and the Quantel system must be networked so that Lyric can access the Quantel directories. *Refer to* **Quantel Interface Configuration** for details on Quantel interface configuration, and to Quantel documentation for information on Quantel system operation.

A Quantel graphic can also be imported to the Lyric **Canvas** and a Lyric graphic can be exported to a Quantel system from the Lyric **Browser**. *Refer to Browser: Quantel*® *Asset Operations* for details.

The following describes terms that are specific to Quantel operations:

- Volume: Quantel's equivalent of a directory within a Windows PC.
- FID: File or Message ID.
- List Max: Limits the number of results per page that may be returned by a search operation.
- Image Type: Quantel systems store three image types:
 - Pictures, which are YUV images.
 - o Stencils, which are Alpha channel-only images.
 - o Cuts or Cutouts, which are complete YUV-A or RGB-A images.

Connecting to a Quantel System

A connection to a Quantel system must be opened before importing a graphic.

1. From the Lyric File menu, select Import from Quantel. The Quantel Import dialog box opens.

Host Name	zditbox	<u> </u>	2	Image Location (Volume or D	virectory)
Username	tp		<u>C</u> onnect		÷
Password [— <u>G</u> enerate	Image Type	
- 1			Volume List	Uuantel Pictures	
	Title			T <u>S</u> earch List <u>M</u> ax	15
10	ine				
				Show <u>T</u> humbnail	

Quantel Import Dialog Box

2. From the System Information Host Name drop-down list box, select the networked Quantel system from which files are to be imported, then click Connect. Note that Username always defaults to ftp, and entering a Password is not necessary. Both fields are always grayed out. Refer to Quantel Interface Configuration for details on setting up a host table to add systems to the Host Name list.

NOTE

Configure Quantel Interface does not perform a check on the validity of the Quantel Host Name and/or IP Address. If an error message is displayed when attempting to connect to the selected system, confirm that the system is available and that the Host Name and IP Address are correctly entered. *Refer to Quantel Interface Configuration for details on error messages.*

A connection can also be established by clicking **List Next Set** or **List Prev Set**. This will also result in the display in the **FID** list of the available files in the selected volume (directory), with the selected parameters applied. *Volume selection and parameters are described below.*

Displaying Quantel Files and Viewing Thumbnails

To display a list of available files in a Quantel system:

- 1. Set up a connection to a Quantel system as described above.
- 2. In the Options area, select the Image Location (Volume or Directory) that is to be viewed.
- 3. In the **Options** area, select the **Image Type: Quantel Pictures**, **Quantel Cutouts** or **Quantel Stencils**.
- 4. In the List Max field, enter the maximum number of files to be displayed. This setting determines how many files are to be listed in the **FID List** at one time. For example, if **List Max** is set at **20**, and there are **45** files that fit the import criteria, three pages would be generated. There would be **20** files on each of the first two pages, and **5** files on the third.
- 5. Optional: Click **Search** to set additional parameters. The **Search By** dialog box is described at the end of this section. After setting parameters, close the **Search By** dialog box.
- In the area below the FID List (unlabeled), click List Next Set. The files of the selected type, in the selected system and volume (directory) are displayed. If the number of files found exceeds the List Max setting, the first page of files is displayed. To view a following page, click List Next Set. To view a preceding page, click List Prev Set.

<u>H</u> ost Name	Editbox	•	Image Location (Volume or Directory)
<u>U</u> sername	ftp		0
Pass <u>w</u> ord	, 	Generate Volume List	Image Type Quantel Pictures
FID	Title		<u>S</u> earch List <u>M</u> ax 20
0.128.2 0.169.2 0.170.2 0.184.6 0.193.2 0.195.2 0.196.2 0.197.2 0.197.2 0.198.2 0.199.2 0.200.2 0.200.2 0.200.2 0.202.2 0.203.2 0.203.2 0.204.2 0.205.2	DZOL-067 cral cral 2 chyrontest.vpb cral 23 cral 2 10 3 5 23 fire1 fire2 10 3 0 fire3 FLAME FLAME2 FLAME3		
7 (21 thru 40) c	f listed		

Quantel Import Dialog Box - Selecting a File

NOTE

If a List Next or List Prev is executed, and either files are not displayed or far fewer than expected are displayed, check the Search By dialog box shown below to make sure that there are no leftover parameters that may unwittingly be affecting the results.

To view a thumbnail of a graphic:

- 1. Select (check) the Show Thumbnail checkbox.
- 2. Click a file ID in the FID list. Note that clicking in the Title column does not select a file.

To save settings for future use:

• Select (click) the Save Settings on Exit checkbox. Image Type, Volume and Search settings are preserved. List Max is not. These settings also determine the Quantel Assets that are displayed in the Browser.

Importing a Quantel Graphic to the Lyric Canvas

To import a Quantel graphic to the Canvas:

- 1. Click on a file in the **FID List** to highlight it. If **Show Thumbnail** is selected, the thumbnail is displayed.
- 2. Click Import. The image appears on the Lyric Canvas.

Quantel Assets are always imported at output pixel size, regardless of the Use 1:1 Pixel Aspect for Graphic Import setting, accessed from Config Menu > Canvas Resolution. This results in the aspect ratio of the image always being correct.

The FID Context Menu

Information about a **Quantel** file can be viewed, but not edited in the **Quantel Import** dialog box. This information can be edited only on the Quantel system.

• Left-click the **FID** for a file to display the context menu:



FID Context Menu

The context menu displays the following:

- File ID: The ID number of the Quantel graphic. This number is automatically assigned when a graphic is created on the Quantel system. This occurs when a graphic is exported to the Quantel either from the Quantel Export dialog box (accessed from File Menu > Export to Quantel), or from the Browser Save to Database function.
- Volume: The directory on the Quantel in which the file is stored.
- Size: The Width-by-Height dimensions in pixels.
- **Owner:** The author of the graphic.
- **Description:** The description of the graphic.
- Updated: Date of last update to the file.

Searching Quantel Assets

Quantel files can be searched based on a variety of parameters. The Quantel Import Search function differs from the Browser Search function in that the Quantel Import Search function searches the selected directory on the Quantel system, whereas the Browser Search function searches only the Quantel files already displayed in the Browser. *Refer to Browser: Quantel® Asset Operations for details on the Browser Search function.* To execute a search:

1. From the Lyric File menu, select Import from Quantel. In the Quantel Import dialog box, connect to a system, then display a set of files. In the Options area, click Search. *Refer to File Menu: Import from Quantel for details.*

Search By	: <u>×</u>							
Author:	Wolf							
<u>T</u> itle:	×							
Category:	Sports							
<u>D</u> ate:	Tuesday , September 30, 200:	-	S	epte	mber,	200	3	Þ
		Sun	Mon	Tue	Wed	Thu	Fri	Sat
		31	1	2	3	4	5	6
		7	8	9	10	11	12	13
		14	15	16	17	18	19	20
		21	22	23	24	25	26	27
		28	29	-	1	2	3	4
		5	6	7	8	9	10	11
1		0) Tod	ay: 9	0/30/	2003		
ОК	Clear Cancel							

Search by Dialog Box

- 2. A Quantel Asset can be searched by Author, Title, Category, and Date. Specify all or part of an Author, Title and or Category in their respective fields.
- 3. The **Date** field reflects the current date. A different date can be selected from the drop-down calendar as shown above. To disable the **Date** as a search condition, deselect (uncheck) the checkbox located within the **Date** field.
- 4. Click **OK**. The **Search By** dialog box closes.
- 5. Click List Next Set. The results of the search are displayed in the FID List.

To clear the search fields in the Search By dialog box:

• Click Clear. The Search By dialog box closes.

To cancel the search:

• Click **Cancel** in the **Search By** dialog box.

Export to Quantel®

File Menu > Export to Quantel

Also: Browser > Q

Q 3

; Browser Menu > Show Quantel Assets > Save to Database

Images produced on Quantel® systems can be imported to the Lyric **Canvas**. Graphic compositions created in Lyric can also be exported back to the Quantel system. The Duet or PC running Lyric and the Quantel system must be networked so that Lyric can access the Quantel directories. *Refer to* **Quantel Interface Configuration** for details on Quantel interface configuration, and to Quantel documentation for information on Quantel system operation.

A Quantel graphic can also be imported to the Lyric **Canvas** and a Lyric graphic can be exported to a Quantel system from the Lyric **Browser**. *Refer to* **Quantel**® **Asset Operations** for details.

The following describes terms that are specific to Quantel operations:

- Volume: Quantel's equivalent of a directory within a Windows PC.
- FID: File or Message ID.
- List Max: Limits the number of results per page that may be returned by a search operation.
- Image Type: Quantel systems store three image types:
 - **Pictures**, which are **YUV** images.
 - Stencils, which are Alpha channel-only images.
 - o Cuts or Cutouts, which are complete YUV-A or RGB-A images.

NOTE

Lyric compositions are exported to a Quantel system as 32-bit images, and are saved to the Quantel system as Cuts, also known as Cutouts.

To export a message from Lyric to a Quantel system:

1. From the **File Menu**, select **Export to Quantel**. The **Quantel Export** dialog box is displayed. It is shown with parameters entered.

Storm Watch ocal Save IV En <u>a</u> ble	
ocal Save	
Enable	
191	
ile C:\Program Files\Chyron\Lyric\Messages\Storm_	Browse
TP Save	
V Enable	
Filename Storm Watch	-
Username ftp	
Location 3	-
Location 3	

Quantel® Export Dialog Box

- 2. Optional: Enter a **Description**.
- 3. To also save the file locally on the system running Lyric, select (check) the **Local Save Enable** checkbox, then in the **File** field, enter a filepath to the directory in which the file is to be saved.
- 4. Click the FTP Save Enable checkbox.
- 5. In the **Filename** field, enter the **Filename** under which the file will be saved in the Quantel system.
- 6. In the **IP Address** field, enter the Quantel system **IP Address** or **Hostname**.
- 7. If required to access the Quantel system, enter a Username in the Username field.
- 8. In the **Location** field, enter a destination **Volume** or directory.
- 9. Click **OK** to execute the export and, if enabled, the save to the local disk.

NOTE

Configure Quantel Interface does not perform a check on the validity of the Quantel Host Name and/or IP Address. If an error message is displayed when attempting to export to the selected system, confirm that the system is available and that the Host Name and IP Address are correctly entered. *Refer to Quantel Interface Configuration for details on error messages.*

38. iTV

iTV

Lyric's iTV composition features require a special license. Contact Chyron Customer Service at 631 - 845 - 2000 for information.

iTV Composition

This feature is not yet fully implemented.

Insert TV Object - iTV Composition

Tools Menu > Insert TV Object

A TV Object is a place-holder that designates the location of a "squeezed-back" (not to be confused with Lyric/Duet Squeezeback operations) TV picture in an interactive television composition, when activated on the viewer's set-top box. To insert a TV Object, right-click on the Canvas and select Insert TV Object.



TV Object

Position the TV Object by dragging it to the desired location on the Canvas. You may also use the XYZ controls in Lyric's Properties menu to position and scale the object.

Note: Lyric for iTV composition requires a special license and this tool may be unavailable in your version of the software.

Insert iTV Hotspot

Tools Menu > iTV Hotspot

An **iTV Hotspot** is a user-definable area that may be assigned a link such as a **URL** or a JavaScript call in Lyric's **iTV Properties** menu. To insert an **iTV Hot Spot**:

• From the **Tools** menu, select **iTV Hot Spot**. A rectangular frame appears on the screen. The frame can be resized and repositioned.



Inserting an ITV Hot Spot

NOTE

Lyric for iTV composition requires a special license and this tool may be unavailable in your version of the software. Also, the menu(s) shown may differ in your version of Lyric.

Export to iTV

File Menu > Export to iTV

Lyric iTV requires a special license. Contact Chyron Customer Service at 631-845-2132 for additional information. This menu item appears only if **iTV** is installed on the system.

