9625DSK-LGA
Downstream Media Keyer

Instruction Manual

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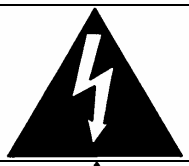
IMPORTANT SAFETY INSTRUCTIONS

	The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “Dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC – SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE

WARNING
DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT

WARNING
TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE

WARNING
THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE

INFORMATION TO USERS IN EUROPE

NOTE

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the European Union EMC directive. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or Modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment.

Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.

REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Preliminary Version.	Dec 02
0.2	Updated to new menu structure, separated InstaLogo™ into Keyer Toolkit manual.	Nov 03
0.3	Added info for Crawl logos.	Dec 03
1.0	Updated for features in firmware version 1.01 build 409 Added Audio Swap and mapping of Voice over input	Jan 04
1.1	Added information about optional temperature probe.	Jan 04
1.2	Changes reflective of firmware version 2.01 build 700. Updated Menu items, HTML audio mapping, Temperature probe and Technical Specifications	Apr 07
1.2.1	Changed the IP address for the METAR server.	May 07
1.2.2	Added Processing Delay information.	Jul 07
1.2.3	Corrections made throughout section 3.	Oct 09

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1. OVERVIEW

1.1. OVERVIEW

The Evertz 9625DSK-LGA Downstream Media Keyer is a comprehensive package that will key 1 to 16 simultaneous static or animated logos over a full bandwidth SDI program video signal. These units incorporate the best switching technology with the proven transition and channel branding techniques that has brought Evertz to the forefront of digital television technology. Add to these, time and temperature logos, audio voiceovers and optional Emergency Alert Services support, and you have one of the most advanced media keyers available today.

The 9625DSK-LGA has been designed to manage and store multiple media objects. Logos and audio clips are stored in non-volatile Flash memory and may be downloaded to the hardware via an RS-232 serial interface or via Ethernet FTP using the Nomad™ (included) or Overture™ software. One animated logo or up to 16 static logos can be keyed simultaneously with independent fade control for each static logo. EAS enabled units have 1 logo reserved for the “crawl” text, thus leaving a maximum of 15 simultaneous logos. The size of each logo varies and ranges from 1/25th to full screen. The position of the logo, fade rates, clip association and animation rates are also user controllable. The onboard preview allows you to cue your logos for position and content verification prior to going "On Air". Audio clips are stored as stereo 16-bit, 48kHz WAV format.

Features

- SDI mixer or downstream keyer with full preview.
- Full 4 AES channel audio mixing plus full 4 AES channel voice over for Dolby 5.1 audio.
- Supports 525i/59.94, 625i/50, 16x9 525i/59.94 video formats.
- Variety of smooth transitions including cut, fade and 8 angles of wipes.
- Full 12 bit linear keyer with video fade-in and fade-out processing.
- Eight AES stereo pair inputs and eight AES stereo pair outputs.
- Includes embedded audio mixing with 4 AES channel de-embedding and re-embedding for voiceover and clip inserts.
- Audio bypass mode for passing Dolby E.
- Stores and inserts 1 animated or up to 16 static logos with independent control of logo position, transparency and offset. Independent control of fade in and fade out for static logos.
- Download logos and audio clips from a standard PC through Ethernet using Evertz Nomad™, InstaLogo™ (included) or Overture™ software.
- Standard unit has 128 Mbytes of internal media storage.
- Optional 1 Gigabyte of internal flash storage.
- Optional front panel Compact Flash for additional 128MB or 1GB storage.
- LTC input for analog or digital ‘Breakfast Clock’ logos.
- Built-in Black Generator.
- Automatic equalization up to 250m (Belden 8281 or equivalent cable).
- Video and audio input bypass relays for power failure bypass protection.
- Multiple control interface options including GPI, RS232 automation control.
- Optional rack mount or desktop remote control panel versions available.
- Optional temperature probe for temperature logos.
- Optional redundant power supply for broadcast applications.

EAS Option:

- Emergency alert crawls
- Interfaces to TFT and Sage EAS decoders
- Maximum number of static logos reduced to 15

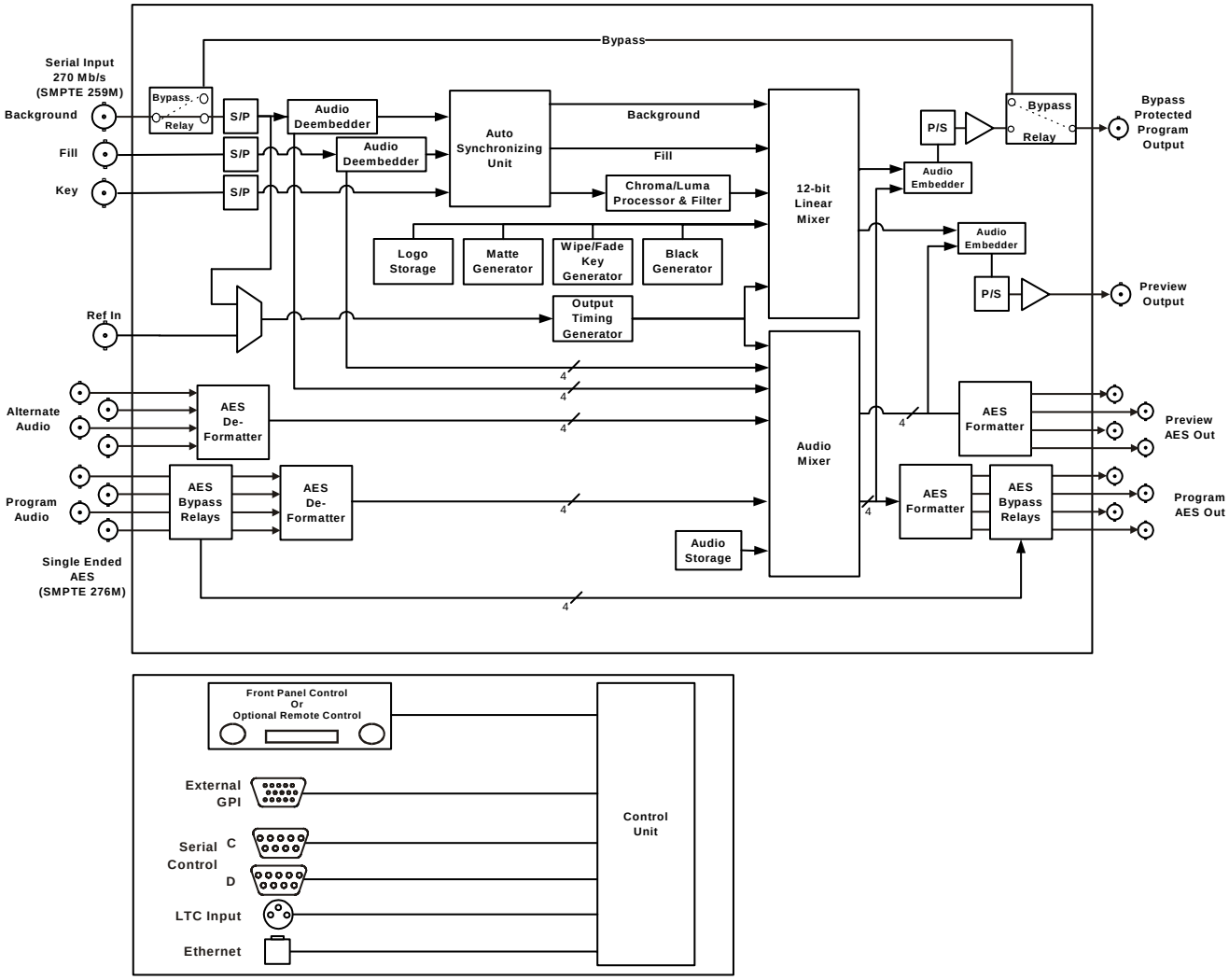

Figure 1-1: 9625DSK-LGA Block Diagram

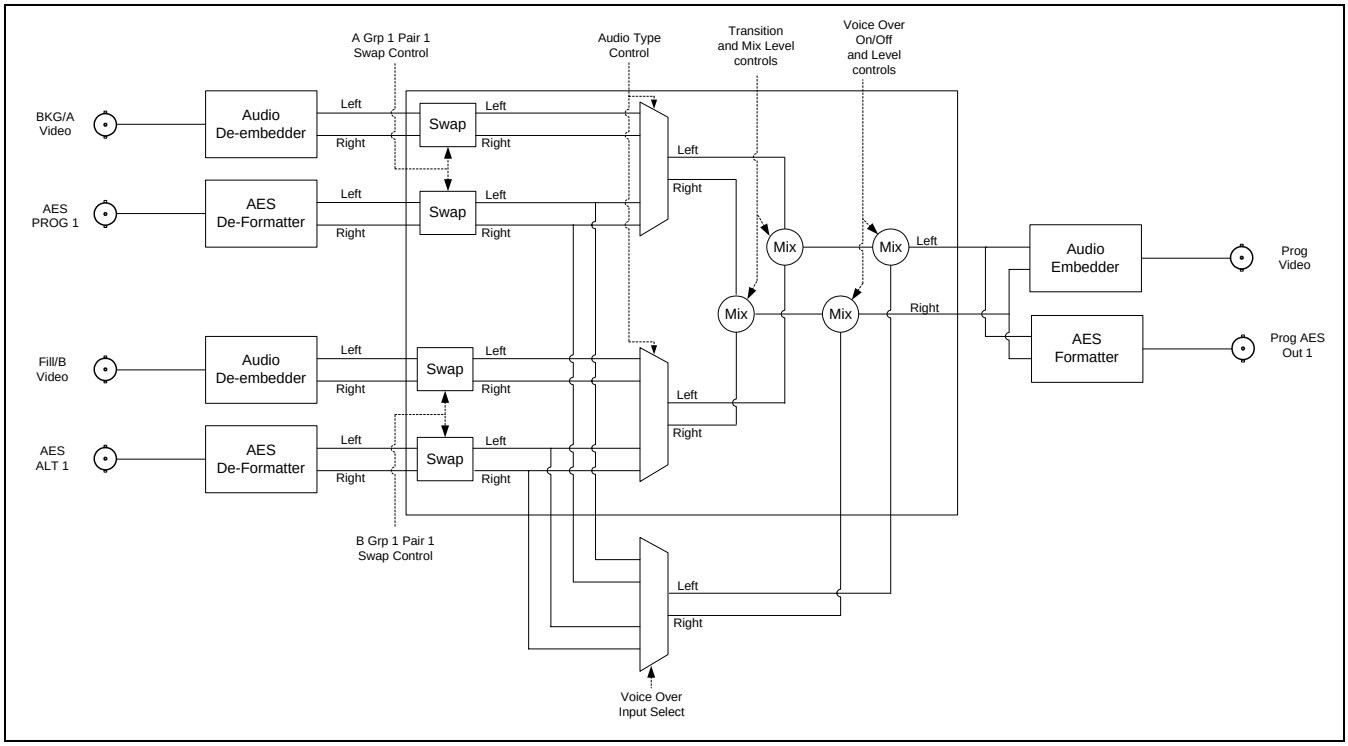

Figure 1-2: Simplified Audio Processing Block Diagram – One Pair of Channels

1.2. HOW TO USE THIS MANUAL

This manual is organized into 6 chapters: Overview, Installation, Front Panel Operation, Desktop Remote Panel Operation, Optional EAS Features, and Technical Description. The overview section contains a brief overview of the 9625DSK-LGA operations, technical features and a glossary to define concepts and terms used throughout the remainder of the manual. We highly recommend taking the time to become familiar with the terms and concepts described here before proceeding further into the manual.

Chapter 2 provides a detailed description of the rear panel connectors, and how the 9625DSK-LGA should be connected into your system.

Chapter 3 describes how to operate the 9625DSK-LGA using the Front Panel Controls or Rackmount Remote Control Panel. This chapter also includes information on the Setup Menu system.

Chapter 4 describes how to control the 9625DSK-LGA using the Desktop Remote Control Panel.

Chapter 5 describes how to set up the 9625DSK-LGA for use with an EAS decoder (EAS option required).

Chapter 6 provides technical information such as the specifications and how to update the firmware in the 9625DSK-LGA.

Items of special note are indicated with a double box like this.

1.3. DEFINITIONS

4:2:2 The sampling ratio used in the HDTV digital video signal. For every 4 samples of luminance there are 2 samples each of R-Y (Red minus Luminance) and B-Y (Blue minus Luminance).

16x9 A widescreen television format such as HDTV in which the aspect ratio of the screen is 16 units wide by 9 high as opposed to the 4x3 of normal TV.