39. Networking and File Transfer

Finding the IP Address or Computer Name of a System

When a system on which Lyric is running is networked to another system such as a Chyron Aprisa, it is necessary to know either the **Full Computer Name** or the **IP Address** of the remote system.

- The Full Computer Name is a name given to a system to make it easily identifiable.
- The IP Address is the actual network address of the system.

The Full Computer Name and IP Address are stored as part of a system's network configuration.

NOTE

If the IP Address of the system is dynamically assigned, i.e. a new one is assigned each time the system is started up, then always enter the Full Computer Name when a Host Name or Alternate Host Name is requested. If in doubt about whether or not the IP Address is fixed or dynamic, then always use the Computer Name as the Host Name or Alternate Host Name.

Procedures for finding the **Computer Name** and **IP Address** are shown for both the Windows® 2000 and Windows NT® operating systems. Note that depending on the version of the Windows® operating system and the system's configuration, the procedures may deviate from those described below.

Windows® 2000

To find the **Computer Name** of a system:

 On the system, access Start > Settings > Control Panel > System > Network Identification. The Full Computer Name is displayed on the Network Identification tab.

To find the **IP Address** of a system:

- 1. On the system, access Start > Settings > Control Panel > Network and Dial-up Connections > Local Area Connection > General.
- Click Properties, then select Internet Protocol (TCP/IP). If Use the Following IP Address is specified, the IP Address is displayed in the IP Address field. If Obtain an IP Address Automatically is specified, use the Full Computer Name as the Host Name or Alternate Host Name, as the IP Address can change with each network session.

Windows NT®

To find the **Computer Name** of a system:

• On the system, access Start > Settings > Control Panel > Network > Identification. The Computer Name is displayed on the Identification tab.

To find the **IP Address** of a system:

- 1. On the system, access Start > Settings > Control Panel > Network > Protocols.
- Select Internet Protocol (TCP/IP). If Specify an IP Address is specified, the IP Address is displayed in the IP Address field. If Obtain an IP Address from a DHCP Server is specified, use the Computer Name as the Host Name or Alternate Host Name, as the IP Address can change with each network session.

FTP

Files can be transferred between systems using **File Transfer Protocol**, also known as **FTP**. While files of all formats can be transferred between systems, **FTP** is necessary for transferring files to and from an iNFiNiT! system. *For information on how to execute an FTP transfer, refer to the chapter on iNFiNiT! Systems and Lyric.*

40. Keyboard/Mouse Shortcuts

Keyboard/Mouse Shortcuts Overview

Lyric offers a variety of keyboard/mouse shortcuts to help speed your work. Many of the keyboard shortcuts work on both Duet keyboards and conventional PC keyboards. Differences between the two keyboards are noted. The keystrokes are specified as follows:

- If a keystroke combination contains a +, it indicates that the key specified to the left of the + should be pressed, then held, while the key to the right is pressed. For example, Ctrl + N indicates that the Ctrl key should be pressed, then held, while the N key is pressed. Ctrl + Alt + ↑ indicates that the Ctrl and the Alt key should be pressed and held while pressing the ↑ key as many times as necessary to shift the page on the Canvas.
- If the keystroke combination does not contain a +, then press, but do not hold the keys, in the order in which they are indicated. For example, to record a message at a specific Message Number,
 <Message Number> Record indicates that the Message Number should be entered on the numeric keypad, and then Record is pressed. No keys are held while others are pressed.
- If the + key is used as a keystroke instead of used to specify a held key, it is indicated as such.

The Keyboard/Mouse Shortcuts are grouped as follows:

- 2D/3D Text, Text Templates and Row Tabs
- All Other Shortcuts

Keyboard/Mouse Shortcuts - 2D/3D Text, Text Templates and Row Tabs

NOTE

For sake of clarity in this section, references to 2D Text Windows in the tables below also encompass 2D Roll, Crawl and Type On Windows.

There are two ways that text in a **2D Text Window** is accessed for editing/manipulation:

- Selection: The text is surrounded by a Bounding Box
- Cursor Position: The cursor position determines which text is affected by an operation.

A few points regarding selection:

- A row in a **2D Text Window** or **2D Text Template** is considered selected for editing when the cursor is positioned on it.
- A 2D Text Window is considered selected when the Title Bar of the window is light gray. A cursor is visible in the 2D Text Window when it is active.
- Text inside of a **2D Text Template** cannot be selected for text shifting operations, although it can be selected for other editing operations. Cursor position can also affect which text is affected by an operation.

Typing 2D/3D Text and RGB Fonts

TYPING CHARACTERS (2D/3D TEXT and RGB FONTS)					
Duet Keystroke(s)	PC Keystroke(s)	Description			
Caps Lock	Caps Lock	Toggles Caps Lock Mode on and off. When Caps Lock Mode is active, all characters are typed in upper case. Equivalent to a typewriter Caps Lock key. When Caps Lock is active, CAP in the Status Bar is not grayed out. Caps Lock Mode remains active until			
Fig. , Name Lands	Num Look				
(same keycap as		loggles Num Lock Mode on and off:			
Ctrl on the numeric keypad)		• When active, the numeric keypad at the right of the keyboard types numbers.			
		 When inactive, pressing the numeric keypad keys shifts cursor position, activates/inactivates Insert Mode, or deletes the selected 2D text character. 			
		When Num Lock is active, NUM in the Status Bar is not grayed out.			
		Num Lock Mode remains active until turned off.			
Fn + Insert (same keycap as Delete Row) OR	Insert (located above the Delete key on the PC) OR	Toggles between Overwrite Mode and Insert Mode : • When Overwrite Mode is active, a newly-typed character replaces the existing character			
With Num Lock inactive, press Ins (0) on numeric keypad	With Num Lock inactive, press Ins (0) on numeric keypad	 When Insert Mode is active, the newly-typed character is inserted at the cursor position without replacing a character. All characters to the right of the new character are moved to the right to accommodate the new character. 			
		When Overwrite Mode is active, OVR in the Status Bar is not grayed out.			
		When Insert Mode is active, OVR in the Status Bar is grayed out.			
		Insert or Overwrite Mode remains active until turned changed.			

TYPING CHARACTERS (2D/3D TEXT and RGB FONTS)				
Duet Keystroke(s)	PC Keystroke(s)	Description		
Ctrl + - (minus sign)	Ctrl + - (minus sign)	Toggles Locked Translation Mode on and off. Locked Translation Mode enables typing of Alt and Alt + Shift characters (including RGB Font).		
		When Locked Translation Mode is active, TRNS in the Status Bar is not grayed out.		
		Locked Translation Mode remains active until turned off.		
Ctrl + = (equal sign)	Ctrl + = (equal sign)	Toggles Single-Stroke Translation Mode on and off. Single-Stroke Translation Mode enables typing of Alt and Alt + Shift characters (including RGB Fonts).		
		When Single-Stroke Translation Mode is active, TRNS in the Status Bar is not grayed out.		
		Single-Stroke Translation Mode is active for typing only one character. After the character is types, Single-Stroke Translation Mode turns off.		

2D Text/Template Selection and Navigation

2D TEXT WINDOW/TEMPLATE SELECTION AND NAVIGATION			
Duet/PC Keystroke(s)	Description		
Selecting a 2D Text Window			
Ctrl + W	Toggles among 2D Text Windows in the order of their creation.		
Shift + Ctrl + W	Toggles among 2D Text Windows in opposite order of their creation.		
Selecting/Repositioning/Resizing a 2D Text Template			
Tab	Toggles through all open 2D Text Templates in 2D Text Windows in order of their creation (oldest to newest), regardless of the 2D Text Window in which they are situated.		
Shift + Tab	Toggles through all open 2D Text Templates in 2D Text Windows in reverse order of their creation (newest to oldest), regardless of the 2D Text Window in which they are situated.		
Ctrl + Left-Click	Toggles 2D Text Template selection on and off.		
Ctrl + Left-Click, then Ctrl + ★↓←→ or click- and-drag Template	Ctrl + Left-Click selects 2D Text Template, then Ctrl + ↑↓←→ or click-and-drag Template is used to reposition the 2D Text Template.		

2D TEXT WINDOW/TEMPLATE SELECTION AND NAVIGATION		
Duet/PC Keystroke(s)	Description	
Ctrl + Left-Click, then ↑↓ ← → or click-and-drag handles	Ctrl + Left-Click selects 2D Text Template , then $\uparrow \forall \leftarrow \rightarrow$ or click-and-drag handles is used to resize the 2D Text Template . Aspect ratio of the 2D Text Template always remains constant when resized from the corner handles.	

2D/3D Color/Font Selection

2D/3D COLOR/FONT SELECTION				
Duet/Keystroke(s)	PC Keystroke(s)	Description		
Color Keys 1 - 8	Ctrl + 1 through Ctrl + 8	Selects entries 1 - 8 in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box.		
No corresponding keystrokes.	Ctrl + 9 Ctrl + 10	Selects Palette Positions 9 and 10 respectively in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box. Do not have corresponding dedicated Duet keyboard keystrokes.		
Color Keys 9 - 14 (Shift + Color Keys 1 - 6)	Ctrl + Shift +1 through Ctrl + Shift + 6	Selects entries 11 - 16 in pull-down Color Palette on the Font Toolbar (2D or 3D text) and in the Color Select dialog box.		
Note: Color Keys 15 and 16 are not operational.				
Font Keys 1 - 8	Alt + 1 through Alt + 8	Selects fonts 1 - 8 as assigned to Duet Font Keys (2D or 3D text).		
Font Keys 9 - 16 (Shift + Font Keys 1 - 8)	Alt + Shift + 1 through Alt + Shift + 8	Selects fonts 9 - 16 as assigned to Duet Font Keys (2D or 3D text).		
No corresponding keystrokes.	Alt + 0 Alt + 9 Alt + Shift + 0 Alt + Shift + 9	Hotkeys for four additional fonts. Do not have corresponding dedicated Duet keyboard keystrokes.		
Color Font Key	Alt + F12	Picks up color and font of the currently selected 2D character.		
		 Place cursor on text, then press the Color Font key or Alt + F12. 		
		Subsequent typing reflects the new color and font attributes until changed (2D Text Windows only).		

Cursor Positioning, Text Editing Functions

2D TEXT CURSOR POSITIONING AND TEXT EDITING FUNCTIONS				
Duet/PC Keystroke(s)	Description			
Cursor Positioning				
Home	Moves cursor to beginning of selected row in 2D Text Window or 2D Text Template .			
End	Moves cursor to end of selected row in 2D Text Window or 2D Text Template .			
Ctrl + Home	Moves cursor to beginning of active 2D Text Window or selected 2D Text Template .			
Ctrl + End	Moves cursor to end of last row of active 2D Text Window or selected 2D Text Template .			
2D Text E	diting - Cut, Copy, Paste, Delete, Erase, Insert, Etc.			
Ctrl + Z	Undo: Undoes last edit. Can back through an edit sequence, one edit at a time.			
Ctrl + Y	Redo: Redoes last undone edit. Can redo an edit sequence, one edit at a time.			
Ctrl + A	Selects all in 2D Text Window . Selected text in enclosed in a bounding box which can be repositioned, scaled, etc. Ctrl + A also selects all text in a 2D Text Template , but manipulation cannot be applied to the 2D Text Template using this method of selection.			
Delete	Deletes selected text in 2D Text Window or 2D Text Template . Selected text not stored in Clipboard .			
Ctrl + C Ctrl + Insert	Copies selected text in 2D Text Window or 2D Text Template . Selected text stored in Clipboard .			
Ctrl + X Shift + Delete	Cuts selected text in 2D Text Window or 2D Text Template. Selected text stored in Clipboard.			
Ctrl + V Shift + Insert	Pastes selected text in 2D Text Window or 2D Text Template at cursor position.			
Ctrl + Alt + V	Paste Unicode Text: Pastes Unicode text that was previously cut or copied form another document.			
Ctrl + I	Paste in Place: Pastes contents of Clipboard on top of and exactly in the same position as cut/copied text (2D Text Windows only).			
Alt + F3	Inserts Space at cursor position in 2D Text Window or 2D Text Template.			