AES/EBU: (Sometimes abbreviated as AES) Refers to the digital audio standard (AES3-1992) set by the Audio Engineering Society and European Broadcast Union and used by most forms of digital audio from CDs to professional digital video.

Aspect Ratio: The ratio of width to height in a picture. Theatre screens generally have an aspect ratio of 1.85 to 1, widescreen TV (16x9) is 1.77 to 1, and normal TV (4x3) is 1.33 to 1.

CCIR (International Radio Consultative Committee) An international standards committee. (This organization is now known as ITU.)

CCIR-601: See ITU-R601.

Cliff effect: (also referred to as the 'digital cliff') This is a phenomenon found in digital video systems that describes the sudden deterioration of picture quality when due to excessive bit errors, often caused by excessive cable lengths. The digital signal will be perfect even though one of its signal parameters is approaching or passing the specified limits. At a given moment however, the parameter will reach a point where the data can no longer be interpreted correctly, and the picture will be totally unrecognisable.

Component analog: The non-encoded output of a camera, video tape recorder, etc., consisting of the three primary colour signals: red, green, and blue (RGB) that together convey all necessary picture information. In some component video formats these three components have been translated into a luminance signal and two colour difference signals, for example Y, B-Y, R-Y.

Component digital: A digital representation of a component analog signal set, most often Y, B-Y, R-Y. The encoding parameters are specified by ITU-R709 for HDTV signals. SMPTE 274M and SMPTE 296M specify the parallel interface.

Composite analog: An encoded video signal such as NTSC or PAL video that includes horizontal and vertical synchronising information.

Composite digital: A digitally encoded video signal, such as NTSC or PAL video that includes horizontal and vertical synchronising information.

D1: A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 19 mm magnetic tape. (Often used incorrectly to refer to component digital video.)

D2: A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 19 mm magnetic tape. (Often used incorrectly to refer to composite digital video.)

D3: A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 1/2" magnetic tape.

D5: A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 1/2" magnetic tape.

Drop frame: In NTSC systems, where the frame rate is 29.97002618 frames per second, the drop frame mode permits time of day indexing of the frame numbers by dropping certain frame numbers. Specifically frames 0, and 1 at the beginning of each minute except minutes 0,10,20,30,40, & 50, are omitted, to compensate for an approximate timing error of 108 frames (3 seconds 18 frames) per hour. A flag bit is set in the time code to signal when the drop frame mode is in effect.

EBU (European Broadcasting Union): An organisation of European broadcasters that among other activities provides technical recommendations for the 625/50 line television systems.

Embedded audio: Digital audio is multiplexed onto a serial digital video data stream.

ITU: The United Nations regulatory body governing all forms of communications. ITU-R (previously CCIR) regulates the radio frequency spectrum, while ITU-T (previously CCITT) deals with the telecommunications standards.

ITU-R601: An international standard for standard definition component digital television from which was derived SMPTE 125M and EBU 3246-E standards. ITU-R601 defines the sampling systems, matrix values and filter characteristics for Y, B-Y, R-Y and RGB component digital television signals.

Letterbox: Placing a wide screen image on a conventional TV by placing black bands at the top and bottom of the screen.

Linear time code: (Also known as Longitudinal Time Code) A digital code used for timing and control purposes on videotape and associated audio tape machines. It is recorded on a linear track with audio characteristics and is referred to as LTC. Each 80 bit code word is associated with one television frame, and consists of 26 time bits, 6 flag bits, 32 user bits and 16 sync bits. This time code may run at 24, 25 or 30 frames per second depending on the video format. See also SMPTE 12M

LTC: See Linear Time Code

NTSC: National Television Standards Committee established the television and video standard in use in the United States, Canada, Japan and several other countries. NTSC video consists of 525 horizontal lines at a field rate of approximately 60 fields per second. (Two fields equals one complete Frame). Only 487 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Closed Captioning.

PAL: Phase Alternating Line. The television and video standard in use in most of Europe. Consists of 625 horizontal lines at a field rate of 50 fields per second. (Two fields equals one complete Frame). Only 576 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Teletext.

Pixel: The smallest distinguishable and resolvable area in a video image. A single point on the screen. In digital video, a single sample of the picture. Derived from the words *picture element*.

Serial digital: Digital information that is transmitted in serial form. Often used informally to refer to serial digital television signals.

SMPTE (Society of Motion Picture and Television Engineers): A professional organisation that recommends standards for the film and television industries.

SMPTE 12M: The SMPTE standard for Time and address code. SMPTE 12M defines the parameters required for both linear and vertical interval time codes.

SMPTE 125M: The SMPTE standard for bit parallel digital interface for component video signals. SMPTE 125M defines the parameters required to generate and distribute component video signals on a parallel interface.

SMPTE 259M-C: The SMPTE standard for 525 and 625 line serial digital component and composite interfaces.

SMPTE 272M: The SMPTE standard for embedding audio in serial digital standard definition (SMPTE 259M-C) video signals.

SMPTE 274M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 1080 lines x 1920 pixels.

SMPTE 276M: The SMPTE standard for transmission of AES/EBU Digital Audio Signals Over Coaxial Cable

SMPTE 292M: The SMPTE standard for high definition serial digital component interfaces.

SMPTE 296M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 720 lines x 1280 pixels.

SMPTE 299M: The SMPTE standard for embedding audio in serial digital high definition (SMPTE 292M) video signals.

TRS: Timing reference signals used in composite digital systems. (It is four words long).

TRS-ID: Abbreviation for "Timing Reference Signal Identification". A reference signal used to maintain timing in composite digital systems. (It is four words long.)

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2. INSTALLATION

2.1. REAR PANEL OVERVIEW

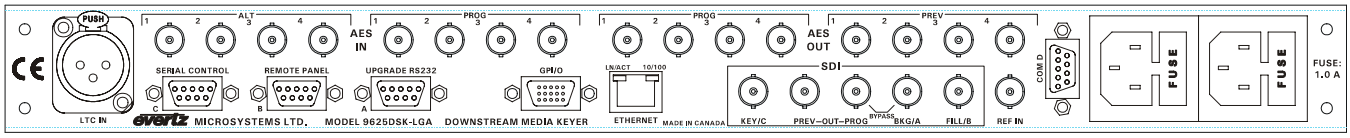


Figure 2-1: 9625DSK-LGA Rear Panel

Figure 2-1 shows the rear panel of the 9625DSK-LGA units. Sections 2.1.1 to 2.1.8 describe the specific video, audio, and control signals that should be connected to the 9625DSK-LGA units. Sections 2.4 to 2.9 describe how to connect them into your system.

2.1.1. Video Connections

BKG/A: This BNC connector is the background or program SDI input to the 9625DSK-LGA.

FILL/B and KEY/C: These BNC connectors are the key and fill SDI inputs to the 9625DSK-LGA. The **FILL/B** input can also be used as an alternate video input for switching applications.

SDI PREV OUT: This output BNC connector is the serial component SMPTE 259M-C preview video output from the 9625DSK-LGA. This preview output connector is normally connected to a SDI preview monitor.

SDI PROG OUT: This output BNC connector is the serial component SMPTE 259M-C program video output from the 9625DSK-LGA. Connect this output to the next video device in your output path. This output is protected by a bypass relay to the adjacent **BKG/A** input BNC. When the bypass relay is activated on power loss to the keyer, the **SDI PROG OUT** will be a direct relay connection to the **BKG/A** input.

2.1.2. Reference Video Connections

REF IN: This 75 ohm terminated input is for connecting an analog video reference. Connect the **REF IN** connector to the reference input sync. The 9625DSK-LGA can also be set to derive its timing from the input video connected to the **BKG/A** input using the *REFERENCE* menu.

2.1.3. AES AUDIO Connections

AES PROG IN: These 4 input BNC connectors provide inputs for the 4 levels of main program AES audio associated with the video connected to the **BKG/A** video input.

AES ALT IN: These 4 input BNC connectors provide inputs for the 4 levels of non-program AES audio. They are designed for alternate audio that can be inserted over the normal program audio. In a switcher application these 4 inputs are for the audio associated with the video connected to the **FILL/B** video input. If you are performing voiceovers, then connect the voiceover audio to the **ALT 4** AES input. The audio provided on this input will be mixed with the program output audio at the specified levels when the **VOICE OVER** button is pressed.

AES PROG OUT: These 4 BNC connectors provide outputs for the 4 levels of main program AES audio and should be connected to the main broadcast chain of your plant. These outputs are protected by bypass relays to the **AES PROG** input BNCs. When the bypass relay is activated on power loss to the keyer the **AES PROG OUT** will be a direct relay connection to the **AES PROG** inputs.

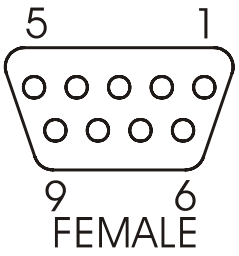
AES PREV OUT: These 4 input BNC connectors provide outputs for the 4 levels of preview AES audio.

2.1.4. Linear Timecode

LTC IN: This female XLR connector is an input for SMPTE/EBU linear time code, which drives the internal clock for the insertion of “Breakfast” clock style logos.

2.1.5. Serial I/O Connections

UPGRADE RS232 (A): This 9 pin female 'D' connector provides an RS-232 serial interface for connection to a computer and is used for firmware upgrades to the 9625DSK-LGA. The pin definitions are shown in Table 2-1. See section 6.2 for more information on upgrading firmware.



Pin #	Name	Description
1	GND	Chassis ground
2	TxD	RS-232 Transmit Output
3	RxD	RS-232 Receive Input
4		
5	Sig Gnd	RS-232 Signal Ground
6		
7	RTS	RS-232 RTS Input
8	CTS	RS-232 CTS Output
9		

Table 2-1: Upgrade RS232 Port A Pin Definitions

REMOTE PANEL (B): This connector is only available on units shipped with the rack mount or desktop remote control panels. This 9 pin female D connector provides an RS-422 serial interface for connection to the Remote Control Panel. This port is wired as a SMPTE 207M Tributary as shown in Table 2-2. See section 2.4 for information on connecting the remote control panel.

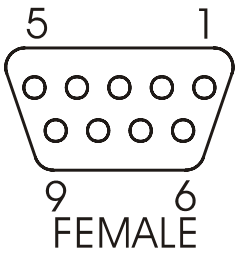
	Pin #	Name	Description
	**1**	GND	Chassis ground
	2	Tx-	RS-422 Tx-(A) Output
	3	Rx+	RS-422 Rx+(B) Input
	4	GND	
	5		
	6	GND	
	7	Tx+	RS-422 Tx+(B) Output
	8	Rx-	RS-422 Rx-(A) Input
	9	GND	

Table 2-2: Remote Panel Port Pin Definitions

SERIAL CONTROL C, COM D: These 9 pin female D connectors provide serial interfaces designed for connection to Automation Systems including the Evertz MetaCast 2 software. The ports are also used to interface to the EAS Decoder (EAS optioned units) or optional temperature probe. These ports can be individually changed to run in either RS422 or RS232 mode by reconfiguring jumpers J19 or J20 on the 7700FC card inside the unit. The SERIAL CONTROL C port is controlled with jumper J19 and the COM D port is controlled with jumper J20. When they are set for the RS-232 mode of operation, the ports have the same pinout as Port A (shown in Table 2-1). When they are set for the RS-422 mode of operation the ports have the pinout shown in Table 2-3.

The RS-422 pinout for the SERIAL CONTROL and COM D ports is not a standard SMPTE RS422 pinout. You will have to make a custom cable in order to use these ports in the RS422 configuration.

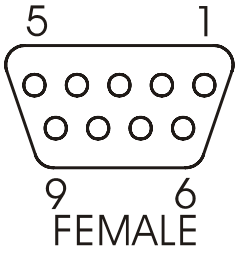
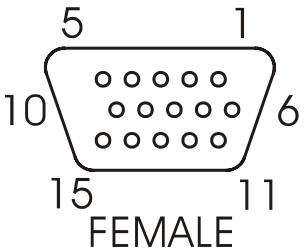
	Pin #	Name	Description
	**1**	GND	Chassis ground
	2	Tx-	RS-422 Tx-(A) Output
	3	Rx-	RS-422 Rx-(A) Input
	4		
	5	GND	
	6		
	7	Rx+	RS-422 Rx+(B) Input
	8	Tx+	RS-422 Tx+(B) Output
	9	GND	

Table 2-3: Serial Port C and D – RS422 Pin Definitions

The function of each port must be configured using the *Serial Control* and *Com D* menu items on the *GENERAL* menu. (See section 3.6.7)

2.1.6. GPI/O Connections

GPI/O: This 15 pin female high density 'D' connector contains several general-purpose control inputs and outputs. The inputs are used to connect manual or automatic triggers for the display or insertion of media. The outputs provide feedback on internal unit status of the downstream keyer. See section 2.9 for information on connecting the general-purpose inputs and outputs. For information on configuring the GPI and GPO functions, see the *GPI Setup* and *GPO Setup* menu items on the *PRESET* menu (sections 3.11.3 and 3.11.6).