2D TEXT CU	2D TEXT CURSOR POSITIONING AND TEXT EDITING FUNCTIONS				
Duet/PC Keystroke(s)	Description				
F2	Deletes all characters and spaces from the cursor to the end of row in active 2D Text Window or Template .				
Shift + Backspace	Erase All (2D Text Templates only): To erase all text from the selected 2D Text Template:				
	 Place the cursor in the 2D Text Template, and then press Shift + Backspace. 				
	Row Edit Functions				
Ctrl + L	Lock Mode: Allows locking of 2D Text rows so that they shift as one group. To toggle on and off:				
	 Press Ctrl + L or select Row Shift Locked from the Edit menu to toggle on and off. 				
	When Lock Mode is active, LOCK is not grayed out on the Status Bar .				
Enter	Add Row: Adds new row below current row in 2D Text Window or 2D Text Template.				
Alt + Insert	Inserts row above cursor position in 2D Text Window or 2D Text Template.				
Alt + Delete	Deletes selected row in 2D Text Window or 2D Text Template.				
Shift + Enter	Moves the portion of a 2D Text Window or 2D Text Template row located to the right of the cursor to the next row.				
Cursor at end of Row, then press	Pull up Word (2D Text Template Only): Pulls up a word from the following row to the row on which the cursor is positioned.				
Delete	• Place the cursor at the end of a row, and then press Del . If there is room on the current row, the first word from the next row is moved up to the current row.				
	NOTE: Word Wrap must be enabled in the 2D Text Template dialog box for this to work in a 2D Text Template .				
Ctrl + B	Swap Row Up: Swaps row up in a multi-row 2D Text Window or 2D Text Template. Equivalent to selecting 2D Text Window or 2D Text Template Context (Right-Click) Menu > Swap Row Up.				
Ctrl + F	Swap Row Down: Swaps row down in a multi-row 2D Text Window or 2D Text Template. Equivalent to selecting 2D Text Window or 2D Text Template Context (Right-Click) Menu > Swap Row Down.				
Alt + P	Swap Row Priority Up: Swaps priority with the 2D Text Window or 2D Text Template row behind the row on which the cursor is positioned.				

2D TEXT CURSOR POSITIONING AND TEXT EDITING FUNCTIONS				
Duet/PC Keystroke(s)	Description			
Alt + N	Swap Row Priority Down: Swaps priority with the 2D Text Window or 2D Text Template row on top of the row on which the cursor is positioned.			
Tab Function				
Ctrl + Tab	Duplicates the function of the Tab key in a conventional word processor. Works in a 2D Text Window or 2D Text Template . Tab Width is set in Config > Preferences > CG Preferences .			
Find/Replace, Spell Check				
Ctrl + H	Find/Replace: Searches 2D Text Windows and 2D Text Templates.			
F7	Spell Check: Checks 2D Text Windows and 2D Text Templates.			

Row Tab Functions

ROW TAB FUNCTIONS		
Duet/PC Keystroke(s)	Description	
Ctrl + T	Add Row Tab Marker	
Alt + J	Select Next Tab	
Alt + M	Tab Column Mode	

2D Text Template Update Functions

2D TEXT TEMPLATE UPDATE FUNCTIONS		
Duet/PC Description Keystroke(s)		
Alt + T	Template Update: Displays Template Update dialog box, from which instant updates can be executed.	
Alt + U	Disables interface fields (for use with Intelligent Interface).	

2D Text Shift/Squeeze/Expand Functions

2D TEXT SHIFT/SQUEEZE/EXPAND FUNCTIONS

Shifts execute in 1-scanline (up/down) or one-pixel (left-right) increments.

Super Shifts execute in 10-scanline (up/down) or one-pixel (left-right) increments.

When text is *selected*, that indicates that is enclosed by a **Bounding Box**. Performing a shift operation on *selected* text can differ in behavior than performing a shift on text that is marked by the cursor position.

Text can be selected in a **2D Text Template** for operations such as changing font color. When a shift operation is applied to selected text in a **2D Text Template**, however, the bounding box disappears, and the cursor reappears. The shift executes based on cursor position, not text selection.

Super Shift

Super Shift: 2D Text shifts are performed in one-scanline (horizontally) or one-pixel (vertically) increments at a time. To move characters/rows **10** scanlines/pixels at a time instead of by single scanlines/pixels:

- **Duet/PC** Description Keystroke(s) **Shift Character Operations** Alt + F3 Insert space. Ctrl + **↑** Shift Character Up/Down: **2D Text Window:** Shifts selected character(s) up/down. 2D Text Window/2D Text Template: Shifts character at cursor position. Shift + Ctrl + ↑↓ Super Shift Character Up/Down in 10-scanline increments (see above). Ctrl + ←→ Shift Character Left/Right: 2D Text Window: Shifts selected character(s) • Left/Right. 2D Text Window/2D Text Template: Shifts character and all characters on the same row to the right of the character Left/Right. Shift + Ctrl + ←→ Super Shift Character Left/Right in 10-pixel increments (see above).
- Hold the Shift key while performing the Character or Row Shift.

2D TEXT SHIFT/SQUEEZE/EXPAND FUNCTIONS				
	Shift Row Operations			
Alt + F1	Center 2D Text Window Row: Cursor can be positioned inside or outside of a Template. This function is applied to the 2D Text Window row, not the 2D Text Template row.			
Click/Drag Row Handle	Shift Single Row in 2D Text Window/2D Text Template.			
Alt + ↑ ¥	Shift Row(s) Up/Down:			
	 2D Text Windows: Shifts the selected row (Row Shift Unlock Mode) or the selected row and the rows below it (Row Shift Lock Mode). 			
	• 2D Text Templates: Shifts the selected row and the rows below it, regardless of the Row Shift Lock/Unlock setting.			
Shift + Alt + ∱ ¥	Super Shift 2D Text Window/2D Text Template row(s) up/down in 10-scanline increments (see above).			
Ctrl + L	Row Shift Unlock: When a row of 2D Text Window text is shifted using the (Alt + $\uparrow \Psi$ or Shift + Alt + $\uparrow \Psi$ functions, only the selected row selected shifts. This is known as Unlocked Mode . The rows beneath the shifted row are not affected.			
	Row Shift Lock: Locked Mode enables the row and the rows below it to shift as a block.			
	2D Text Template rows are always in Locked Mode, regardless of the Row Shift Lock/Unlock setting.			
Alt + ←→	Shift 2D Text Window or 2D Text Template Row Left/Right.			
Shift + ALT + ← →	Super Shift 2D Text Window/2D Text Template row left/right in 10-pixel increments (see above).			
Shift Page Operations				
Alt + F2	Center Page: Centers entire Lyric screen.			
Ctrl + Alt + ↑∀←→	Shift page up/down/left/right: Shifts entire Lyric screen up/down/left/right.			
Shift + Ctrl + Alt + ↑↓←→	Super shift page up/down/left/right: Shifts entire Lyric screen up/down/left/right in 10-scanline/pixel increments.			

2D TEXT SHIFT/SQUEEZE/EXPAND FUNCTIONS			
2D Text Squeeze/Expand Functions			
Ctrl + 4 on numeric keypad	 Word Squeeze: 2D Text Windows: Draws together the word on which the cursor is positioned, or on selected text, reducing the space (kerning) between the characters. The leftmost character in the word stays stationary. 2D Text Templates: Draws together the word on which the cursor is positioned, as well as any words on the same row to the right of the cursor position, reducing the space (kerning) between the characters. The leftmost character in the word stays stationary. This operation can also be accessed from 2D Text/Template Context (right-click Menu > Squeeze/Expand. 		
Ctrl + 6 on numeric keypad	 Word Expand: 2D Text Windows: Expands word on which the cursor is positioned, or selected text, out towards the right, expanding the space (kerning) between the characters. The leftmost character in the word stays stationary. 2D Text Templates: Expands word on which the cursor is positioned, as well as any words on the same row to the right of the cursor position, out towards the right, expanding the space (kerning) between the characters. The leftmost character in the word stays stationary. 2D Text Templates: Expands word on which the cursor is positioned, as well as any words on the same row to the right of the cursor position, out towards the right, expanding the space (kerning) between the characters. The leftmost character in the word stays stationary. This operation can also be accessed from 2D Text/Template Context (right-click Menu > Squeeze/Expand. 		
Ctrl + 8 on numeric keypad	 Row Squeeze (2D Text Windows/2D Text Templates): Draws rows below the row on which the cursor is positioned (cursor row) up, towards the cursor row, reducing the space between the rows. The row on which the cursor is positioned remains stationary. This operation can also be accessed from 2D Text/Template Context (right-click Menu > Squeeze/Expand. 		
Ctrl + 2 on numeric keypad	 Row Expand (2D Text Windows/2D Text Templates): Pushes rows below the row on which the cursor is positioned (cursor row) down, away from the cursor row, expanding the space between the rows. The on which the cursor is positioned remains stationary. This operation can also be accessed from 2D Text/Template Context (right-click Menu > Squeeze/Expand. 		

2D Text Record Options

LYRIC MESSAGE FILES - RECORD 2D TEXT			
Duet Keystroke(s)	PC Keystroke(s)	Description	
The Message ID Number can be entered before any of the following commands to specify a message other than that which is currently displayed.			
Selective Recording - 2D Text: Ctrl + Record displays the Record Only: dialog box, which enables the recording of specific 2D Text elements of a Lyric composition. A message recorded in this manner can be read into a 2D Text/Roll/Crawl/Type On Window of another message as a Pop-On message, which replaces text in the message into which it is read. All messages are recorded in the *.lyr format to the Default Message Directory. Note that the Ctrl + Alt + Record (Duet keyboard) and Ctrl + Alt + Minus key (-) on the numeric keypad (PC keyboard) combinations can be used to overwrite the currently loaded message.			
Ctrl + Record T Enter	Ctrl + Minus key T Enter	Records All Text in selected 2D Text Window.	
Ctrl + Record E Enter	Ctrl + Record E Enter	Records Cursor to End of text in selected 2D Text Window .	
Ctrl + Record R Enter	Ctrl + Record R Enter	Records Current Row of text in selected 2D Text Window .	
Ctrl + Record D Enter	Ctrl + Record D Enter	Records Template Description Message.	

Keyboard/Mouse Shortcuts - Except 2D Text/Templates

General

GENERAL			
Duet/PC Keystroke(s)	Description		
	Help		
F1	Help		
Shift + F1	Context Help: Press Shift + F1 . The Reference of the second s		
File Operations			
Ctrl + N	If a Canvas is displayed, prompts user with a choice to clear the Canvas . If user selects Yes , then new Canvas is displayed. Note that additional options are available by selecting New from the File menu.		
Ctrl + O	Open File.		
Ctrl + S	Save File.		
Alt + F4	Exits Lyric, first requesting confirmation.		
Window Operations			
F3	Shifts focus to the Scene Graph.		
F4	Shifts focus to the topmost Browser Window .		
F6	Shifts focus to the Canvas .		
Ctrl + F6	Selects next window (for example, moves from the Canvas to the Properties page to the Timeline).		
Ctrl + Shift + F6	Selects the previous window.		
Ctrl + F4	Close window.		
Page Shift			
Alt + F2	Center page: Centers entire Lyric screen.		
Ctrl + Alt + ↑V←→	Shift page up/down/left/right: Shifts entire Lyric screen up/down/left/right.		
Shift + Ctrl + Alt + ↑V←→	Super shift page up/down/left/right: Shifts entire Lyric screen up/down/left/right in 10-scanline/pixel increments.		

GENERAL			
Duet/PC Keystroke(s)	Description		
	Erase Operations		
Ctrl + E	Erase: Prompts the user to choose from among several options. Equivalent to clicking the B button.		
Ctrl + Q	Erase Screen: Erases the Canvas . If Lyric is running on a Duet, this also erases the contents of the currently selected Frame Buffer .		
Canvas Viewing			
Spin the mouse wheel up/down.	Zooms into/out from the Canvas .		
Hold the Shift key down. Spin the mouse wheel up/down.	Zooms into/out from the Canvas more quickly.		
Hold the Shift key down and the mouse wheel down. Spin the mouse wheel up/down.	Zooms into/out from the Canvas more slowly.		
Hold the mouse wheel down. Move the mouse around the Canvas.	Looks around the scene.		
Hold the Shift key down and the mouse wheel down. Move the mouse around the Canvas.	Rotates the scene.		

Manipulating and Editing Objects on the Canvas

MANIPULATING AND EDITING OBJECTS ON THE CANVAS			
Duet/PC Keystroke(s)	Description		
Ctrl + Z	Undo		
Alt + Backspace			
Ctrl + Y	Redo		
Ctrl + left click	Selects multiple items on the Scene Graph or on the Timeline for editing.		
Shift + left click	Selects adjacent items on the Scene Graph or on the Timeline for editing.		
Alt + Click	Clicking the mouse while the Alt key is held cycles through selecting each object on the Canvas .		
Ctrl + Delete	Deletes the object (any type) that is active on the Scene Graph and Canvas .		
Shift + Delete	Deletes the object (any type) that is active on the Scene Graph and Canvas .		
Ctrl + E	Erase: Prompts the user to choose from among several options. Equivalent to clicking the B button.		
Ctrl + Q	Erase: Erases all Canvas contents with no request for confirmation.		
Ctrl + G	Group (usable for any and all types of Canvas objects).		
Ctrl + U	Ungroup.		
Ctrl + C Ctrl + Insert	Copy (any object)		
Ctrl + X Shift + Delete	Cuts selected text in 2D Text Window or 2D Text Template . Selected text stored in Clipboard .		
Ctrl + V Shift + Insert	Paste (any object)		
Ctrl + I	Paste in Place (any object)		

Browser			
	Mouse/Keyboard Action	BROWSER	
	F4	Switches focus in Lyric to the topmost Browser Window .	
	Click-and-Drag	Bitmap, Lyric Message, Aprisa and Quantel assets from the Browser window to the Lyric Canvas or into a 2D Text Window in the Canvas.	
	Click-and-Drag	Bitmap and Aprisa 100 (Still) assets from the Browser Window to Texture Chip in Properties > Surface.	
	Click-and-Drag	Lyric Message Assets from the Browser window to the File Name field in the Playlist .	
	Click-and-Drag	Assets from one Browser window to another Browser window.	
	Click-and-Drag	Font Assets from the Browser window into Properties > Fonts or Properties > 2D Font FX.	
	Click-and-Drag	Lyric messages and graphics from Windows® Explorer®-type windows into Lyric Browser Message Asset and Bitmap Asset Browser windows, respectively.	
	Click-and-Drag	Alt + drag-and-drop a Bitmap Asset or Aprisa 100 (Still) asset to create a background for a Canvas, 2D Text Window or 2D Text Template.	
	¥∧← →	Moves the Browser cursor from item to item in the Browser Window .	
	Home	Selects the first item in the Browser Window .	
	End	Press End to select the last item in the Browser Window .	
	Enter or Double-Click	When a Browser item is highlighted, press either Enter key to open the selected item. Double-clicking the item also opens the item.	
	First letter or number of file name	Typing any character key finds the next Browser entry with a title that starts with that character. For example, in a Browser Window containing images titled Red , Rose and Yellow , typing r selects Red and scrolls it into view. Typing r again selects Rose , and typing y selects Yellow .	
	Key Combination for RGB Font Character	In the Font Browser , typing a character selects and scrolls to the image mapped to that character.	
	Alt + Keys 0 through 9	Accesses user-defined fonts in the Font Asset Browser.	
	Alt + Shift + Keys 0 through 9		

File Operations

LYRIC MESSAGE FILES - CLEAR AND DELETE			
Duet Keystroke(s)	PC Keystroke(s)	Description	
Del	. (Decimal/Del) key on the numeric keypad	Clears the Message Number display	
The Message ID Number can be entered before the following command to specify a message other than that which is currently displayed.			
Alt + F5	Alt + F5	Deletes file where current message is stored; requests confirmation from operator.	

LYRIC MESSAGE FILES - RECORD				
Duet Keystroke(s)	PC Keystroke(s)	Description		
The Message ID Number can be entered before any of the following commands to specify a message other than that which is currently displayed.				
Record	Minus key (-) on the numeric keypad	Records message at displayed message number.		
Alt + Record	Alt + Minus key (-) on the numeric keypad	Overwrites the current message		
Selective Recording - 2D Text: Ctrl + Record displays the Record Only dialog box, which enables the recording of specific 2D text elements of a Lyric composition. A message recorded in this manner can be read into a 2D Text/Roll/Crawl/Type On Window of another message as a Pop-On message, which replaces text in the message into which it is read. All messages are recorded in the *.lyr format to the Default Message Directory. Note that the Ctrl + Alt + Record (Duet keyboard) and Ctrl + Alt + Minus key (-) on the numeric keypad (PC keyboard) combinations can be used to overwrite the currently loaded message, without prompting for an overwrite confirmation. After the message is recorded, the Message Number display does <i>not</i> increment. If the message was not originally read from an existing message, then the composition is saved at the current Message ID. If a message with that Message ID already exists, then the overwrite prompt is displayed.				
Ctrl + Record T Enter	Ctrl + Minus key (-) on the numeric keypad T Enter	Records All Text in selected 2D Text Window.		
Ctrl + Record E Enter	Ctrl + Minus key (-) on the numeric keypad E Enter	Records Cursor to End of text in selected 2D Text Window .		

LYRIC MESSAGE FILES - RECORD			
Duet Keystroke(s)	PC Keystroke(s)	Description	
Ctrl + Record R Enter	Ctrl + Minus key (-) on the numeric keypad R Enter	Records Current Row of text in selected 2D Text Window .	
Ctrl + Record D Enter	Ctrl + Minus key (-) on the numeric keypad D Enter	Records Template Data Message .	
Selective Recording which enables the rec Default Effects Direc	- Timeline: Ctrl + Re ording of specific Time ctory.	ecord displays the Record Only dialog box, eline elements. Records files to the	
Ctrl + Record S Enter	Ctrl + Minus key (-) on the numeric keypad S Enter	Records the Keyframe information for all objects on the Canvas (Scene) in the <i>.efx</i> format, where it becomes available for use by the Read Effects tool. The file format is the same as that recorded from File > Save As , where Lyric Effect (*.efx) is selected as the file format.	
Ctrl + Record O Enter	Ctrl + Minus key (-) on the numeric keypad O Enter	Records all of the Keyframe information for a selected Object on the Canvas in the <i>.kyf</i> format. The file format is the same as that recorded from Right-Click Object Timeline > Save Keyframe File .	
Selective Recording which enables the rec	- Panel: Ctrl + Reco ording of tool-specific	rd displays the Record Only: dialog box, files.	
Ctrl + Record C Enter	Ctrl + Minus key (-) on the numeric keypad C Enter	Records only Clip information in the <i>.ccf</i> format to the Default Clip File Directory . The file format is the same as that recorded from Clip Control Panel > Save .	
Ctrl + Record K Enter	Ctrl + Minus key (-) on the numeric keypad K Enter	Records only Clock and Timer information in the <i>.lyr</i> format to the Default Message Directory . All Clocks and Timers in the composition are recorded. The file format is the same as that recorded from Properties > Clocks/Timers > Save .	
Ctrl + Record M Enter	Ctrl + Minus key (-) on the numeric keypad M Enter	Records only Macro information in the <i>.lyr</i> format to the Default Message Directory . The file format is the same as that recorded from Macros > - > Save , when the Macro is saved in the <i>.lyr</i> format.	
Ctrl + Record F Enter	Ctrl + Minus key (-) on the numeric keypad F Enter	Records only Multi FX information in the <i>.lyr</i> format to the Default Message Directory . The file format is the same as that recorded from Tools Menu > Multi FX > Save .	

LYRIC MESSAGE FILES - RECORD		
Duet Keystroke(s)	PC Keystroke(s)	Description
Ctrl + Record P Enter	Ctrl + Minus key (-) on the numeric keypad P Enter	Records the only the Playlist information in the . <i>ply</i> format to the Default Playlist Directory . The file format is the same as that recorded from File Menu > Save As , where Playlist Files (*.ply) is selected as the file format.
Ctrl + Record X Enter	Ctrl + Minus key (-) on the numeric keypad X Enter	Records only Video Mixer information in the <i>.lyr</i> format to the Default Message Directory . The file format is the same as that recorded from Tools Menu > Video Mixer > Save .

LYRIC MESSAGE FILES - READ		
Duet Keystroke(s)	PC Keystroke(s)	Description
The Message ID Number can be entered before any of the following commands to specify a message other than that which is currently displayed.		
Read	Enter on the numeric keypad	Read message to Canvas .
Ctrl + Read	Ctrl + Enter on the numeric keypad	Read Next.
Alt + Read	Alt + Enter on numeric keypad	Read Previous.

Buffer and Output Operations

OUTPUTS		
Duet Keystroke(s)	PC Keystroke(s)	Description
Ctrl + Fn + F6	Ctrl + F11	Toggles we button on and off.
Xfer	/ key on the numeric keypad	Transfers active Frame Buffer content to VGE (output).
Swap	Ctrl + /	Swaps Channels.
Alt + Xfer	Alt + /	Transfers the contents of the current Canvas to the next available Frame Buffer without changing the active Frame Buffer . Leaves contents of active Channel intact.
Chng	* key on the numeric keypad	Switches to next available frame buffer, making it active.

OUTPUTS		
Duet Keystroke(s)	PC Keystroke(s)	Description
Play Ctrl + Play	Alt + Page Up Ctrl + Alt + Page Up	If the sective: Plays animation on VGE (output). If the sective: Plays animation on VGA. Plays animation on VGE (output) regardless of whether the sective or inactive the sective.
Esc	Esc	Stops the animation.
Ctrl + Q	Ctrl + Q	Erases the Canvas . If Lyric is running on a Duet, also erases the contents of the currently selected Frame Buffer .
Alt + Erase	Ctrl + Alt + Q	Erases the outputs of both the selected Internal Clip Player and the Duet output.

Animation Playback (for Testing)

ANIMATION PLAYBACK (FOR TESTING)		
Keystroke(s)	Description	
Alt + Next icon Im on Canvas Transport Controls	Advance to next keyframe of selected object.	
Alt + Previous icon III on Canvas Transport Controls	Return to previous keyframe of selected object.	
Alt + Home	Go to beginning of animation.	
Alt + End	Go to end of animation.	
÷	Reverses animation one frame.	
>	Advances animation one frame.	
Alt + 🗲	Reverses animation one second.	
Alt + →	Advances animation one second.	

TIMELINE		
Duet/PC Keystroke(s)	Description	
Ctrl + 🗲	Moves selected timeline element forward one frame	
Ctrl + →	Moves selected timeline element backward one frame	
Left Mouse Button	Click and drag to extend or shorten selected timeline element(s); moves existing keyframes proportionately	
Ctrl + Left Mouse Button	Click and drag to extend or shorten selected timeline element(s) without moving existing keyframes.	