Pin #	Name	Description
1	GND	Chassis ground
2	GPO 2	General purpose output 2
3	GPO 1	General purpose output 1
4	GPO 3	General purpose output 3
5	GPI C	General purpose input Load assigned preset
6	GPO 4	General purpose output 4
7	GPI F	General purpose input Load assigned preset
8	GPI A	General purpose input Load assigned preset
9	GPI D	General purpose input Load assigned preset
10	GP+3.3V	+3.3V from general purpose interface board
11	GPI H	General purpose input Load assigned preset
12	GPI E	General purpose input Load assigned preset
13	GPI G	General purpose input Load assigned preset
14	GPI B	General purpose input Load assigned preset
15	Vext	External voltage source for GPI's

Table 2-4: GPI/O Connector Pin Definitions

2.1.7. Ethernet Network Connections

ETHERNET: This RJ-45 connector is an Ethernet port used for high-speed firmware upgrades, FTP logo transfers, or a virtual serial port Com E. See section 2.8 for information on connecting to an Ethernet network. See section 3.6.6 in the *General* menu descriptions for information on configuring the network addresses for the downstream keyer.

2.1.8. Power Connections

The 9625DSK-LGA main unit has one or two (redundant supply is optional) universal power supplies that operate on 100 to 240 Volts 50/60 Hz AC. The optional Remote Control panels are supplied with a universal input (100 to 240 volts AC at 50 or 60 Hz) 12 VDC power adapter.

2.2. MOUNTING

The 9625DSK-LGA is equipped with rack mounting angles and fits into a standard 19 inches by 1.75 inches (483 mm x 45 mm) rack space. The optional rack mount Remote Control Panel (RCP) is equipped with rack mounting angles and fits into a standard 19 inches by 1.75 inches by 3.75 inches (483 mm x 45 mm x 150mm) rack space. The optional Desktop Remote Control Panel (DCP) is designed to be mounted on a control panel desk and is fitted with rubber feet to keep it from sliding on the desktop.

2.3. POWER REQUIREMENTS

Power requirements are 100 to 240 volts AC at 50 or 60 Hz. The 9625DSK-LGA has universal power supplies that automatically sense the input voltage. Power should be applied by connecting a 3-wire grounding type power supply cord to the power entry module on the rear panel. The power cord should be minimum 18 AWG wire size; type SVT marked VW-1, maximum 2.5 m in length. If the units are fitted with the redundant power supply there will be an additional IEC-320 connector on the rear panel.

The power entry module combines a standard power inlet connector, two 5 x 20 mm fuse holders and an EMI line filter.

The Remote Control panel is supplied with a universal input (100 to 240 volts AC at 50 or 60 Hz) 12 VDC power adapter. Power should be applied by connecting a 3-wire grounding type power supply cord to the power adapter. Plug the 12 VDC output of the power adapter into the DC power jack on the rear of the Remote panel, and secure it by turning the fastening nut.

2.4. CONNECTING THE REMOTE CONTROL PANEL

The 9625DSK-LGA is available with a rack mountable or desktop remote control panel. The remote control panel is connected to the **REMOTE PANEL** connector on the Keyer units using the straight-through cable provided. For longer distances, simply make your own cable of the required length according to the diagram in Table 2-5. Communications to the remote panel is through a standard straight-through RS-422 connection, enabling the panel to be located up to 1000 feet from the main electronics unit.

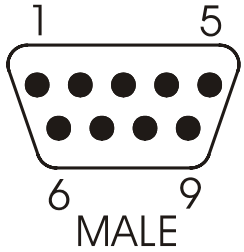
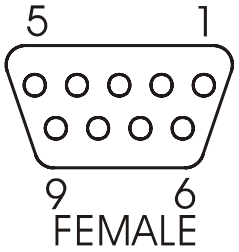
9625DSK-LGA End				Remote Panel End		
	9 pin D Male	**Pin**	**Belden 9729**	**9 pin D Female**	**Pin**	
		1			1	
	Tx-	2	-------1a------	Rx-	2	
	Rx+	3	-------2b------	Tx+	3	
	Rx Gnd	4	---drain 2----	Rx Gnd	4	
		5				
	Tx Gnd	6	---drain 1----	Tx Gnd	6	
	Tx+	7	-------1b-----	Rx+	7	
	Rx-	8	-------2a------	Tx-	8	
		9			9	
	Frame Gnd	Shield	---drain 1----	Frame Gnd	Shield	

Table 2-5: Remote Control Panel Extender Cable

2.5. CONNECTING THE VIDEO

2.5.1. Video Inputs

The standard definition program video source should be connected to the **BKG/A** BNC. If you are using the 9625DSK-LGA as a two input standard definition video keyer, the alternate video source should be connected to the **FILL/B** BNC. If you are using a downstream key source for the downstream keyer, the Key video should be connected to the **KEY/C** BNC and the fill should be connected to **FILL/B** BNC. The 9625DSK-LGA supports standard definition digital video in the formats shown in Table 2-6. The video standard must be set manually to match the incoming video type using the *Video Standard* menu item on the *General* menu (see section 3.6.1).

Common Name	Pixels / Active Lines	Frame Rate	Progressive /Interlace	Standard	Valid Genlock Types
525i/59.94	720 x 486	29.97 (30/1.001)	I	SMPTE 125M	NTSC
625i/50	720 x 576	25	I	EBU TECH 3267-E	PAL

Table 2-6: Video Input Formats

2.5.2. Video Outputs

The **PROG** output contains the video output from the Program Bus and should be connected to the main broadcast chain of your plant. The **PROG** output is protected by a bypass relay. When the relay is active, the **PROG** output is directly connected to the **BKG/A** input.

The **PREV** output contains the video output from the preview and will normally be connected to a SDI monitor to allow you to view the program output before it goes on air. When the bypass relay is active, the **PREV** output will not have any video on it.

2.5.3. Genlock Reference

For proper switching of the video and audio signals an analog video genlock reference must be supplied. Connect a composite analog NTSC or PAL colour black video signal to the REF IN connector. Make sure that the signal type is correct for the video standard in use. (See Table 2-6)

2.6. CONNECTING THE AUDIO

The 9625DSK-LGA is capable of working with either embedded audio or discrete AES audio. The source of the audio, which is to be associated with each video input is selected via the HTML Audio Setup page (see section 3.16). The audio will be output both as discrete audio and as embedded audio.

2.6.1. Connecting Program Audio

If you are using discrete AES program audio, connect up to 4 channels of AES audio associated with the program video input (connected to the **BKG/A** input) to the **AES PROG** audio inputs with the same numbers. If you are using the 9625DSK-LGA as a two input standard definition video keyer connect up to 4 channels of AES audio that is associated with the alternate video input (connected to the **FILL/B** input) to the **AES ALT** audio inputs with the same numbers. If you are using embedded program audio then you do not need to connect any program audio to the AES inputs.

2.6.2. Connecting Voiceover or EAS Audio

The source of the audio, which will be used for voiceovers (Ext. Audio Mix), is also selected via the HTML Audio Setup page. The 9625DSK-LGA can only accept AES audio as a voiceover source.

2.6.3. Connecting the Audio Outputs

The **AES PROG OUT** connectors contain the audio outputs from the program audio bus and should be connected to the main broadcast chain of your plant. The **AES PROG OUT** outputs are protected by bypass relays. When the relays are active, the **AES PROG OUT** outputs are directly connected to the four **AES PROG IN** inputs.

The **PREV AES OUT** connectors contain the audio outputs from the preview audio bus and will normally be connected to your audio monitoring system to allow you to hear the program audio output before it goes on air. When the bypass relays are active, the **PREV AES OUT** outputs will not have any audio on them.

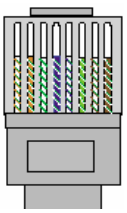
2.7. CONNECTING THE LINEAR TIME CODE

The 9625DSK-LGA has a linear time code (LTC) input used to provide time information for the analog or digital clock logos. Connect the LTC output from your house master time code source to the LTC IN XLR connector. When using an unbalanced input to the reader, the signal should be applied to pin 3 of the reader input connector. Normally, the unused input (pin 2) should be connected to ground (pin 1).

2.8. CONNECTING TO AN ETHERNET NETWORK

The 9625DSK-LGA is designed to be used with either 10Base-T (10 Mbps) or 100Base-TX (100 Mbps) also known as *Fast Ethernet*, twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100Ω STP cable may be used. When connecting for 100Base-TX systems, category 5 UTP cable is required. The cable must be “straight through” with a RJ-45 connector at each end. Create a network connection by plugging one end of the cable into the RJ-45 receptacle of the 9625DSK-LGA and the other end into a port of the supporting network device.

The straight-through RJ-45 cable can be purchased or can be constructed using the pinout information in Table 2-7. A colour code wiring table is provided in Table 2-7 for the current RJ 45 standards (AT&T 258A or EIA/TIA 258B colour coding shown). Also refer to the notes following the table for additional wiring guide information.



Pin #	Signal	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseT
1	Transmit +	White/Green	White/Orange	X
2	Transmit –	Green/White or White	Orange/White or Orange	X
3	Receive +	White/Orange	White/Green	X
4	N/A	Blue/White or Blue	Blue/White or Blue	Not used (required)
5	N/A	White/Blue	White/Blue	Not used (required)
6	Receive –	Orange/White or Orange	Green/White or Green	X
7	N/A	White/Brown	White/Brown	Not used (required)
8	N/A	Brown/White or Brown	Brown/White or Brown	Not used (required)

Table 2-7: Standard RJ45 Wiring Colour Codes

Note the following cabling information for this wiring guide:

- Only two pairs of wires are used in the 8-pin RJ 45 connector to carry Ethernet signals.
- Even though pins 4, 5, 7 and 8 are not used, it is mandatory that they be present in the cable.
- 10BaseT and 100BaseT use the same pins; a crossover cable made for one will also work with the other.
- Pairs may be solid colours and not have a stripe.
- Category 5 cable must use Category 5 rated connectors.

The maximum cable run between the downstream keyer and the supporting hub is 300 ft (90 m). The maximum combined cable run between any two end points (i.e. downstream keyer and PC/laptop via network hub) is 675 feet (205 m).

Devices on the Ethernet network continually monitor the receive data path for activity as a means of checking that the link is working correctly. When the network is idle, the devices also send a link test signal to one another to verify link integrity. The downstream keyer rear panel is fitted with two LEDs to monitor the Ethernet connection.

10/100: This LED is ON when a 100Base-TX link is last detected. The LED is OFF when a 10Base-T link is last detected. Upon power-up the LED is OFF as the last detected rate is not known and therefore defaults to the 10Base-T state until rate detection is completed.

LN/ACT: This dual purpose Green LED indicates that the 9625DSK-LGA has established a valid linkage to its hub, and whether the 9625DSK-LGA is sending or receiving data. This LED will be ON when the 9625DSK-LGA has established a good link to its supporting hub. This gives you a good indication that the segment is wired correctly. The LED will BLINK when the 9625DSK-LGA is sending or receiving data. The LED will be OFF if there is no valid connection.

2.9. CONNECTING THE GENERAL PURPOSE INPUTS AND OUTPUTS

Figure 2-2 shows a simplified schematic diagram of the GPIO circuitry. The user can connect GP+3.3V supplied from the keyer unit into the Vext pin to provide power to the GPIO opto-isolator circuitry. In this configuration the user can activate GPIs simply by connecting the GPI input pins to Ground (see Figure 2-3). This can be done with a button, switch, relay or an open collector transistor. In this configuration the GPOs will be internally pulled up to 3.3 volts (see Figure 2-5). 3.3 volts is available to the user to be used for driving external circuitry. Care must be taken to limit the load to 0.5W ensuring that there is no affect on the power supply source on the unit.

Warning: Do not connect GP+3.3V from one unit to another unit's GP+3.3V output.

Alternately, the user can connect an external power source for the opto-isolator circuitry. The Vext voltage must be greater than the voltage supplied to GPI by at least 3v. Figure 2-4 and Figure 2-6 show how to wire the GPIs and GPOs from an external power supply.

The tally outputs are active low with an internal pull up (10k Ohm) resistor to the Vext pin. When active, the output will go low and is able to sink up to 10mA. When inactive, the signal will go high (to the voltage applied to the Vext pin). Do not attempt to source more than 100μA from the output.

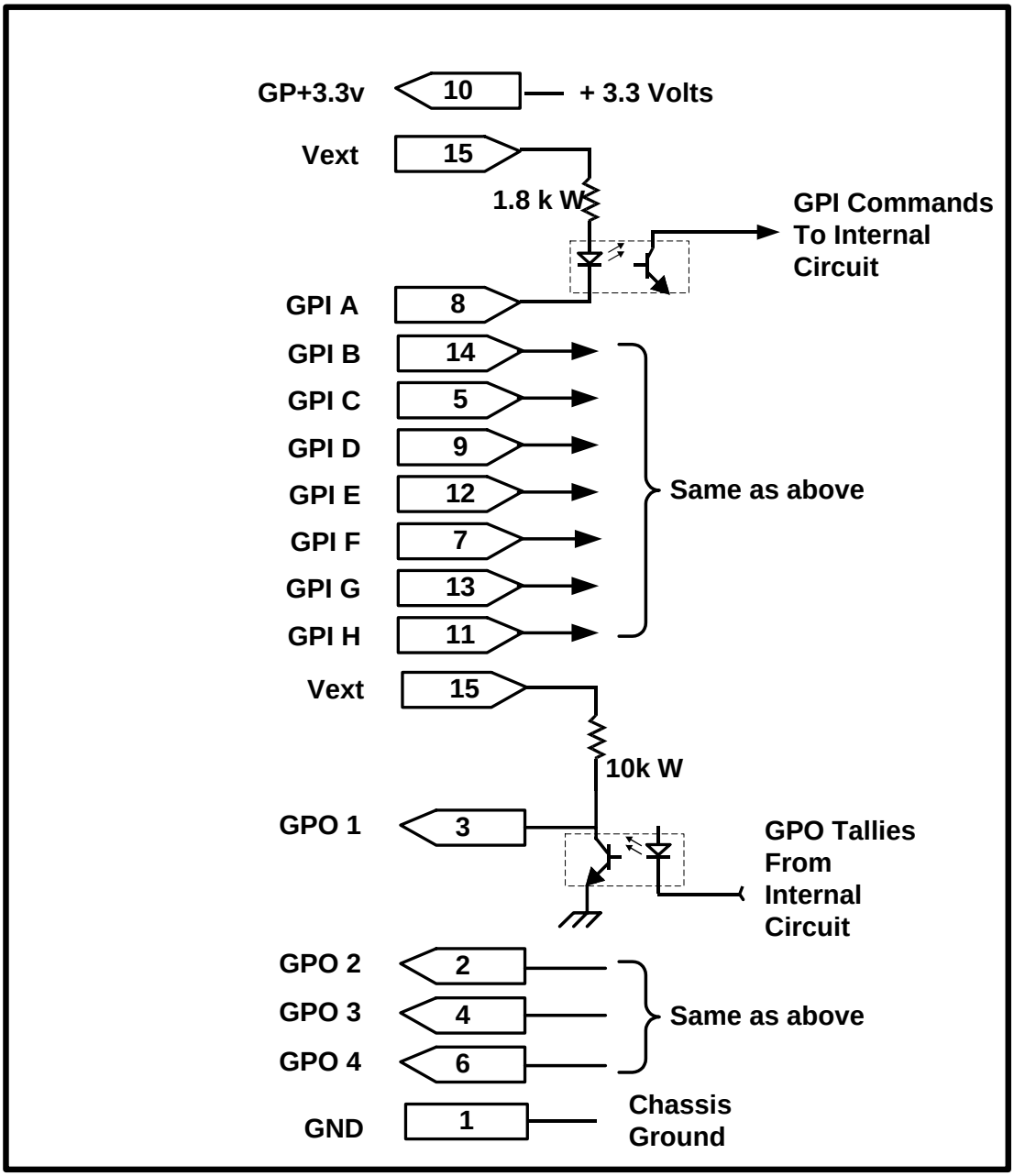


Figure 2-2: Keyer GPIO Opto Isolator Circuitry

All GPI inputs are level triggered. Lowering the GPI input to a potential below Vext will select the allocated preset definition. The 8 GPIs (A through H) are dedicated as load logo controls. When one of these GPI inputs is activated, the corresponding logo is loaded into active video. If multiple inputs are active both commands are ignored until a single input is recognized.

The GPI to logo allocation is programmable using the *GPI Setup* menu item on the *PRESET* menu. (See section 3.11.3).

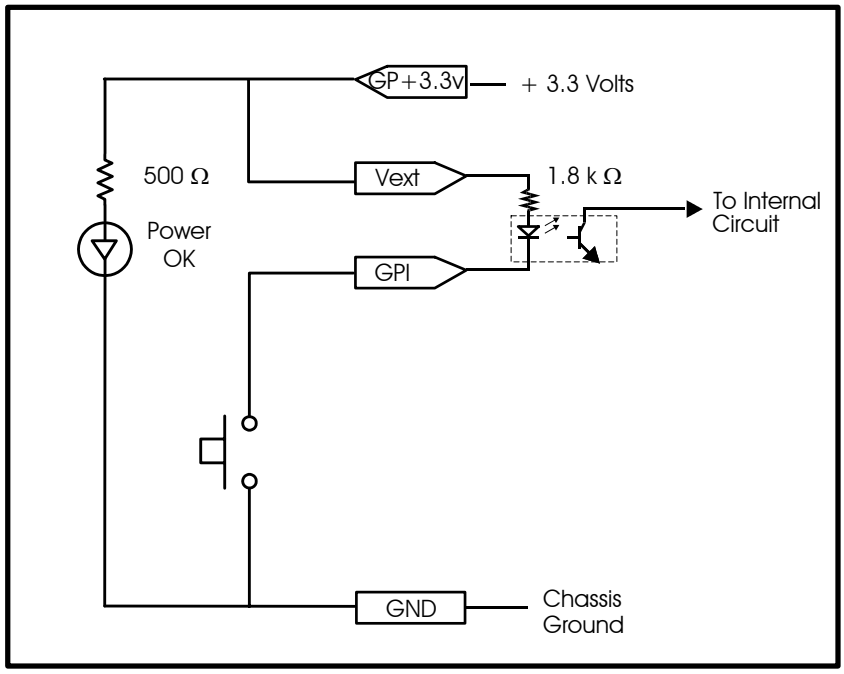


Figure 2-3: Powering the General Purpose Input Opto-Isolators from the Unit

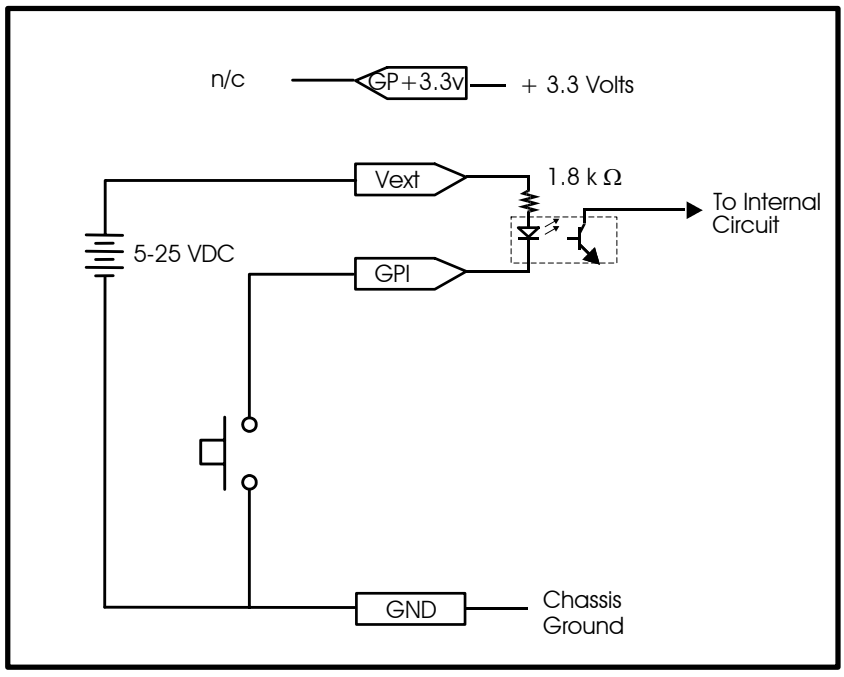


Figure 2-4: Powering the General Purpose Input Opto-Isolators from an External Power Supply

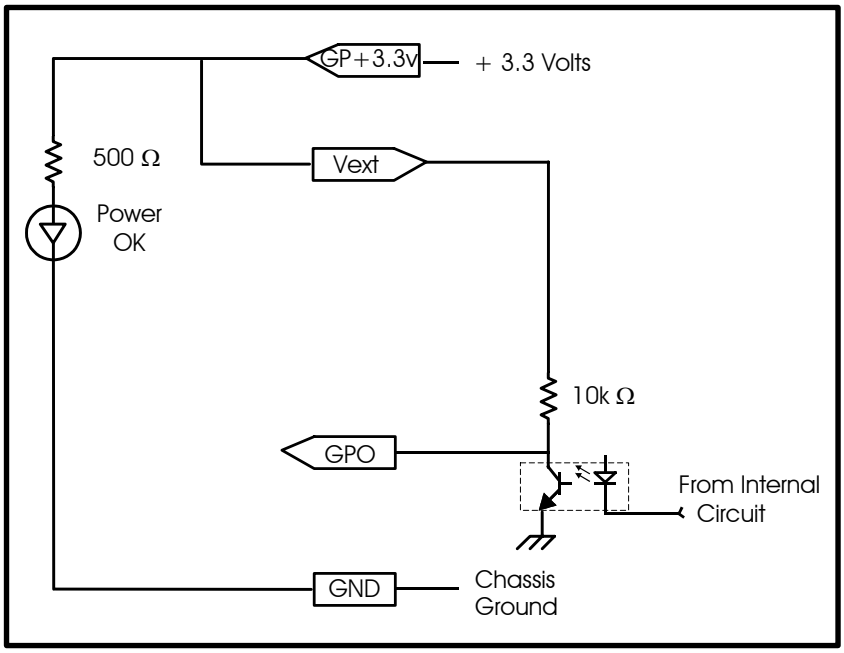


Figure 2-5: Powering the General Purpose Output Opto-Isolators from the Unit

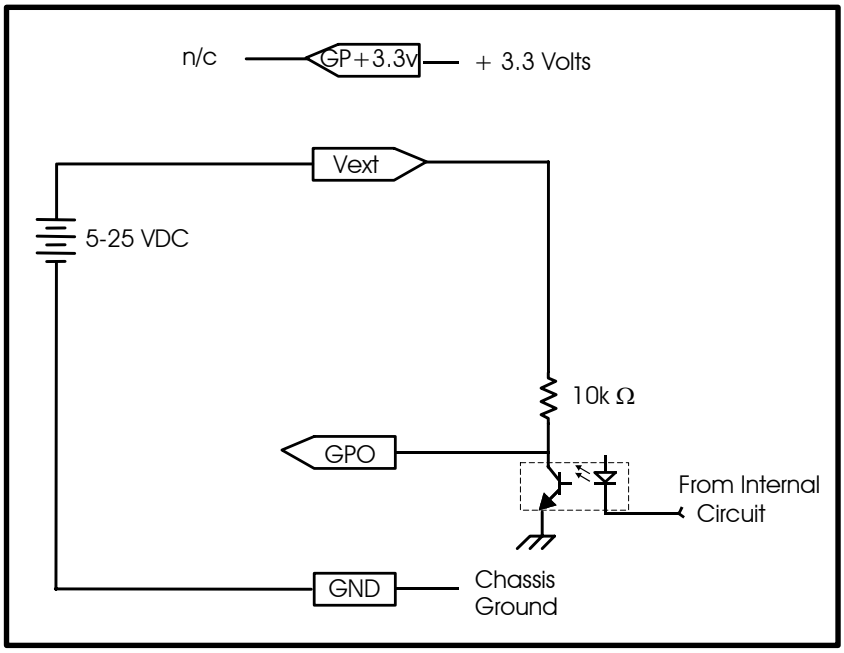


Figure 2-6: Powering the General Purpose Output Opto-Isolators from an External Power Supply

Table 2-8 shows the maximum limits that the user must adhere to so that no circuitry is damaged.