Playlists

PLAYLIST OPERATIONS		
Duet/PC Keystroke(s)	Description	
Playlist Navigation		
<u></u> ↑↓←→	Press the cursor keys $\uparrow \Psi \leftarrow \rightarrow$ to navigate up, down, left and right. Note that when using the $\leftarrow \rightarrow$ keys to navigate, that when cursor reaches a field that accepts text entry, the cursor steps through the text first before proceeding to the next field.	
Page Up Page Down	When the cursor is in a Line , Control , Effect or Channel field, press Page Up or Page Down to navigate up or down in five-line increments. If the cursor is in the Line column, the entire line is highlighted.	
Click Scroll Bar Track	In the Scroll Bar , click above or below the scroll box to page backwards or forwards, respectively, through the Playlist .	
Click Scroll Bar Arrow	In the Scroll Bar , click the up or down arrow to scroll the Playlist one line up or one line down, respectively.	
End	Press End to move the cursor to the next instance of End or to the final line of the Playlist that contains an entry.	
Current Take Line Indicator Placement . In the event that non-sequential execution of the Playlist is necessary, the Current Take Line Indicator can be moved to a different step using a variety of methods.		
Click	Click to the left of a Playlist line to move the Current Take Line Indicator to the line.	
Ctrl + ↑ ¥	Press Ctrl + \uparrow or Ctrl + \checkmark to move the Current Take Line Indicator up or down in one-line increments.	
Ctrl + Page Up Ctrl + Page Down	Press Ctrl + Page Up or Ctrl + Page Down to move the Current Take Line Indicator up or down in five-line increments.	
Ctrl + Home	Press Ctrl + Home to move the Current Take Line Indicator to the first line of the Playlist .	

PLAYLIST OPERATIONS		
Duet/PC Keystroke(s)	Description	
Ctrl + End	Press Ctrl + End to move the Current Take Line Indicator to the next instance of End or to the final line of the Playlist that contains an entry.	
GPI	Triggers a GPI to move the Current Take Line Indicator up or down in one-line increments. The GPI is set up in the Playlist Configuration dialog box. A GPI can also be used to execute a Take .	
Playlist Editing		
Ctrl + C	Copies selected fields to the paste buffer.	
Ctrl + X	If the Speed or File Name field(s) is highlighted, cuts the contents of the field(s) to the paste buffer.	
	If the entire line is highlighted, cuts the contents of the line to the paste buffer.	
Ctrl + V	Pastes contents of the paste buffer to the Playlist in the line in which the cursor is positioned.	
Insert	Inserts a blank line directly above the line in which the cursor is positioned.	
Delete	If the Speed or File Name field is highlighted, deletes the contents of the field.	
	If the entire line is highlighted, deletes the line.	
Ctrl + W	Swaps the contents of the line on which the cursor is positioned with the line directly following. Note that the cursor must be in the Line field and the entire line must be highlighted for the Swap to execute.	
Ctrl + G	Playlist Group.	
Ctrl + U	Playlist Ungroup.	
Ctrl + Z	Cancels the last edit applied in the Playlist . Reverts the Playlist to the state directly previous to when the edit was applied.	
File Operations		
Ctrl + O	Displays the Open dialog box from which a file can be selected to open. Files of Type is automatically set to Playlist Files (*.ply) if the Playlist window is active.	
	If the Playlist window is not active, then Playlist Files (*.ply) should be selected in the Files of Type field before selecting a file to open.	
Ctrl + S	Displays the Save As dialog box from which the currently displayed Playlist can be saved. The Playlist window must be active for Ctrl + S to save to a Playlist .	

PLAYLIST OPERATIONS		
Duet/PC Keystroke(s)	Description	
Playlist Execution		
Esc	Stops Playlist execution.	
GPI	Executes a Take .	

Internal Clip Player

INTERNAL CLIP PLAYER		
Duet Keystroke(s)	PC Keystroke(s)	Description
><	><	Moves a clip to the next or previous frame, respectively.
Alt + Erase	Ctrl + Alt + Q	Erases the outputs of both the selected Internal Clip Player and the Duet output.

41. Support

Support and License Agreement

Chyron provides a number of support methods for Lyric software. Please review these methods and select the ones that best suit your facility's needs.

To insure access to customer service and to product upgrades, Lyric software must be registered. The registration card included in the manual must be returned by FAX or mail to Chyron.

Internet Support

Visit the support area of our web site, at: http://www.chyron.com/support/index.html. You may find the **User Forums** particularly useful.

Email Support

If you're unable to find the answers to your questions on our web site, feel free to email us! We make every effort to answer questions promptly. You can reach us at:

support@chyron.com

Telephone Support

Chyron Customer Service can be reached at 888-4-CHYRON or 631-845-2132.

Customer Service can furnish complete information about your support options.

Microsoft Data Access Components 2.0

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Index

•

.efx files	20-88, 20-91
.lmx vslyr Macro File Formats	32-1
.mdb Database Files (Browser)	10-19, 10-21

2

2D Objects

2D Object Context (Right-Click) Menu
Advanced Image Effects21-1
Copy Animation State20-16
Enable Bounding Box16-22
Mask Object23-1
Motion Path20-49
Paste Animation State20-16
Show 2D Object Properties16-12
Show Center of Rotation 19-2, 19-5
Soft Mask23-14
Squeeze Back29-2
2D Object Context (Right-Click) Menu16-16
2D Object Surface Properties18-32
2D Object Templates16-12
2D Objects
2D Objects
2D Objects
Roll feature14-1
2D Text
2D Character Animation14-25
2D Font Effects11-10
2D Text/Template Context (Right-Click) Menu
Animate Elements14-25
Color/Font12-19
Copy/Paste Animation State20-16
Harvester Properties
Insert/Delete Row12-17
Mask Character - Duet SD/HD/Offline23-4
Modify Spline14-12

Row/Tab Properties. 12-29 Squeeze/Expand 2D Text/Rows. 12-12 Swap Row Priorities Up/Down. 12-18 Template Properties 13-1 2D Text/Template Context (Right-Click) Menu12- 12-22 Advanced Image Effects 21-1 Mask Characters - Duet SD/HD/Offline 23-4 Text Row Priority. 12-18 2D Text 12-17 2D Text Animation 12-18 Animating 2D Characters 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-4 2D Text Animation 14-4 2D Text Animation 14-4 2D Text Animation 14-12 Text Animation 14-12 2D Text Animation 14-12 2D Text Animation 14-12 2D Text Animation 14-25 3 3D Characters	
Squeeze/Expand 2D Text/Rows	Row/Tab Properties12-29
Swap Row Priorities Up/Down12-18Template Properties13-12D Text/Template Context (Right-Click) Menu12-22Advanced Image Effects21-1Mask Characters - Duet SD/HD/Offline23-4Text Row Priority12-182D Text12-12D Text Animation14-25Crawl14-4Roll14-1Spline Window (Type-on-a-Curve)14-12Type-On (Slow Reveal)14-82D Text Animation14-42D Text Animation14-12Type-On (Slow Reveal)14-82D Text Animation14-142D Text Animation14-12ZD Text Animation14-122D Text Animation14-2533D Characters	Squeeze/Expand 2D Text/Rows12-12
Template Properties13-12D Text/Template Context (Right-Click) Menu12- 22Advanced Image Effects21-1Mask Characters - Duet SD/HD/Offline23-4Text Row Priority12-182D Text12-12D Text Animation14-25Animating 2D Characters14-25Crawl14-4Roll14-1Spline Window (Type-on-a-Curve)14-12Type-On (Slow Reveal)14-82D Text Animation14-12D Text Animation14-12D Text Animation14-12D Text Animation14-12D Text Animation14-12D Text Animation14-2533D Characters	Swap Row Priorities Up/Down12-18
2D Text/Template Context (Right-Click) Menu12-22 Advanced Image Effects	Template Properties13-1
Advanced Image Effects 21-1 Mask Characters - Duet SD/HD/Offline 23-4 Text Row Priority 12-18 2D Text 12-1 2D Text Animation 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-4 2D Text Animation 14-12 Type-On (Slow Reveal) 14-12 2D Text Animation 14-14 2D Text Animation 14-14 2D Text Animation 14-25 3 3D Characters	2D Text/Template Context (Right-Click) Menu12- 22
Mask Characters - Duet SD/HD/Offline 23-4 Text Row Priority 12-18 2D Text 12-1 2D Text Animation 12-1 Animating 2D Characters 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-4 2D Text Animation 14-4 2D Text Animation 14-1 2D Text Animation 14-2 3 3D Characters	Advanced Image Effects21-1
Text Row Priority 12-18 2D Text 12-1 2D Text Animation 14-1 Animating 2D Characters 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-4 2D Text Animation 14-4 2D Text Animation 14-4 2D Text Animation 14-25 3 3D Characters	Mask Characters - Duet SD/HD/Offline23-4
2D Text	Text Row Priority12-18
2D Text Animation Animating 2D Characters Crawl 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-1 2D Text Animation 14-1 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-8 2D Text Animation 14-12 2D Text Animation 14-3 2D Text Animation 14-4 2D Text Animation 14-72 30 Characters	2D Text12-1
Animating 2D Characters 14-25 Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-1 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-12 2D Text Animation 14-12 3 3D Characters	2D Text Animation
Crawl 14-4 Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-12 2D Text Animation 14-12 30 Characters 3	Animating 2D Characters14-25
Roll 14-1 Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-7 3 3D Characters	Crawl14-4
Spline Window (Type-on-a-Curve) 14-12 Type-On (Slow Reveal) 14-8 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-7 30 Characters 14-25	Roll14-1
Type-On (Slow Reveal) 14-8 2D Text Animation 14-1 2D Text Animation 14-4 2D Text Animation 14-8 2D Text Animation 14-8 2D Text Animation 14-12 2D Text Animation 14-12 3D Text Animation 14-25 3D Characters 3	Spline Window (Type-on-a-Curve)14-12
2D Text Animation	Type-On (Slow Reveal)14-8
2D Text Animation	2D Text Animation14-1
2D Text Animation	2D Text Animation14-4
2D Text Animation	2D Text Animation14-8
2D Text Animation14-25 3 3D Characters	2D Text Animation14-12
3 3D Characters	2D Text Animation14-25
3D Characters	3
	3D Characters

3D Character/Template/Object Context Menu
Copy/Paste Animation State20-16
Motion Path20-49
Show Center of Rotation 19-2, 19-5
3D Character/Template/Object Context Menu .17-7
3D Characters, About17-1
3D Text Templates17-4
Textures, Mapping to 3D Characters18-32
Wireframe - Internal Properties - 3D Characters/Objects2-85
3D Characters17-1
3D Characters17-7
3D Characters18-32
Index-1

3D Objects

3D Character/Template/Object Context Menu	
Copy/Paste Animation State 20)-16
Motion Path20)-49
Show Center of Rotation 19-2, 1	9-5
3D Character/Template/Object Context Menu. 1	7-7
Textures, Mapping to 3D Objects 18	3-32
Wireframe - Internal Properties - 3D Characters/Objects	2-85
3D Objects 1	7-1
3D Objects 1	7-7
3D Objects 18	3-32
3D Text (Character) Templates 1	7-4

Α

Wipe Effect 21-1
Zoom Effect 21-1
Advanced Image Effects 21-1
Aligning Template Fields 13-10
Alignment Grid 8-18
Analog and Digital Genlock 30-4
Anchor - Squeezeback Panel - Duet LE/LEX/PCI/PCI+ 30-1, 30-5, 30-14
Ancillary Data - Squeezeback Panel - Duet LE/LEX/PCI/PCI+ 30-1, 30-2, 30-5
Animate Elements 14-25
Animation
Animating Individual 2D characters 14-25
Animation Control Properties Page 20-80
Animation Playback Controls
Animation Settings Preferences
Preview Frame - Internal Properties
Rendering Mode - Internal Properties 2-85
Animation Settings Preferences 20-10
Attributes (Properties) 2-68
Animation length 20-36
Copy/Paste Animation State 20-16
Creating a Simple Lyric Composition 2-34
Flipbook Animations 16-22
Looping Controls 20-75
Modify Animation Length 20-36
Motion Path 20-49
What Can Lyric Animate? 20-1
Animation 20-1
Antialiasing 17-8
Aprisa 100/250 Still Store
Aprisa Interface Configuration 34-3
Aprisa Still Asset Browser Operations
Aprisa Systems 34-1
Exporting Stills from Lyric to the Aprisa
Importing Aprisa Stills into Lyric
Aprisa 100/250 Still Store 34-1
Aprisa 200/250 Digital Disk Recorder