Description	Name	Value
Maximum GP+3.3V current load	$I_{GP+3.3V}$ max	100 mA
Minimum input voltage for a high	V_{gpi} high min	3 V
Maximum input voltage for a low	V_{gpi} low max	0.8 V
Maximum GPO sink current	I_{gpo} max	25 mA

Table 2-8: GPIO Maximum Ratings

2.10. CONNECTING THE OPTIONAL TEMPERATURE PROBE

The 9625DSK-LGA is available with an optional temperature probe that is used to input data for display in a temperature logo. Consult the temperature probe manual for information on installing the temperature probe. Connect the temperature probe power adapter to the probe unit. Connect the temperature probe to the **COM D, SERIAL CONTROL (C), or COM E (Ethernet virtual com, see section 2.11)** connector on the 9625DSK-LGA. The temperature probe ships with an adapter cable to convert its RJ-45 connector to a standard 9 pin D connector. The RJ45 plugs into the temperature probe. You will need to create a straight-through 9 pin male to female cable of the desired length according to the diagram in Table 2-5 to connect the probe to the 9625DSK-LGA. The serial port on the 9625DSK-LGA must be set for RS-232 operation as described in section 2.1.5.

The temperature probe cable should not exceed 1000 feet.

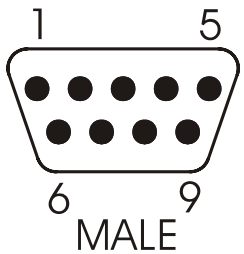
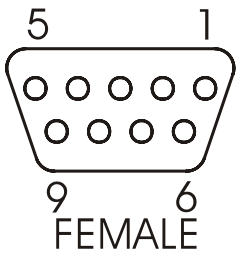
9625DSK-LGA End				Temperature Probe End		
	9 pin D Male	Pin	Belden 9729	9 pin D Female	Pin	
		1			1	
	TxD	2	-------1a------	RxD	2	
	RxD	3	-------1b------	TxD	3	
		4		Rx Gnd	4	
	Gnd	5	---drain 1----	Gnd		
		6			6	
		7			7	
		8			8	
		9			9	
	Frame Gnd	Shield	---drain 2----	Frame Gnd	Shield	

Table 2-9: Temperature Probe Extender Cable

In order for the temperature probe to communicate to the 9625DSK-LGA you must configure the **SERIAL CONTROL C, COM D, or COM E** port for the correct protocol and baud rate. The *SERIAL CONTROL C, COM D, or COM E* menu items on the *General* menu are used to accomplish this (depending on which communications port is used for the temperature probe). Set this menu item to *temperature* in order for the temperature probe to communicate to the 9625DSK-LGA. See section 3.6.7 for information on setting the serial port protocol.

2.11 Connecting The Temperature Probe Via Ethernet (COM E)

There is a virtual serial port (COM E). This serial port is enabled on the Ethernet connector and requires a valid network connection to an Ethernet enabled device for functionality. Evertz does not recommend any particular brand of serial to Ethernet adapter; however, the Lantronix UDS-10 has been tested and confirmed to work with the 9625 series products.

To connect the virtual serial port of the unit to the desired device, you must first select the COM E (net) menu item under the GENERAL menu items of the unit setup menu. Press SELECT to enter COM E (net) sub-menu and use the up and down arrows to scroll through the list of available protocols that can be allocated to the port. For our example we will be using the Temperature Probe configuration, so scroll to the *Temperature* option and press the SELECT button. The front panel should now show an E on the far right beside the Temperature protocol selection. This indicates that the protocol for communicating with the temperature probe is now allocated to the virtual port E. This concludes the configuration on the 9625 Unit.

Next you must install and configure the Lantronix or other serial to Ethernet adapter. In order to do this, you must either connect to the device using the device's Telnet Server, or connect a communications program (such as Hyperterminal) to the serial side of the device. It is usually easier to use the Hyperterminal mode on the serial side, as the default IP address of the unit will probably not match your network configuration. Refer to the Lantronix manual for configuring the device.

The Lantronix must be added onto your network with a valid IP and the device must be told what IP to send the serial information to (this would be the IP address of the 9625 unit) and what Ethernet port to make the connection on (3001). Finally, configure the Lantronix device to accept the serial data in the correct format. This will include setting such things as baud rate (1200 for the temp probe), flow control (00) etc. See below for all the parameters required.

A good test for connectivity is to use a PC on the network to ping the IP address of the 9625 unit and the IP address of the Lantronix device. If you cannot ping either device, the network is not configured properly. Also be sure the IP addresses used are unique on the network. If you get a ping response and the connection still does not seem to be working, try unplugging the devices from the network and pinging again. If you still get a ping response, there is another device somewhere on the network with the same IP.

We have also tested the Lantronix device with the TFT and Sage decoders, and both devices work correctly. You should also be able to configure automation to run on the virtual port; however, TCP/IP traffic does not guarantee frame accurate control. **We recommend that automation be connected to a dedicated serial port and not the virtual port.** See section 4 of the Lantronix manual for details.

Remote IP Address should be set to the IP address of the 9625 unit.
Remote IP Port should be set to 3001 (for Com E).
Connect mode should be set to 05.
If one end loses power and the other doesn't, expect some delay before the system can recover.
Here is the output from the telnet setup session (new values are entered after the question marks): The IP addresses used here are examples only, consult your network administrator for appropriate IP addresses for your configuration.

*** **basic parameters for the Temperature Probe**
Hardware: Ethernet Autodetect
IP addr - 0.0.0.0/DHCP/BOOTP/AutoIP, no gateway set
DHCP device name: not set
********** Security **********
SNMP is enabled
SNMP Community Name:
Telnet Setup is enabled
TFTP Download is enabled
Port 77FEh is enabled
Web Server is enabled
Enhanced Password is disabled
********** Channel 1 **********
Baudrate 1200, I/F Mode 4C, Flow 00
Port 03001
Remote IP Adr: 192.168.008.123, Port 03001
Connect Mode : 05 Disconn Mode: 00 Disconn Time: 02:00
Flush Mode : 77
********** Expert **********
TCP Keepalive : 45s
Change Setup : 0 Server configuration
1 Channel 1 configuration
5 Expert settings
6 Security
7 Factory defaults
8 Exit without save
9 Save and exit Your choice ? 1
Baudrate (1200) ?
I/F Mode (4C) ?
Flow (00) ?
Port No (03001) ?
ConnectMode (05) ?
Remote IP Address : (192) .(168) .(008) .(123)
Remote Port (03001) ?
DisConnMode (00) ?
FlushMode (77) ?
DisConnTime (00:00) ?:
SendChar 1 (00) ?
SendChar 2 (00) ?

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CHAPTER 3
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Figures

Tables

3. HOW TO OPERATE THE DOWNSTREAM KEYER USING THE RACK MOUNT CONTROL PANEL

The standard 9625DSK-LGA is a 1 RU chassis with an integrated front control panel. The 9625DSK-LGA is also available as a 1RU chassis with a separate 1RU rack mountable or desktop remote control panel. This chapter describes the operation of the 9625DSK-LGA using either the integrated control panel or the rack mount control panel. For information about controlling the 9625DSK-LGA using the desktop control panel see section 4. For information about connecting the remote control panel to the 9625DSK-LGA see section 2.4.

When the 9625DSK-LGA is fitted with the compact flash (+CF) option a different front panel is fitted on the main electronics unit. This front panel provides access to insert the compact flash memory device to allow you to quickly add or remove logos or audio clips to the system.

3.1. AN OVERVIEW OF KEY AND DISPLAY FUNCTIONS

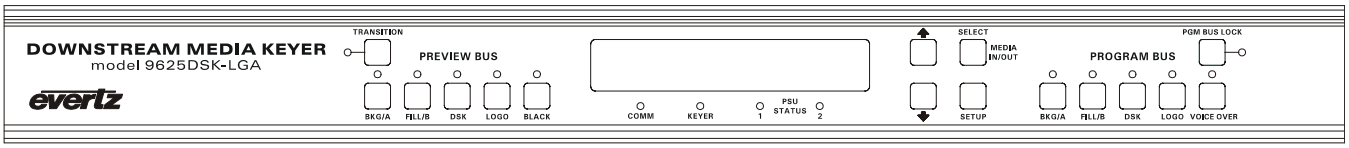


Figure 3-1: 9625DSK-LGA - Front Panel Layout

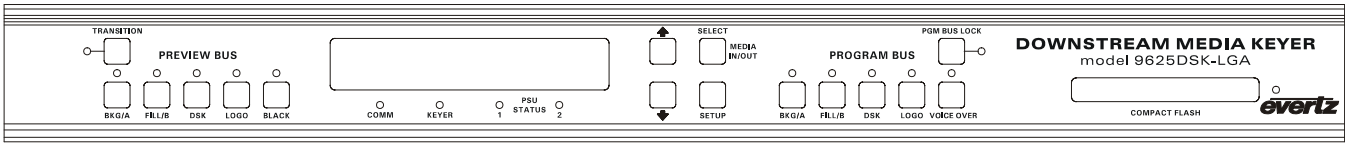


Figure 3-2: 9625DSK-LGA with Compact Flash - Front Panel Layout

The front panel controls consist of a 16 digit alphanumeric display, 16 buttons and 16 LED status indicators.

The buttons are used to provide control of the 9625DSK-LGA, to switch the various input sources, and to navigate the front panel *Setup* menu system. The front panel control provides a quick and simple method of configuring the 9625DSK-LGA Downstream Keyer for your application.

3.1.1. Preview Bus Button Group

BKG/A: This button selects the video from the BKG/A input for the preview video output bus, as well as selecting the associated audio that is mapped in the HTML page.

FILL/B: This button selects the video from the FILL/B input for the preview video output bus, as well as selecting the associated audio that is mapped in the HTML page.

DSK: This button controls the downstream keyer layer for the preview video output bus. If the LED is not illuminated, then the downstream keyer layer is not active on the Preview Bus. If the LED is ON then the downstream keyer layer is enabled on the Preview Bus.

When the downstream keyer layer is enabled, the video present on the FILL/B video input is mixed with the background video (on the BKG/A input) based on the key signal provided on the KEY/C video input, or it can be self-keyed, using user defined thresholds. See section 3.9 for information about setting up the *DSK MODE* and other settings.

LOGO: This button controls the complete media key layer for the preview output bus. The media key layer includes the logo layer for the video and the voiceover layer for the audio. Logos cannot be displayed and voiceovers cannot be performed when the media key layer is off. If the LED is not illuminated, then the media key layer is not active. If the button LED is ON then the media key layer is enabled on the preview output bus.

BLACK: This button selects the internal black generator as the source for the applicable video output bus. When the LED above the Black button is ON then the black generator is the source for the preview video output bus. When the LEDs above the Program Bus **BKG/A, FILL/B** and **DSK** buttons are OFF then the black generator is the source for the program video output bus. This can be accomplished by selecting Black as the Preview Bus source and then pressing the **TRANSITION** button.

3.1.2. Program Bus Button Group

BKG/A: This button selects the video from the BKG/A input for the program video output bus, as well as selecting the associated audio as configured in the HTML page.

FILL/B: This button selects the video from the FILL/B input for the program video output bus, as well as selecting the associated audio as configured in the HTML page.

DSK: This button controls the downstream keyer layer for the program video output bus. If the LED is not illuminated, then the downstream keyer layer is not active on the Program Bus. If the LED is ON then the downstream keyer layer is enabled on the Program Bus.

When the downstream keyer layer is enabled, the video present on the **FILL/B** video input is mixed with the background video (on the **BKG/A** input) based on the key signal provided on the **KEY/C** video input, or it can be self-keyed using user defined thresholds. See section 3.9 for information about setting up the *DSK MODE* and other settings.

LOGO: This button controls the complete media key layer for the program output bus. The media key layer includes the logo layer for the video and the voiceover layer for the audio. Logos cannot be displayed and voiceovers cannot be performed when the media key layer is off. If the LED is not illuminated, then the media key layer is not active. If the button LED is ON then the media key layer is enabled on the program output bus.

VOICE OVER: This button will mix the alternate audio with the program audio. The source for the alternate audio and the audio mix levels are selected via the HTML Audio Setup page.

3.1.3. The Function Button Group

TRANSITION: This button starts a transition of what is displayed on the Preview Bus to the Program Bus. The transition *Type, Rate* and *Swap Mode* are set using the menu items in the *Transition* menu item (see section 3.10). Transitions can also be triggered using GPI, or automation control. The LED indicates that a transition from the Preview Bus to the Program Bus is in progress when it is illuminated, regardless of how the transition was triggered.

When the *Transition Swap Mode* is set to *Swap* the input video and audio of the Preview Bus and the Program Bus will be swapped at the end of the transition. Logos and other media being keyed on the respective buses will also be swapped with the inputs.

When the *Transition Swap Mode* is set to *No Swap* the input video and audio of the Preview Bus will be transferred to the Program Bus. Logos and other media being keyed on the Preview Bus will also be transferred to the Program Bus. The Preview Bus will remain unchanged.

PGM BUS LOCK: This button will lock the front panel PROGRAM BUS controls so that changes cannot be made to the program output bus. The **PGM BUS LOCK** LED will turn ON indicating that the front panel PROGRAM BUS buttons are disabled. When any of these buttons are pressed, the front panel display will show the message `Pgm Bus Locked` for a few seconds. Pressing the **PGM BUS LOCK** button again will return the front panel keys to their normal functions and the LED key will turn OFF indicating that the front panel controls can now affect the Program Bus.

The 9625DSK-LGA may still be controlled from the GPI inputs or the automation when the PROGRAM BUS is Locked. Transitions will also be allowed using the TRANSITION button.

MEDIA IN/OUT: This button (also labelled **SELECT**) controls whether a selected logo (the logo shown on the front panel display) is being keyed into the video on the buses with the media key layer enabled. To control whether a logo is keyed or not, you must first enable the media key layer by pressing the **LOGO** button for the bus you want the logo to appear on. The **LOGO** LED for the respective bus must be illuminated for logos to display on that bus. Scroll to the logo required using the ↑ & ↓ buttons. If the logo is currently being keyed its name will flash in the front panel display. To key the logo into the output video buses with the media layer enabled, press the **MEDIA IN/OUT** button. The logo will fade in according to its programmed fade in time and the logo name display will begin flashing. If the logo is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. To remove a keyed logo from the output video buses, press the **MEDIA IN/OUT** button when the logo name is flashing. The logo will fade out according to its programmed fade out time and the logo name display will stop flashing.

3.1.4. Setup Button Group

SETUP: This button is used to enter the *Setup* menu, which is used to configure the operating modes of the 9625DSK-LGA. (See section 3.2 for an overview of the *Setup* menu.) When you are in the *Setup* menu, this button is also used to back out of menu selections to the next higher menu level or to exit the *Setup* menu and return to normal panel operation.

SELECT: When in the *Setup* menu, this button is used to choose a sub-menu and navigate to the next level down in the menu structure. When you are at the bottom level of the menu system it also accepts numeric values or makes the displayed menu choice the active value for that menu item. When not in the *Setup* menu, this button is also used to fade logos in and out on the selected output bus.

↑, ↓ When in the *Setup* menu, the ↑ and ↓ arrow keys are used to move to various items at the current menu level in the menu system. The ↑ and ↓ arrow keys are also used to enter numeric values for menu choices at the bottom level of the menu system.

When not in the *Setup* menu, the ↑ and ↓ arrow keys are used to select a logo to display.

3.1.5. Control Panel Status Indicators

3.1.5.1. Preview Bus Status Indicators

BKG/A: This LED indicates that the Background/A video input is selected as the source for the preview video bus.

FILL/B: This LED indicates that the Fill/B video input is selected as the source for the preview video bus.

DSK: This LED indicates that the downstream keyer layer is enabled on the Preview Bus when it is ON. When it is OFF it indicates that the downstream keyer layer is disabled on the Preview Bus.

LOGO: This LED indicates that the media key layer is enabled on the Preview Bus when it is ON. When it is OFF it indicates that the logo key layer is disabled on the Preview Bus.

BLACK: This button LED indicates that the internal black video generator is selected as the source for the preview video bus when the LED is flashing and for the program video bus when it is ON solid.

3.1.5.2. Program Bus Status Indicators

BKG/A: This LED indicates that the Background/A video input is selected as the source for the program video bus.

FILL/B: This LED indicates that the Fill/B video input is selected as the source for the program video bus.

DSK: This LED indicates that the downstream keyer layer is enabled on the Program Bus when it is ON. When it is OFF it indicates that the downstream keyer layer is disabled on the Program Bus.

LOGO: This LED indicates that the media key layer is enabled on the Program Bus when it is ON. When it is OFF it indicates that the logo key layer is disabled on the Program Bus.

VOICE OVER: This LED indicates that the audio mix function is enabled on the program audio bus when it is ON.

3.1.5.3. Function Status Indicators

PGM BUS LOCK: This LED indicates that the *Panel Lock* function is active and the remainder of the front panel buttons are disabled.

TRANSITION: This LED indicates that a transition from the Preview Bus to the Program Bus is in process when it is ON. When it is OFF it indicates that no transition is currently in progress.

KEYER: This LED indicates that the downstream keyer layer is enabled on the Program Bus when it is ON and on the Preview Bus when it is flashing. When it is OFF it indicates that the downstream keyer layers are disabled on both buses.

COMM This LED is used to signal two types of communication to the 9625DSK-LGA. Flashing ON approximately every 1.5 seconds indicates that the control panel is communicating with the main microprocessor in the unit. When the 9625DSK-LGA is under automation control, or logos or other media files are being transferred to or from the unit using the Nomad™ or Overture™ software, the LED will be on when the unit is receiving data from the control source.

The control panel has lost communication with the main unit if this LED is OFF continuously. In that case check the cabling if you are using a remote control panel. Otherwise the unit may require a reboot if the control buttons on the control panel are not responding.

3.1.6. Electronics Unit Status Indicators

PSU STATUS 1, 2: These green LEDs indicate that the corresponding power supply is functioning normally. On units fitted with a single power supply the **PSU STATUS 2** LED will be OFF all the time. These LEDs are the only ones present on the electronic units of the remote control versions.

3.1.7. Front Panel Display Functions

The 16 character alphanumeric display is used to show the name of the logo that will be faded in or out by pressing the **MEDIA IN/OUT** button. The display is also used to show the *Setup* menu items to configure the downstream keyer.

3.2. OVERVIEW OF FRONT PANEL OPERATION

3.2.1. Audio Follow Video Switching

The 9625DSK-LGA has two video buses and two four level audio buses. The 9625DSK-LGA can be operated as a simple two input audio follow video switcher. In this mode the audio on the AES PROG audio inputs will follow the BKG/A video input and the audio on the AES ALT audio inputs will follow the FILL/B video input.

The PREVIEW BUS buttons select which inputs will be routed to the Preview Bus outputs. When you select one of the **BKG/A**, **FILL/B**, **DSK** or **BLACK** buttons, the other buttons are automatically deselected. The **BKG/A** button selects the video source from the BGND/A video input. If you are using embedded audio, then the audio embedded on the BGND/A video will also be present on the AES PREV outputs. If you are using discrete AES program audio then the audio from the AES PROG inputs will be present on the AES PREV outputs. The **FILL/B** button selects the video source from the FILL/B video input. If you are using embedded audio, then the audio embedded on the FILL/B video will also be present on the AES PREV outputs. If you are using discrete AES program audio then the audio from the ALT AES inputs will be present on the AES PREV outputs. The **DSK** button displays the background video mixed with the selected FILL/B video (based on the key video or self keyed). For more information about the DSK function refer to section 3.9. If you are using embedded audio, then the audio embedded on the BGND/A video will also be present on the AES PREV outputs. If you are using discrete AES program audio then the audio from the AES PROG inputs will be present on the AES PREV outputs. When the DSK layer is active you can also mix either the audio embedded on the FILL/B video or the ALT AES audio with the program audio. The resulting mixed audio is embedded on the PROG video output and will also be present on the AES PREV outputs. The **BLACK** button selects the internal black generator.

The PROGRAM BUS buttons select which inputs will be routed to the Program Bus outputs. When you select one of the **BKG/A**, **FILL/B** or **DSK** buttons, the other buttons are automatically deselected. The **BKG/A** button selects the video source from the BGND/A video input. If you are using embedded audio, then the audio embedded on the BGND/A video will also be present on the AES PROG outputs. If you are using discrete AES program audio then the audio from the AES PROG inputs will be present on the AES PROG outputs. The **FILL/B** button selects the video source from the FILL/B video input. If you are using embedded audio, then the audio embedded on the FILL/B video will also be present on the AES PROG outputs. If you are using discrete AES program audio then the audio from the ALT AES inputs will be present on the AES PROG outputs. The **DSK** button displays the background video mixed with the selected FILL/B video (based on the Key video or self keyed). For more information about the DSK function refer to section 3.9. If you are using embedded audio, then the audio embedded on the BGND/A video will also be present on the AES PROG outputs. If you are using discrete AES program audio then the audio from the AES PROG inputs will be present on the AES PROG outputs. When the DSK layer is active you can also mix either the audio embedded on the FILL/B video or the ALT AES audio with the program audio. The resulting mixed audio is embedded on the PROG video output and will also be present on the AES PROG outputs. See section 2.6.3 for information on configuring the audio modes.

To transition the Preview Bus to the Program Bus press the **TRANSITION** button. The transition type and rate are set using the *Transition* menu items. When the *Transition Swap Mode* is set to *Swap* the input video and audio of the Program Bus, logos and other media being keyed on Program Bus will be swapped back to the Preview Bus at the end of the transition. When the *Transition Swap Mode* is set to *No Swap* the input video and audio of the Preview Bus will remain unchanged. See section 3.10 for information on configuring transition modes.

3.2.2. Displaying Logos

To control whether a logo is keyed or not, you must first enable the media key layer by pressing the **LOGO** button for the bus you want the logo to appear on. The **LOGO** LED for the respective bus must be illuminated for logos to display on that bus. Scroll to the logo required using the ↑ & ↓ buttons. If the logo is currently being keyed its name will flash in the front panel display. To key the logo into the output video buses with the media layer enabled, press the **MEDIA IN/OUT** button. The logo will fade in according to its programmed fade in time and the logo name display will begin flashing. If the logo is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. To remove a keyed logo from the output video buses, press the **MEDIA IN/OUT** button when the logo name is flashing. The logo will fade out according to its programmed fade out time and the logo name display will stop flashing.

3.3. AN OVERVIEW OF THE SETUP MENU SYSTEM

The *SETUP* menu system uses the 16 digit alphanumeric display and provides a quick, intuitive method of configuring the 9625DSK-LGA. These items are often only required to be set up at the time of installation, and do not pertain to the day-to-day operation of the unit. Figure 3-3 provides an overview of the *Setup* menu system.

3.4. NAVIGATING THE SETUP MENU

To enter the *Setup* menu, press the **SETUP** button. This will bring you to the main *Setup* menu where you can use the ↑ & ↓ buttons to move up and down the list of available sub-menus. Once you have chosen the desired sub-menu, press the **SELECT** button to select the next menu level.

Once in a sub-menu, there may be another menu layer, or there may be a list of parameters to adjust. If there is another set of menu choices, use the ↑ & ↓ buttons to select the desired menu item and press the **SELECT** button. Continue this process until you get to the bottom of the menu tree where the list of parameters to be adjusted is shown.

To adjust any parameter, use the ↑ & ↓ buttons to move up or down the parameter list to the desired parameter. To view the possible values for that item, press the **SELECT** button. The current value for that parameter will be shown with an asterisk (*). Pressing the ↑ & ↓ buttons allows you to show the possible values for the selected parameter. The various parameter values that are not currently selected will NOT have an asterisk (*). When you have stopped at the desired value, press the **SELECT** button to save your selection. The value will be shown with an asterisk (*), indicating that it is now the current value. To move up one level in the menu press the **SETUP** button.

You can select other parameters from that sub-menu by using the ↑ & ↓ buttons, followed by the **SELECT** button. Alternately you can move up one menu item by pressing the **SETUP** button.

When you have made all the desired changes, press the **SETUP** button one or more times until you return to the top of the Menu tree and exit the *Setup* menu.

Each of the menu items, with function explanations, is described in the following sections.