Aprisa Clip Asset Browser Operations
· +···· •·· ··· ··· ··· ··· ··· ··· ···
Aprisa Interface Configuration34-3
Aprisa Systems34-1
Aprisa 200/250 Digital Disk Recorder34-1
Aprisa Systems
Aspect Ratio11-4
Assemble/Disassemble Effects - Advanced Image Effects21-1
Attribute Timeline
Attributes2-68
Audio and the Internal Clip Player26-12
Audio, Using in Lyric 2-101, 26-13, 26-34
Auto Clean Artifacts (Video Capture)
Auto Display Thumbnails (Video Capture)
Auto Erase13-1
В
B Key (Bigger) for Resizing Selected Text12-9
Backgrounds
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows
Backup Utility - Backing Up Browsers and Directories 9-8 Basic Windows

iNFiNiT!® Fonts Asset Operations
Message Asset Operations10-13
Quantel® Asset Operations
Restoring9-13
RGB Fonts11-31
Search Operations10-28
Selecting/Creating/Importing/ Deleting/Repairing a Database10-21
Sorting and Viewing Options10-1
Sync Fonts on Load 10-19, 11-27, 11-31
TrueType® Font Context Menu11-22
Browsers10-1
Browsers10-13
Browsers10-21
Browsers10-28
Browsers
Browsers
Browsers11-27
Browsers11-31
Browsers
Browsers13-26
Browsers16-7
Browsers
Browsers
Browsers
Browsers
Bulge Effect - Duet LE/LEX/PCI/PCI+ Only21-1
BVW-75 Serial Protocol
C
Cabling Options for Duet LE/LEX/PCI/PCI+5-1

Canvas Context Menu - See Tools and Canvas/Scene Graph Context Menu	2-61
Canvas Resolution	2-16, 2-85
Capture	28-1
Capture Channel (Video Capture)	28-8
Capture Sample (Video Capture)	28-8
Center of Rotation - Objects in XYZ Space	e. 19-2, 19-5
Center of Rotation, Show	19-2, 19-5
	Inday 2

Index

Character Depth 11-13	3
Checkbox	2
Circular Slider	2
Clear Effect (Squeezeback Panel) 30-5, 30-2	5
Clear Message Number Display 2-7	1
Clear MSG (Squeezeback Panel) 30-5, 30-29	9
Clip Control Panel	
Aprisa Systems 34-	1
Audio and the Internal Clip Player 26-12	2
Clip Control Panel Overview	3
Clip Timeline Operations 26-32	2
Configuration for Display of Video Source - Duet HD 4-14	4
Configuration for Display of Video Source - Duet LE/LEX/PCI/PCI+5-10	6
Configuration for Display of Video Source - Duet SD	9
External VTR and DDR Systems	1
Internal Clip Player - Hardware and Connections	1
Previewing, Creating and Playing a Clip 26-20	6
Recording Video/Audio to Video/Audio Files. 26-34	4
Saving and Recalling a Clip File	9
Using Audio in Lyric2-10	1
Clip Control Panel 2-10	1
Clip Control Panel 3-	9
Clip Control Panel 5-10	6
Clip Control Panel 26-	1
Clip Control Panel 26-12	2
Clip Control Panel 26-13	3
Clip Control Panel 26-26	6
Clip Control Panel 26-29	9
Clip Control Panel	2
Clip Control Panel	4
Clip Control Panel 34-	1
Clip Control Panel 35-	1
Clock and Timer Formats 15-10	0
Clocks and Timers 15-	1
Close File	3

Closed Captioning as ancillary data in PCI- Squeezeback board 30-21
CMix
CMix Installation and Connections 27-24
Using CMix with Lyric 27-12
CMix
CMix
Color Palette for 2D Text and Backgrounds 18-1
Color Palette for Light Sources and 3D Objects. 18-18
Color/Font 12-19
Command Set - Intelligent Interface 31-11
Config Menu
Aprisa Interface Configuration
Canvas Resolution 2-16
Canvas Resolution Configuration 2-85
Configure Board Use - VPBs and PCI- Squeezeback
Configure Intelligent Interface 31-5
Default Effect Configuration
Duet HD 22-4
Duet LE/LEX/PCI/PCI+ Message Effects 22-5
Duet SD 22-1
Default Effect Configuration 22-1
Default Effect Configuration 22-1
Default Effect Configuration 22-4
Default Effect Configuration 22-5
Duet Hardware Configuration
All Systems
Device Control3-10, 4-15, 5-21, 7-10
Timecode 3-15, 4-20, 5-19
All Systems 3-1
Duet HD
HD Video 4-11
Duet HD
Duet LE/LEX/PCI/PCI+
Configure Board Use 5-9
Setup Board Configuration 5-11
Setup GPI 5-17

I	r	`	Р	0		,
ļ	l	ļ	u	e	1	٩.

Duet LE/LEX/PCI/PCI+5-8
Duet LE/LEX/PCI/PCI+30-3
Duet SD
(SD) Video3-7
Duet SD3-5
Duet SD4-9
Duet SD/HD
GPI 3-12, 4-17
MPx
Duet SD/HD3-5
Duet SD/HD4-9
Duet Hardware Configuration3-1
Duet Hardware Configuration3-5
Duet Hardware Configuration3-7
Duet Hardware Configuration3-10
Duet Hardware Configuration3-12
Duet Hardware Configuration3-15
Duet Hardware Configuration3-17
Duet Hardware Configuration4-9
Duet Hardware Configuration4-11
Duet Hardware Configuration4-15
Duet Hardware Configuration4-17
Duet Hardware Configuration4-20
Duet Hardware Configuration4-22
Duet Hardware Configuration5-8
Duet Hardware Configuration5-9
Duet Hardware Configuration5-11
Duet Hardware Configuration5-17
Duet Hardware Configuration5-19
Duet Hardware Configuration5-21
Duet Hardware Configuration7-10
Duet Hardware Configuration
Preferences
Alignment8-18
Animation20-10
Browser10-19
CG Preferences8-3

Default Paths	.8-13
Spelling	.8-11
Windows	.8-19
Preferences	8-1
Preferences	8-3
Preferences	.8-11
Preferences	.8-13
Preferences	.8-18
Preferences	.8-19
Preferences1	0-19
Preferences2	20-10
Quantel® Interface Configuration	.37-1
Safe Title Adjust 2-19), 8-4
Save/Load User Profile	.2-32
Context Menu (2D Text)1	2-22
Copy Animation State2	20-16
Crawl	.14-4
Crumble Effect - Advanced Image Effects	.21-1
Cue Clip	.25-1
Curtain Effect - Advanced Image Effects	.21-1
Custom Font Editor1	1-41
D	
Database (Browser) 10-1, 10-21, 1	3-26
Database Link 13-1, 13-16, 13-26, 1	6-12
DB Link 13-1, 13-16, 13-26, 1	6-12
DDR Control from Timeline and Playlist	.2-97
DDR, Aprisa	.34-1
DDR, External, Control from Lyric	.35-1
Default Animation Length Preferences2	20-10
Default Directories, Setting	.8-13
Default Effect	
Duet HD	.22-4
Duet LE/LEX/PCI/PCI+ Message Effects	.22-5
Duet SD	.22-1
Default Effect	.22-1
Default Interpolation2	20-10
Default Paths Preferences	.8-13

Default Preload Setting 20-10
Delay/Advance for Internal Clip Player output 26-13
Delete Row 12-17
Depth (3D Characters) 11-13
Depth Test - Internal Properties 2-85
Depth Write - Internal Properties 2-85
Designer button and SQZ Kwik Tool (Duet LE/LEX/PCI/PCI+ Squeezeback Panel)
Detonate Effect - Advanced Image Effects 21-1
Device Control Tab (Duet Hardware under Config) 2-97
Dictionary
Digital Genlock 30-4
Direction (2D Font Effects) 11-10
Directories, Backing Up 9-8
Directories, Restoring
Display Sample (Video Capture) 28-8
Dissolve 22-1
Docking Toolbars 2-54
Dual Channel Duet HD Operations 4-25
Dual-Board Duet LE/LEX/PCI/PCI+ Configuration 5-23
Duet GPI/O board7-2
Duet Hardware Configuration
All Systems
Device Control 3-10, 4-15, 5-21, 7-10
Timecode
All Systems 3-1
Duet HD
HD Video 4-11
Duet HD 3-5, 4-9
Duet LE/LEX/PCI/PCI+
Configure Board Use 5-9
Setup Board Configuration 5-11
Setup GPI 5-17
Duet LE/LEX/PCI/PCI+
Duet LE/LEX/PCI/PCI+ 30-3

Duet SD
(SD Video)
Duet SD 3-5
Duet SD 4-9
Duet SD/HD
Duet Hardware - GPI 3-12, 4-17
Duet Hardware - MPx 3-17, 4-22
Duet SD/HD3-5
Duet SD/HD 4-9
Duet Hardware Configuration
Duet Hardware Configuration
Duet Hardware Configuration
Duet Hardware Configuration 3-10
Duet Hardware Configuration
Duet Hardware Configuration 3-15
Duet Hardware Configuration 3-17
Duet Hardware Configuration 4-9
Duet Hardware Configuration 4-11
Duet Hardware Configuration 4-15
Duet Hardware Configuration 4-17
Duet Hardware Configuration 4-20
Duet Hardware Configuration 4-22
Duet Hardware Configuration5-8
Duet Hardware Configuration5-9
Duet Hardware Configuration 5-11
Duet Hardware Configuration 5-17
Duet Hardware Configuration 5-19
Duet Hardware Configuration 5-21
Duet Hardware Configuration
Duet Hardware Configuration 30-3
Duet HD
Dual Board Operations 4-25
Duet HD Hardware Configuration - HD Video . 4-11
Duet HD Mixer 27-24
Duet SD/HD Hardware Configuration - General ۲۰۵۰ م.د

Duet HD3-5
Duet HD4-1
Duet HD4-9
Duet HD4-11
Duet HD4-25
Duet HD27-24
Duet Keyboard6-2
Duet LE/LEX/PCI/PCI+ Cabling Options5-1
Duet LE/LEX/PCI/PCI+ Message Effect Setup and Execution22-5
Duet LE/LEX/PCI/PCI+ Playout Modes
Streaming Animation Mode (Duet LEX/PCI+)
Duet LE/LEX/PCI/PCI+ Playout Modes24-4
Duet LE/LEX/PCI/PCI+ Squeezeback Hardware Topology30-2
Duet LE/LEX/PCI/PCI+ Squeezeback Panel
Cancel
Clear Effect 30-5, 30-25
Сору А/В 30-5, 30-27
Copy END 30-5, 30-27
Copy START
Copy/Paste Operations 30-5, 30-27
Effect Activation buttons
GPI Controls 30-5, 30-23
IN 30-5, 30-23
OUT 30-5, 30-23
Effect Activation buttons
Effect dialog box
Active Board 30-5, 30-8
Slot 30-5, 30-8
Effect dialog box30-5
Effect dialog box30-8
Effect Name 30-5, 30-25
Enable Squeezeback Kwik Tool 30-5, 30-25
Intelligent Interface
Triggering a Squeezeback Effect 30-1, 30-5
Lyric Graphic Message import

SQZ Board tabs 30-5
SQZ Board tabs 30-10
SQZ Kwik Tool 30-5, 30-25
SQZ Version SDRAM-MIXER 30-5
Duet LE/LEX/PCI/PCI+ Squeezeback Panel 30-1
Duet LE/LEX/PCI/PCI+ Tools
Duet LEX/PCI+ Animation Settings 20-10, 24-10
Duet LEX/PCI+ Streaming Animation 24-10
Duet Outputs (SD and HD DUET Only) 24-1
Duet SD
Duet SD Mixer 27-1
Duet System Differences, About 2-1
Duet Video I/O Board - HD 4-1
Duet Video I/O Board - SD 3-1
E

Ease for Pause Operations	20-68
Edge Size	11-10
Edit Center of Rotation	19-2, 19-5
Edit Menu	
Copy/Paste Animation State	20-16
Delete Row	12-17
Find/Replace	12-16
Insert Row	12-17
Insert Tab	12-25
Paste Unicode	12-14
Row/Tab Properties	
Row Properties	12-29
Select Next Tab	12-25
Swap Row Priorities Down	12-18
Swap Row Priorities Up	12-18
Tab Column Mode	12-25
Edit Menu	2-50
Edit Position	19-2, 19-5
Edit Rotation	19-2, 19-5
Edit Scale	19-2, 19-5
Effect dialog box (Squeezeback Panel)	30-8
Effect Speed	22-1