- **GENERAL**
  - Select Standard
  - Reference Setup
  - Update Code
  - Time Setup
  - Input Timing
  - Network Info
  - Serial Control
  - COM D
  - COM E (net)
  - Line 21 Protect
  - B Blanking
  - Unit Name
  - Up Down Timer
  - Automation Debug
  - M2100 Auto Debug
- **MANAGE FILES**
  - Media
  - File
  - To
  - Copy
  - Delete
  - Format
- **MATTE**
  - Matte On/Off
  - Aspect
  - Top
  - Bottom
- **DSK**
  - Key Type
  - Key Gain
  - Key Offset
  - Key Threshold
  - Auto Key Enable
- **TRANSITION**
  - Transition Type
  - Transition Rate
  - Transition Swap
  - Transition Pause
- **PRESET**
  - Recall Preset
  - Store Preset
  - Export Preset
  - Preset Source
  - GPI Setup
    - GPI
    - CLoad Prest
    - CTransition
    - CAction
    - CLogo
    - C Vo 1 – 4 L
    - C Vo 1 – 4 R
    - OLoad Prest
    - OTransition
    - OAction
    - OLogo
    - O Vo 1 – 4 L
    - O Vo 1 – 4 R
  - GPO Setup
    - GPO A
    - GPO B
    - GPO C
    - GPO D
- **Audio Over Trans**
  - VO In Rate
  - VO Out Rate
- **TEMPERATURE**
  - Temp Source
  - Temp Format
  - Set Temperature
- **EAS**
  - EAS Type
  - EAS Vert Pos'n
  - EAS Font
  - EAS Height
  - EAS Rate
  - Warning BG
  - Warning FG
  - Watch BG
  - Watch FG
  - Test BG
  - Test FG
- **MEDIA (Crawl Logos)**
  - H Position
  - V Position
  - Gain
  - Fade In
  - Hold
  - Fade Out
  - Rate
  - Repeat
  - Pause
  - Font Hei
  - Font
  - BG Opacity
  - FG Opacity
  - Crawl BG
  - Crawl FG
- **MEDIA (Static Logos)**
  - H Position
  - V Position
  - Gain
  - Fade In
  - Hold
  - Fade Out
  - UD Timer
- **MEDIA (Animated Logos)**
  - H Position
  - V Position
  - Logo Gain
- **MEDIA (Audio Clips)**
  - CL Repeat
  - CL Config
- **MEDIA (Playlists)**
  - LN (Logo Name)
  - AN (Audio Name)

Figure 3-3: Overview of the Setup Menu System

3.5. FRONT PANEL SETUP MENU – MAIN MENU

The Front panel *Setup* menu is arranged in a layered structure that groups similar configuration items together. The following section provides a brief description of the first level of menus that appear when you enter the menu. Selecting one of these items will take you to the next menu level. Sections 3.6 to 3.15 provide detailed descriptions of each of the sub-menus. The tables in these sections are arranged in an indented structure to indicate the path taken to reach the control. Menu items or parameters that are underlined indicate the factory default values.

GENERAL	This menu is used to set up the video standard, COM ports, network address, time and other miscellaneous settings and to update firmware
MANAGE FILES	This menu is used to manage logos and other media files – to copy them from one media device to another, to delete them, etc.
MATTE	This menu is used to configure the black overlay matte attributes
DSK	This menu is used to configure the DSK functions – key type, gain, and thresholds
TRANSITION	This menu is used to set up the transition type, rate and swap mode
PRESET	This menu is used to save and recall user presets, and to configure the General Purpose inputs and outputs
AUDIO OVER TRANS	This menu is used to set the voiceover transition fade in and fade out rates
TEMPERATURE	This menu is used for setting temperature source, format and temperature
EAS	This menu is used to configure the EAS crawl functions – speed, position, font type and height, and colours (only on EAS optioned units)
MEDIA	This menu is used to adjust media parameters such as to set their fade in, hold and fade out time etc…

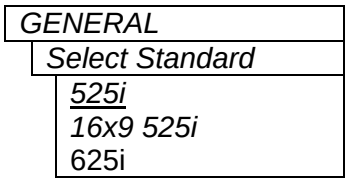
3.6. GENERAL CONFIGURATION ITEMS

The *GENERAL Setup* menu is used to set up various items related to the overall operation of the 9625DSK-LGA such as Video Standard, Time settings, Network info, COM port settings and firmware versions. Table 3-1 shows the items available in the *GENERAL Setup* menu. Sections 3.6.1 to 3.6.4.4 provide detailed information about each of the sub-menus.

Select Standard	Sets the video standard
Reference Setup	Selects whether the timing reference will be the Input video and sets vertical and horizontal offsets
Update Code	Displays product name, firmware version, and option to upgrade unit
Time Setup	Configures the real time clock and LTC timecode input
Input Timing	Configures the horizontal input reference timing
Network Info	Configures the Ethernet Network Address for FTP uploads
Serial Control	Configures the function of the SERIAL CONTROL (C) serial Port
COM D	Configures the function of the COM D serial Port
COM E (net)	Configures the function of the virtual COM E serial Port
Line 21 Protect	Controls whether logos can be placed on Line 21
B Blanking	Selects the source of the blanking information for the B video input
Unit Name	Sets the unit name when used with a M2100 control panel
Up Down Timer	Configures the two up/down timers for time logos
Automation Debug	Debugging tool for the Evertz automation protocol
M2100 Auto Debug	Debugging tool for the M2100 automation protocol

Table 3-1: Top Level of the General Setup Menu

3.6.1. Selecting the Video Standard



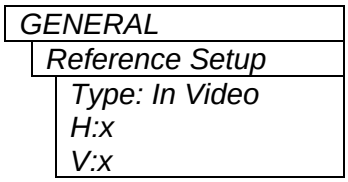
The *Video Standard* menu item is used to set the video standard in use.

Select *525i/59.94* for operation with 4 x 3 aspect ratio 525i/59.94 video conforming to SMPTE 125M.

Select 16x9 *525i* for operation with 16 x 9 aspect ratio 525i/59.94 video conforming to SMPTE 125M. This setting is used when the picture has been anamorphically compressed into a 4 x 3 raster.

Select *625i/50* for operation with 4 x 3 aspect ratio 625i/50 video conforming to EBU TECH 3267-E.

3.6.2. Selecting the Video Timing Reference



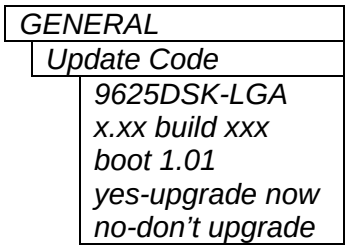
The *Reference Setup* menu item is used to select the timing reference for the 9625DSK-LGA.

Select *In Video* to use the SDI video connected to the BKG/A video input as the timing reference.

Select *H:x* to adjusts horizontal reference timing of the video output with respect to the Reference video.

Select *V:x* to adjust the vertical reference timing of the video output with respect to the Reference video.

3.6.3. Firmware Version and Evoking an Upgrade



This menu will inform the user of the product name, firmware, and boot firmware.

It will also give the user an option if they would like to upgrade the firmware in the unit.

(Note: Firmware upgrades can be performed through software provided in the Keyer Tool Kit CD.)

3.6.4. Configuring the Real Time Clock

The 9625DSK-LGA contains a real time clock that is used to drive the clock display logos that can be placed on the screen. This battery backed up real time clock (known as RTC) free runs on an internal oscillator and can be set from the front panel. When the 9625DSK-LGA is powered up with a valid video input, a separate clock (known as the UTC) is initialized from the RTC and maintains Universal Coordinated time (UTC) accurately from the video input so that it will not drift. The 9625DSK-LGA automatically updates the RTC clock from the UTC clock to minimize long term time drift. In order to keep the UTC clock in sync with your house master time code it should also be locked to incoming linear time code connected to the LTC IN connector. The UTC clock time is internally maintained as Universal Coordinated Time (UTC) but can also be adjusted for time zone offsets from UTC and for daylight saving time, and displayed as local time (Local). The *Time Setup* sub-menus of the *General* setup menu are used to configure the real time clock and display the UTC and Local times.

3.6.4.1. Displaying the Local Time

GENERAL
Time Setup
Local 12:34:50

This menu item is used to display the clock time as local time. (UTC time adjusted for the time zone offset and DST adjustment). The time displays are always shown in the 24 hour time format.

3.6.4.2. Displaying the UTC Time

GENERAL
Time Setup
UTC 12:34:50

This menu item is used to display the UTC time clock. The time displays are always shown in the 24 hour time format.

3.6.4.3. Setting the Real Time Clock

GENERAL
Time Setup
RTC 12:34:50

This menu item is used to display and set the hardware real time clock in the 9625DSK-LGA. The time displays are always shown in the 24 hour time format.

When you press the **SELECT** button, the display shows the current real time clock time which will look similar to the following:

```
12:34:50
```

To set the real time clock press the **SELECT** button and the hours digits will be flashing to indicate that they are in entry mode. Use the ↑ or ↓ buttons to change the hours to the desired value. Then press the **SELECT** button and the minute's digits will begin flashing to indicate that they are in entry mode. Set the minutes and seconds in the same way. When you have entered the correct time press the **SELECT** button to update the hardware real time clock. The second's digits will stop flashing and the time will begin incrementing indicating that the Real Time Clock has been set. When you set the hardware real time clock the UTC clock time will automatically be adjusted.

When there is a valid LTC input to the 9625DSK-LGA, the LTC time will overwrite the Real Time clock that has been entered.

3.6.4.4. Setting the Time Zone Offset

GENERAL
Time Setup
Zone +00:00:00

This menu item allows the user to set a time zone offset between the UTC time and the Local time. This time zone offset will be added to the UTC time along with the Daylight Saving time correction (see section 3.6.4.5) to obtain the Local time. Time zones are normally in one hour or 30 minute increments and can be + or – from UTC. (Time zones east of Greenwich are +, and time zones west of Greenwich are -)

To set the time zone press the **SELECT** button and the hours digits will begin flashing to indicate that they are in entry mode. Use the ↑ or ↓ buttons to change the hours to the desired value. To set negative time zone offsets continue pressing the ↑ or ↓ buttons until the hours values show a negative sign. Then press the **SELECT** button and the minutes digits will begin flashing to indicate that they are in entry mode. Set the minutes and seconds in the same way. When you have entered the correct time press the **SELECT** button to the set the time zone offset. The seconds digits will stop flashing to indicate that the time zone offset has been set.

3.6.4.5. Enabling Daylight Saving Time Compensation

GENERAL
Time Setup
DST Active
off
on

This menu item allows the user to control whether Daylight Saving Time (DST) compensation will be applied to derive the local time.

When set to *off*, Daylight Saving Time compensation will not be applied.

When set to *on* Daylight Saving Time compensation will be applied and the local time will be adjusted back by 1 hour.

The 9625DSK-LGA must be manually changed from Daylight Saving time to Standard time using this menu setting. If you want to automatically keep the time clock in the 9625DSK-LGA in sync with the correct local time, connect a source of linear time code that contains local time to the LTC IN connector. See section 3.6.4.6

3.6.4.6. Selecting Whether the Time Code Input is UTC or Local Time

GENERAL
Time Setup
LTC Time Zone
Local
UTC

This menu item allows the user to select whether incoming time code will be in UTC or local time. This information is necessary to correctly update the RTC clock from the time code.

Select *Local*, when the incoming LTC is local time.

Select *UTC*, when the incoming LTC is Universal Co-ordinated time.

3.6.4.7. Synchronizing the Real Time Clock to the UTC Time

GENERAL
Time Setup
Jam RTC from UTC
SELECT=Confirm

The hardware real time clock (RTC) will drift slightly from the video rate UTC Clock time under normal operation. When this drift exceeds 5 seconds the RTC will be automatically resynchronized to the UTC time. This menu item allows the user to synchronize the RTC to the UTC Clock time immediately.

To synchronize the RTC time immediately, press the **SELECT** button when `RTC force jam` is shown on the display. The front panel display will show `RTC JAMMED` for 1 second after the time has been synchronized.

3.6.4.8. Displaying the Local Date

GENERAL
Time Setup
LDate 00:12:30

This menu item is used to display the local date which is the UTC date adjusted by the time zone in yy:mm:dd format.

3.6.4.9. Displaying the UTC Date

GENERAL
Time Setup
UDate 00:12:30

This menu item is used to display the UTC date in yy:mm:dd format.

3.6.4.10. Setting the Real Time Date

GENERAL
Time Setup
Rdate 00:12:30

This menu item is used to display and set the real time date in the keyer

When you press the **SELECT** button, the display shows the current real time date in yy:mm:dd format.

To set the date press the **SELECT** button and the year digits will begin flashing to indicate that they are in entry mode. Use the ↑ or ↓ pushbuttons to change the year to the desired value. Then press the **SELECT** button and the month digits will begin flashing to indicate that they are in entry mode. Set the month and day in the same way. When you have entered the correct date press the **SELECT** button to update the real time date. When you set the real time date, the UTC date will automatically be adjusted.

When there is a valid LTC input to the keyer with the date encoded in the userbits, the LTC date will overwrite the Real Time date that has been entered.

3.6.4.11. Setting the LTC Date Format

GENERAL
- *Time Setup*
  - *LTC Date Encode*
    - *Auto*
    - *Skotel*

This menu item is used to select the format of the date encoded in the user bits of the LTC. For Skotel time code generators, choose *Skotel.* For all other time code generators choose *Auto.*

3.6.5. Setting the Video Input Timing

The output stage of the 9625DSK-LGA contains a line buffer so that the output video can be timed with respect to the reference applied to the **REF IN** input.