Enable Bounding Box 16-22
Enable Squeezeback Kwik Tool (Squeezeback Panel)
Entering information in Lyric 2-42
EULA 41-1
Excel documents and Database Link 13-16
Exit 9-18
Expand/Squeeze 2D Text/Rows 12-12
Explosion Effect - Advanced Image Effects 21-1
Export to Aprisa 34-17
Export To iNFiNiT!®
Export to Quantel®
External Update - Intelligent Interface
External VTR or DDR Systems

F

Fade - Duet LE/LEX/PCI/PCI+ Squeezeback Panel	30-5, 30-10
File Formats, Lyric	2-98
File Menu	
Backup	
Close	
Exit	
Export to Aprisa	
Export To iNFiNiT!®	
Export To iTV	38-2
Export to Quantel®	
Import from Aprisa	
Import From iNFiNiT!®	36-8
Import from Quantel®	37-9
New Canvas/Browser/Playlist	
Open	
Print	
Print Setup	
Recently Used File List	
Restore	9-13
Save/Save As	
Summary Info	
File Menu	

Files, Backing Up9-	-8
Files, Restoring9-1	3
Fill Area11-1	0
Find/Replace12-1	6
Flag Effect21-	·1
Flipboard Effect - Advanced Image Effects21-	·1
Flipbook Animation16-2	22
Floating Toolbars2-5	64
Flood Light	28
Focus Effect21-	·1
Focus Effect - Advanced Image Effects21-	·1
Font Editor11-4	1
Font Sample 11-4, 11-10, 11-1	7
Font Source (Browser Preferences)10-1	9
Font Toolbar11-	·2
Fonts11-1, 11-2, 11-4, 11-10, 11-13, 11-17, 11-22 11-27, 11-31, 11-41, 18-32, 36-1, 40-1	2,
Formats, Lyric File2-9	8
Frame Buffers - Display All in VGA Monitor8-1	9
Frame Delay - Duet LE/LEX/PCI/PCI+ PCI- Squeezeback board	21
Frame Delay - Video Capture	-8
Frame Delay and Ancillary Data - Squeezeback Pane - Duet LE/LEX/PCI/PCI+	el •5
Frame Grab28-	·1
Free - Duet LE/LEX/PCI/PCI+ Tools24-	4
FTP	·1
G	
Genlock	-4
Getting Started2-	·1
Global Light Source	28
Globe Effect - Advanced Image Effects21-	·1

Global GPIs7-12
GPI Overview and Setup 3-12, 4-17, 5-17, 7-1
GPIs7-1
GPIs and Serial Control of External Devices2-97
KwiKeys GPI/O Trigger Device7-14

GPIs

н

Harvester Lite Plugin	33-3
Harvester Pro Plugin	33-6
Harvester Properties	33-3
Help Menu/Help System	2-56
Hotkeys for Fonts	11-17

I

Import from Aprisa34-15
Import from iNFiNiT!®36-8
Import from Quantel®37-9
Individual Light Sources18-28
iNFiNiT! and Lyric
Browser Overview10-1
Custom Font Editor - Creating/Modifying iNFiNiT! Fonts11-41
FTP Files to and from the iNFiNiT!
iNFiNiT! Family Keyboard Codes31-48
iNFiNiT! File Import/Export Example
iNFiNiT!® File Export - Exporting Files to the iNFiNiT!36-28
iNFiNiT!® File Import - Using iNFiNiT! Files in Lyric36-8
iNFiNiT!® Font Asset Operations
iNFiNiT! and Lyric10-1
iNFiNiT! and Lyric11-41
iNFiNiT! and Lyric31-48
iNFiNiT! and Lyric36-1 Index-5

iNFiNiT! and Lyric
iNFiNiT! and Lyric
iNFiNiT! and Lyric
iNFiNiT! and Lyric
Insert Row 12-17
Insert Tab 12-25
Insert TV Object 38-1
Instant Template (2D Text) 13-31
Intelligent Interface® - Introduction
Cabling and Pinouts 31-1
Command Set
C Command - Set Font Color for Template
Command Syntax 31-11
E Command - Send and Execute Macros. 31-19
F Command - Specify Font Index 31-20
M Command - Select Message Directory. 31-21
Q Command - Resend Last Transmission 31-22
U Command - Update Template Data 31-23
V Command - Special Effects and Control 31-25
W Command - Create Template Data Message 31-41
X and R Commands - Request for Update, Reply 31-42
Y Commands - Assorted 31-45
Command Set 31-11
Embedded Commands 31-13
Error Codes
Examples
Graphic Substitution via Intelligent Interface®
iNFiNiT!® Family Keyboard Codes
Intelligent Interface Configuration
Multi FX Commands (Intelligent Interface)
Fade 31-37
Focus
PageTurn
Slide 31-35
Static (Fade) 31-37

Use Message 31-38
Zoom 31-39
Multi FX Commands (Intelligent Interface) 31-30
Serial Port Connections
Telnet Connection
Triggering Duet LE/LEX/PCI/PCI+ Squeezeback Effects
Squeezeback Panel
Effect Activation Buttons - GPI Controls (Duet LE/LEX/PCI/PCI+) 30-23
Triggering Squeezeback from Intelligent Interface (Duet LE/LEX/PCI/PCI+) 31-40
Triggering Duet LE/LEX/PCI/PCI+ Squeezeback Effects
Triggering Duet LE/LEX/PCI/PCI+ Squeezeback Effects
Intelligent Interface® - Introduction
Internal Clip Player
Duet LE/LEX/PCI/PCI+ Cabling Options 5-1
Internal Clip Player- Recording 26-34
Using The Internal Clip Player With Lyric 26-13
Internal Clip Player2-101
Internal Clip Player 26-1
Internal Clip Player
Internal Clip Player
Internal Clip Player
Internal Properties2-85
Interpolate - Duet LE/LEX/PCI/PCI+ Squeezeback Panel
Interpolation, keyframe 20-69
iTV
J
Jog Wheel 2-42
Jump Interpolation 20-69
Justify Text buttons 11-2
κ
Kerning 11-4
Keyboard commands 2-71
Keyboard, Duet

Keyboard/Mouse Shortcuts - 2D/3D Text, Templates and Row Tabs40-1
Keyboard/Mouse Shortcuts - General40-12
Keyboard/Mouse Shortcuts - Overview40-1
Keyframe Graph - Interpolation20-69
Keyframe Graph - Navigating, Editing20-38
Keyframes 20-1, 20-38
KwiKeys GPI/O trigger device7-14
KwiKeys keypad used to trigger Video Squeezeback effects- See Effect Activation buttons - GPI Controls
L
Leading11-4
Leaf Effect - Advanced Image Effects21-1
Legacy Mask - Internal Properties - Duet LE/LEX/PCI/PCI+ Only2-85
LEIF Architecture (Plug-Ins)33-1
LEIF Help32-26
Liberty Twister Paint33-6
License Agreement41-1
License Code2-4
Light Sources
Lighting - Internal Properties2-85
Linear Interpolation20-69
Live (Duet Tools)
Load (Duet LE/LEX/PCI/PCI+ Tools)24-4
Load Saved (Duet LE/LEX/PCI/PCI+ Tools)24-4
Load User Profile2-32
Lock Aspect - Duet LE/LEX/PCI/PCI+ Squeezeback Designer
Lock Canvas Size and Position8-19
Loop20-75
Looping Genlock Signals - Duet LE/LEX/PCI/PCI+.5-1
Luminance (Color Selection)18-18
Lyric Control of PCI-Squeezeback board 30-5, 31-40
Lyric Keyboard/Mouse Shortcuts 40-1, 40-12
Lyric-to-iNFiNiT!® RGB Font Conversion
Μ

Macros Overview

.lmx vslyr Macro File Formats	32-1
Advanced Scripting32	2-14
LEIF Help32	2-26
Macro Declarations32	2-22
Send and Execute Macros via Intelligent Interface31	I-19
SendKeys32	2-20
Macros Overview	32-1
Macros Overview	2-14
Macros Overview	2-20
Macros Overview	2-22
Macros Overview	2-26
Mapping Textures18	3-32
Mask Characters - Duet SD/HD/Offline only2	23-4
Mask Objects - Duet LE/LEX/PCI/PCI+ - Alpha Trim - Internal Properties2	2-85
Mask Objects - Duet LE/LEX/PCI/PCI+ - Legacy Mask - Internal Properties2	<u>2</u> -85
Mask Objects - Duet LE/LEX/PCI/PCI+ - Soft Mask23	3-14
Mask Objects - Duet SD/HD/Offline 23-1, 2	23-5
Mask Scene Duet SD only 23-1, 2	23-2
Masks - An Introduction2	23-1
Matrix Effect - Advanced Image Effects	21-1
Matrox® DigiSuite LE Board	26-1
Message Effects (Default Effect) - Duet LE/LEX/PCI/PCI+2	22-5
Mix Effects (SD Duet)2	22-1
Mixer - CMix	7-24
Mixer - Duet HD27	7-24
Mixer - Duet SD	27-1
Mixer Controls (Duet LE/LEX/PCI/PCI+ Squeezeba	ack)
Squeezeback Designer)-14
Squeezeback Panel 30-5, 30)-13
Mixer Controls (Duet LE/LEX/PCI/PCI+ Squeezeback)30)-13
Modify Animation Length20)-36
Modify Spline14	1 -12
Motion Path20)-49
Movie Objects	6-18
Inde	x-11

Moving Objects	19-5
Msg field - Video Squeezeback	30-5, 30-29
Multi Effects - Duet SD	22-10

Ν

Navigating and Entering Information in Lyric	2-42
Navigating the Lyric interface	. 2-1
New Canvas/Browser/Playlist	. 9-2
None Effect - Advanced Image Effects	21-1

0

Object Timeline 20-2	23
ODBC - Registering an ODBC Data Source 13-2	26
Offset 11-	10
On-Air Operations	
Single Board Operation 5-2	23
Online Help 2-5	56
onRead Macro - Internal Properties 2-8	35
Orthographic Camera 19	-9
Outputs and Frame Buffers	-1

Ρ

Play
Playback Control Buttons 20-15, 24-1, 24-4, 24-10
Playlist
Executing a Squeezeback Effect 30-5, 31-40
Playlists
Playout Modes
Duet LE/LEX/PCI/PCI+ Tools
Duet SD/HD Tools24-1
Outputs and Frame Buffers 24-1
Playout Overview 2-81
Playout Modes 2-81
Playout Modes 24-1
Playout Modes 24-4
Plugins
Introduction
BizGraph33-6
Chyron CMix 27-12, 27-24
Harvester Lite 33-3
Harvester Pro 33-6
Paint (Twister) 33-6
Quarterback 33-6
Introduction 33-1
Pop-On Text 12-30
Position - Objects in XYZ Space 19-1, 19-2, 19-5
Position - Starting/Ending X/Y 30-5, 30-10
Preferences
Alignment 8-18
Animation Settings
Internal Properties 2-85
Preview Frame - Internal Properties
Animation Settings 20-10
Browser 10-19
Character Generator Preferences
Default Paths8-13
Spelling 8-11
Windows
Preferences

Preview Frame - Internal Properties	.2-85
Previewing Multiple Frame Buffers	.8-19
Print	9-7
Print Setup	9-7
Properties	

	2D Font Effects	11-10
	3D Font Effects	11-13
	Animation	20-80
	Camera	19-9
	Clocks and Timers	
	Clock/Timer Formats	15-10
	Clocks and Timers	15-1
	Font	11-4
	Lighting	
	Looping	20-75
	Surface	
	XYZ Orientation	19-2, 19-5
Pr	operties	2-68

Q

Quantel®

Export to Quantel®	.37-14
Import from Quantel®	37-9
Quantel® Asset Operations	37-5
Quantel® Interface Configuration	37-1
Quantel®	37-5
Quantel®	37-9
Quantel®	.37-14
Quantel® Interface Configuration	37-1
Quarterback	33-6
Quick Load (Duet LE/LEX/PCI/PCI+ Tools)	24-4
R	
Radio Button	2-42

Random Order Type On/Slow Reveal	14-8
Read	2-71
READ - Video Squeezeback	5, 30-29
Read Effects	20-88
Read Effects and .EFX-Type Files	20-88

Read Effects for Duet LE/LEX/PCI/PCI+20-91
READ Lyric graphic for effect (Duet LE/LEX/PCI/PCI+ Squeezeback Panel)
READ Lyric Squeezeback Effect message 30-5, 30-25
Read Next feature
Read Next Search Range (Preferences)8-3
Read Next feature2-71
Read Previous feature2-71
Recall Keys7-15
Recalling Messages2-71
Recording Messages2-71
Recording Video/Audio from External Source26-34
Registering an ODBC Data Source13-26
Render Mode - Duet LE/LEX/PCI/PCI+ Tools24-4
Rendering Mode
Animation Settings Preferences
Internal Properties2-85
Rendering Mode2-85
Rendering Mode24-4
Resizer Video
Resizing 2D Text12-9
Restore Utility - Restoring Browsers and Directories9-13
Reveal/Type On14-8
RGB Fonts
Custom Font Editor11-41
iNFiNiT!-to-Lyric, Lyric-to-iNFiNiT! RGB Font Transfer
RGB Font Asset Browser Operations11-31
RGB Font Conversion36-46
RGB Fonts11-31
RGB Fonts11-41
RGB Fonts36-46
Ripple Effect - Advanced Image Effects21-1
Rotation - Rotating Objects in XYZ Space 19-2, 19-5
Row Priority12-18
Row Tabs12-25
Row/Tab Properties12-29

RS-422 Control of
External Devices3-10, 4-15, 5-21, 7-2, 7-10, 26-13,
26-26

RS-422 Serial I/O & GPI/O Board......3-10, 4-15, 5-21, 7-2, 7-10

S

S Key (Smaller) for Resizing Selected Text 12-9
Safe Title Adjust2-19, 8-4
Safe Title Area 2-19, 8-4
Safe Title Area Preferences 8-4
Saturation (Color Selection) 18-20
Save (Duet LE/LEX/PCI/PCI+ Tools) 24-4
Save (File Menu)
Save As (File Menu) 9-5
Save Display (Video Capture) 28-8
SAVE SQZ MSG - save Lyric Squeezeback Effect message
Save User Profile 2-32
Scale - Object Size in XYZ Space 19-2, 19-5
Scene Graph Context Menu - See Tools and Canvas/Scene Graph Context Menu 2-61
Scene Graph Display 20-17
Scrub Mode - Clip Control Panel 26-13
Direction (Wipe Effect 22-1
SDRAM-MIXER Version 30-5
Search Browsers 10-28
Search Range (Read Next/Previous Preference) 8-3
Select Database (Browser) 10-21
Select Next Tab 12-25
Selecting 2D Text 12-9
SendKeys (Macros) 32-20
Serial Control of External Devices
Serial Port Connections - Intelligent Interface
Set Current Color/Font 12-19
Set Message Preload Time - Duet LEX/PCI+ 24-10
Set Primary Video - Video Squeezeback
Setup (Video) 3-5, 4-9
Shadow 11-10

Shear 11-4
Shift Character (Freeform 2D Text) 12-9
Shift Row (Freeform 2D Text) 12-9
Shininess (Surface Properties) 18-32
Shortcut Keys 40-1, 40-12
Show Center of Rotation 19-2, 19-5
Single VGE effects 22-1
Slide Effect - Advanced Image Effects 21-1
Slider 2-42
Slow Reveal 14-8
Smoothness 11-13
Soft Mask - Duet LE/LEX/PCI/PCI+ Only
Softness 11-10
Solid/Ramp Color Selection 18-1
Space Width 11-4
Speed - Default Effect 22-1
Spell Check
Spelling Preferences 8-11
Spell Check 12-21
Spline Interpolation 20-69
Spline Window (Type-on-a-Curve) 14-12
Spot Light 18-28
Squeeze/Expand 2D Text/Rows 12-12
Squeezeback (Duet SD) 29-2
Squeezeback Panel
Triggering Squeezeback from Intelligent Interface (Duet LE/LEX/PCI/PCI+)
Squeezeback Panel (Duet LE/LEX/PCI/PCI+) 30-5
Squeezeback Panel Copy/Paste Operations - Duet LE/LEX/PCI/PCI+
Sqz Version - SDRAM-MIXER 30-5
Standard Definition Video I/O Board
Still Store, Aprisa
Stop 20-15, 24-4
Stream Size (Animation Defaults) 20-10
Streaming Animation - Duet LEX/PCI+ 24-10
Summary Information

Super Shift (Freeform 2D Text)...... 12-9

Support and License Agreement	41-1
Surface Effects	.18-32
Swap button (Duet LE/LEX)	24-4
Swap button (Duet SD/HD)	24-1
Swap Row Priorities Down	.12-18
Swap Row Priorities Up	.12-18
Sync TrueType® Fonts on Load 10-19,	11-27

т

Tab Column Mode12-25
Tabs - In Dialog Boxes2-42
Telnet Connection
Template - Overview
2D Object Templates16-12
2D Text Templates
2D Text/Template Context Menu12-22
Aligning Templates13-10
Creating Templates from Existing Text13-31
Keyboard/Mouse Shortcuts - 2D/3D Text, Text Templates and Row Tabs40-1
Template Update - Tools Menu 13-14, 17-5
2D Text Templates13-1
3D Text Templates
Keyboard/Mouse Shortcuts - 2D/3D Text, Text Templates and Row Tabs40-1
3D Text Templates 17-4, 17-7
Template - Overview2-83
Template Data Messages 31-1, 31-8, 31-23, 31-41, 31-42
Text Entry Field2-42
Text Toolbar11-2
Text Window12-1
Textures, Mapping to 3D Characters and 3D Objects 18-32
Timecode 3-15, 4-20, 5-19
Timelines20-23
Toolbars2-54
Tools and Canvas/Scene Graph Context Menu
Background18-22

Clip Control Panel 2-101, 3-9, 5-16, 26-13, 26-26, 26-29, 26-32, 26-34, 34-1, 35-1
Clock
CMix
CMix Installation and Connections 27-12, 27-24
Using CMix within Lyric 27-12, 27-24
CMix27-12
CMix27-24
Crawl14-4
Flipbook Animation16-22
Font Editor11-41
Graphic (Import)16-1
Harvester Lite
Harvester Properties (not on Tools Menu)33-3
Insert TV Object
Internal Properties2-85
Mask Scene (Duet SD Only)23-2
Movie Objects16-18
Multi FX (Multiple Effects) (Duet SD Only)22-10
Roll14-1
Set Message Preload Time - Duet LEX/PCI+ 24-10
Set Message Properties2-85
Spell Check12-21
Spline Window (Type-on-a-Curve)14-12
Squeezeback Object29-2
Template13-1
Template Update 13-14, 17-5
Text Window12-1
Timer15-1
Type On/Slow Reveal14-8
Video Capture
Video Capture - Duet HD28-5
Video Capture - Duet LE/LEX/PCI/PCI+28-8
Video Capture - Duet SD28-1
Video Capture28-1
Video Capture28-1
Video Capture

2)110 0001 04140
Video Capture 28-8
Video Region - Duet SD 29-1
Tools and Canvas/Scene Graph Context Menu 2-61
Transfer Mode (Duet Xfer Button) 24-1, 24-4
Transfer to Air (Video Capture) 28-8
Transfer to Canvas (Video Capture) 28-8
Transform Tools 19-2, 19-5
Transparency 18-32
Transport Controls 20-15
Type On/Slow Reveal 14-8
Type-on-a-Curve (Spline Window) 14-12
U
Unicode, Paste 12-14
Updating Database Information 10-13, 11-22, 11-31
Use Group Priority - Internal Properties 2-85
User Profiles
Using Help System 2-56
V
Venetian Blinds Effect - Advanced Image Effects 21-1
Video A/B Mixer Controls - Squeezeback Designer 30-5, 30-14
Video Capture
Video Capture - Duet HD 28-5
Video Capture - Duet LE/LEX/PCI/PCI+
Video Capture - Duet SD 28-1
Video Capture
Video Capture
Video Capture
Video Capture
Video Mixer
CMix 27-12, 27-24
Video Mixer - Duet HD 27-24
Video Mixer - Duet SD 27-1
Video Mixer 27-1
Video Mixer 27-1
Video Mixer 27-12
Video Mixer

Video Mixer 27-24
Video Output Standard
Duet HD 4-1
Duet SD 3-1
Video Output Standard 3-1
Video Output Standard 4-1
Video Region - Duet SD 29-1
Video Setup
Video Source, Display of 3-9, 4-14, 5-16
Video Squeezeback - Due LE/LEX/PCI/PCI+
Squeezeback Designer
Mixer Controls
Background On 30-5
Graphic On Top 30-5
Graphic Plane On 30-5
Mixer Controls 30-5
Squeezeback Designer 30-14
Squeezeback Panel
Cancel 30-5, 30-25
Clear Effect 30-5, 30-25
Сору А/В 30-5, 30-27
Copy END 30-5, 30-27
Copy START 30-5, 30-27
Copy/Paste Operations 30-5, 30-27
Effect Activation Buttons
GPI Controls 30-5, 30-23
IN 30-5, 30-23
OUT 30-5, 30-23
Effect Activation Buttons 30-5
Effect Activation Buttons 30-23
Effect dialog box
Active Board 30-5, 30-8
Slot
Effect dialog box 30-5
Effect dialog box 30-8
Effect Name 30-5, 30-25
Enable Squeezeback Kwik Tool 30-5, 30-25

Intelligent Interface - Triggering a Squeezeback Effect
Lyric Graphic Message import
Clear MSG - Lyric graphic 30-5, 30-29
Erase/Replace a Squeezeback graphic 30-5, 30-29
READ Lyric graphic for effect 30-5, 30-29
Store MSG - Lyric graphic 30-5, 30-29
Lyric Graphic Message import
Lyric Graphic Message import
Mixer Controls
A Over B B Over A 30-5, 30-13
Background On 30-5, 30-13
Dissolve Effect 30-5, 30-13
Graphic Plane On 30-5, 30-13
Mixer Controls30-5
Mixer Controls30-13
OK 30-5-30-25
OK
PASTE END

Frames
Hold Control for Both Video 30-5, 30-10
Interpolate 30-5, 30-10
ON 30-5, 30-10
OUT/IN and Frame Display Field 30-5, 30-10
Overview 30-5, 30-10
Position - Starting/Ending X Y 30-5, 30-10
SQZ Board tabs30-5
SQZ Board tabs30-10
SQZ Kwik Tool 30-5, 30-25
SQZ Version SDRAM-MIXER
Squeezeback Panel30-1
Squeezeback Panel30-2
Squeezeback Panel30-5
Video Squeezeback - Due LE/LEX/PCI/PCI+30-1
Video Squeezeback - Due LE/LEX/PCI/PCI+30-2
Video Squeezeback - Due LE/LEX/PCI/PCI+30-5
Video Squeezeback - Duet SD29-2
View Menu2-54
VTR, External, Control from Lyric35-1
w
Windows Menu2-60
Wipe Effect - Advanced Image Effects21-1
Wireframe - Internal Properties - 3D Characters/Objects2-85
Word Squeeze/Expand 2D Text/Rows12-12
Word Wrap - 2D Text Templates13-1
Wrap Mode (Texture Mapping)18-32
x
Xfer (Transfer)24-1
XYZ Properties - XYZ Orientation 19-2, 19-5
Z
Zoom Effect - Advanced Image Effects