The *H Phase Offset* adjustment is a REAL TIME ADJUSTMENT and will affect the output video timing immediately. These settings should not be adjusted when the output video is in the broadcast chain.

GENERAL
- *Input Timing*
  - *Timing 0*
  - *Timing 0 to 2047*

This menu item enables the user to set the horizontal input reference timing. Setting this value to 0 samples indicates that the reference will have no sample delay.

Increasing the value will delay the input reference video in one-sample increments.

3.6.6. Setting Up the Network Addresses

The *Network Info* sub-menus of the *General* Setup menu are used to configure the 9625DSK-LGA for FTP uploads of logos and other media. In most cases you will only have to plug in your Ethernet cable and configure the network IP address (*A*) to contain an unused IP address in the valid range. Entries are made in standard IP address format. Please consult your Network administrator for IP address allocations, netmask and gateway requirements.

To set the various *Network Info* parameters, press the **SELECT** button when the desired parameter is shown on the front panel display (indicated by the letter on the left side of the display). The left group of digits will be flashing to indicate that they are in entry mode. Use the ↑ or ↓ buttons to change this group to the desired value. Then press the **SELECT** button and the next group of digits will be flashing to indicate that they are in entry mode. Set the remaining groups of digits in the same way. When you have entered the correct value for the right group of digits, press the **SELECT** button to set the parameter. The display will stop flashing to indicate that the parameter value has been set.

The settings become active immediately after you return to the *Network Info* menu level. A reboot is not required.

3.6.6.1. Setting Up the IP Address

GENERAL
Network Info
A 196.168.1.1

This menu item sets the unique IP address of the 9625DSK-LGA within the network. 192.168.1.XXX is an example of an IP address in a private (internal) network. If connecting multiple 9625DSK-LGAs, take care not to use the same IP address for each.

3.6.6.2. Setting Up the Sub Net Mask

GENERAL
Network Info
M 255.255.255.0

This menu item sets the "subnet mask" of the network. Specifically, this parameter outlines all the IP addresses that can communicate with the 9625DSK-LGA. This parameter is usually set to 255.255.255.0 for a private network.

3.6.6.3. Setting Up the Gateway

GENERAL
Network Info
G 192.168.1.1

This menu item identifies the IP address of the "gateway" (commonly referred to as the "firewall"). In its simplest sense the gateway could be the PC directly connected to the 9625DSK-LGA and running the network application software (i.e. InstaLogo™, Nomad™ or Overture™). In a private network, this gateway could be identified as 192.168.1.YYY.

3.6.6.4. Displaying the Ethernet Hardware Address

GENERAL
Network Info
0:2:C5:01:04:A5

This menu item displays the Ethernet hardware address of the unit (which cannot be changed).

3.6.7. Setting the Serial Protocol for COM Ports C and D

The four serial ports on the 9625DSK-LGA are used for various functions. The UPGRADE (A) port is used as a console port for upgrading firmware and other utility functions. The REMOTE PANEL (B) port is only available on remote control versions of the 9625DSK-LGA and is used to connect the remote control panel. The SERIAL CONTROL (C) port and COM D ports are programmable and can be used for a variety of functions. There are two identical menu items on the *GENERAL* menu that are used to configure the COM C and COM D ports. For simplicity only one of these menu items will be shown in the manual.

- *GENERAL*
  - *COM D*
    - *None*
    - *Eas cg*
    - *Temperature*
    - *Automation*
    - *Control Panel B*
    - *Console A*
    - *M2100_AUTO*
    - *XY_AUTO*

This menu item allows you to set the communications protocol that will be used on COM Port D.

Select *None* to disable the use of COM Port D

Select *Eas cg* when you have the EAS option (+EAS) enabled and have an EAS decoder connected to the port. See section 5.1 for more information about connecting the EAS decoder. See sections 5.2 and 3.14 for information about configuring the EAS functions of the 9625DSK-LGA.

Select *temperature* when you have the optional temperature probe connected to the port. See section 2.10 for more information about connecting the temperature probe. The temperature is displayed using a preformatted Temperature logo, which is created using the InstaLogo™ or Overture™ software. See the InstaLogo™ section of the Keyer Toolkit manual or the Temperature Probe addendum which shipped with your temperature probe for information on creating the Temperature logo.

There are three settings that are used when the 9625DSK-LGA is under automation control. See your automation vendor for information about the protocols that are supported.

Select *Automation* when you want to control the 9625DSK-LGA using the Evertz automation protocol. This is the setting you should use when you are controlling the 9625DSK-LGA from the Evertz MetaCast 2 software.

Select *M2100-auto* when you want to control the 9625DSK-LGA using the Grass Valley M2100 9625DSK-LGA automation protocol.

Select *XY-AUTO* when you want to control the 9625DSK-LGA using the xy logo inserter automation protocol. Note that only logo functions of the 9625DSK-LGA can be controlled using the xy automation protocol.

3.6.8. Setting the Serial Protocol for Serial Control

- *GENERAL*
  - *Serial Control*
    - *None*
    - *Eas cg*
    - *Temperature*
    - *Automation*
    - *Control Panel B*
    - *Console A*
    - *M2100_Auto*
    - *XY_Auto*

This menu item allows you to set the communications protocol that will be used on Serial Control.

Select *None* to disable the use of the Serial Control

Select *Eas cg* when you have the EAS option (+EAS) enabled and have an EAS decoder connected to the port. See section 5.1 for more information about connecting the EAS decoder. See sections 5.2 and 3.14 for information about configuring the EAS functions of the 9625DSK-LGA.

Select *temperature* when you have the optional temperature probe connected to the port. See section 2.10 for more information about connecting the temperature probe. The temperature is displayed using a preformatted Temperature logo, which is created using the InstaLogo™ or Overture™ software. See the InstaLogo™ or Overture™ section of the Keyer Toolkit manual or the Temperature Probe addendum which shipped with your temperature probe for information on creating the Temperature logo.

There are three settings that are used when the 9625DSK-LGA is under automation control. See your automation vendor for information about the protocols that are supported.

Select *Automation* when you want to control the 9625DSK-LGA using the Evertz automation protocol. This is the setting you should use when you are controlling the 9625DSK-LGA from the Evertz MetaCast 2 software.

Select *M2100-auto* when you want to control the 9625DSK-LGA using the Grass Valley M2100 9625DSK-LGA automation protocol.

Select *XY-Auto* when you want to control the 9625DSK-LGA using the xy logo inserter automation protocol. Note that only logo functions of the 9625DSK-LGA can be controlled using the xy automation protocol.

3.6.9. Setting the Serial Protocol for COM E (net)

- *GENERAL*
  - *COM E (net)*
    - *None*
    - *Temperature*
    - *Automation*
    - *Control Panel B*
    - *Console A*
    - *M2100_AUTO*
    - *XY_AUTO*

This menu item allows you to set the communications protocol that will be used on COM E (net).

Select *None* to disable the use of the Serial Control

Select *Temperature* when you have the optional temperature probe connected to the port. See section 2.10 for more information about connecting the temperature probe. The temperature is displayed using a preformatted Temperature logo, which is created using the InstaLogo™ or Overture™ software. See the InstaLogo™ or Overture™ section of the Keyer Toolkit manual or the Temperature Probe addendum which shipped with your temperature probe for information on creating the Temperature logo.

There are three settings that are used when the 9625DSK-LGA is under automation control. See your automation vendor for information about the protocols that are supported.

Select *Automation* when you want to control the 9625DSK-LGA using the Evertz automation protocol. This is the setting you should use when you are controlling the 9625DSK-LGA from the Evertz MetaCast 2 software.

Select *M2100-auto* when you want to control the 9625DSK-LGA using the Grass Valley M2100 9625DSK-LGA automation protocol.

Select XY-*Auto* when you want to control the 9625DSK-LGA using the xy logo inserter automation protocol. Note that only logo functions of the 9625DSK-LGA can be controlled using the xy automation protocol.

3.6.10. Protecting Line 21 Captions

- *GENERAL*
  - *Line 21 Protect*
    - *L21 Prot: Yes*
    - *L21 Prot: No*

This menu item allows the user to control logos that can be placed on line 21 where closed captions are located in North American television systems. When the video standard is set to one of the 625 line standards, the setting of this menu item is ignored.

When set to *Yes*, logos can be placed vertically beginning at line 22, preserving any closed caption information that is encoded on line 21.

When set to *No*, logos can be placed vertically beginning at line 21.

3.6.11. Setting the B Blanking

- *GENERAL*
  - *B Blanking*
    - *B blanking: B*
    - *B Blanking: A*

This menu item allows the user to set the B Blanking source.

When set to *B*, the blanking source will be the FILL/B video input.

When set to *A*, the blanking source will be the BKG/A video input.

3.6.12. Setting the Unit Name

GENERAL
Unit Name
EVZx

This menu item allows the user to set the keyer unit name required when the 9625DSK-LGA keyer is used in conjunction with a M2100 control panel. Each keyer connected to the panel must have a unique name assigned.

EVZ1 through EVZ8 are available. EVZ1 is the default.

3.6.13. Setting the Up Down Timer

GENERAL
Up Down Timer
Timer: Timer1
Timer: Timer2

This menu item selects which of the 2 timers the rest of the sub-menu items will affect.

Timer 1 is selected by default. To select Timer 2, press the **SELECT** button and use the 🡻 pushbutton to scroll to *Timer2*, then press the **SELECT** button again.

GENERAL
Up Down Timer
Hour: 0

This menu item sets the hours for the timer. It can be set to values from 0 to 23 hours.

To change the value press the **SELECT** button then use the 🡹 or 🡻 pushbuttons to change the hours for the timer. Pressing **SELECT** again will set the value.

GENERAL
Up Down Timer
Minute: 0

This menu item sets the minutes for the timer. It can be set to values from 0 to 59 minutes.

To change the value press the **SELECT** button then use the 🡹 or 🡻 pushbuttons to change the minutes for the timer. Pressing **SELECT** again will set the value.

GENERAL
Up Down Timer
Second: 0

This menu item sets the seconds for the timer. It can be set to values from 0 to 59 seconds.

To change the value, press the **SELECT** button and then use the 🡹 or 🡻 pushbuttons to change the seconds for the timer. Pressing **SELECT** again will set the value.

GENERAL
Up Down Timer
Direction: Down
Direction: Up

This menu item sets the direction for the Timer.

To change the direction, press the **SELECT** button and then use the 🡹 or 🡻 pushbuttons to scroll through the options. Pressing **SELECT** button again will set the value.

3.6.14. Automation Debug Functions

Two automation debug functions are provided in the *GENERAL* menu. One is for the Evertz automation protocol and is called *Automation Debug*. The other is for the M2100 automation protocol and is called *M2100 Auto Debug*. Both work in essentially the same way. When you turn on one of the automation debug functions, the data packets being received from the automation system are output to the Upgrade RS-232 serial port. To view the data, use a terminal program with the following settings: baud rate: 57600, data bits: 8, parity: none, stop bits: 2, flow control: none.

These functions are used to view the commands that are being sent by the automation system. If you are having problems with a unit that is being controlled from automation, Evertz service personnel may ask you to provide a capture of the data being output on the serial port when the debug function is turned on.

GENERAL
Automation Debug
Off
On

This menu item sets the Automation Debug ON or OFF.

The OFF command is selected by default. To set the Automation Debug, press the **SELECT** button and then use the ↑ or ↓ pushbuttons to scroll through the options. Pressing the **SELECT** button gain will set the value.

GENERAL
M2100 Auto Debug
Off
On

This menu item sets the M2100 Auto Debug ON or OFF.

The OFF command is selected by default. To set the M2100 Auto Debug, press the **SELECT** button and then use the ↑ or ↓ pushbuttons to scroll through the options. Pressing the **SELECT** button gain will set the value.

3.7. FILE MANAGEMENT CONFIGURATION ITEMS

The 9625DSK-LGA comes standard with a 128 MB internal flash memory for storing logos and other media files. This can be upgraded to 1 GB of internal flash memory. The 9625DSK-LGA can also be fitted with a removable compact flash expansion drive that can be used with either 128 MB or 1 GB compact flash memory cards. The *MANAGE FILES Setup* menu is used to set up various items related to the moving logo files between these different media drives. Table 3-2 shows the items available in the *MANAGE FILES Setup* menu. Sections 3.7.1 to 3.7.6 provide detailed information about each of the sub-menus.

Media	Selects the source media for the file operation
File	Selects the media file for the file operation
To	Selects the destination media for the file operation
Copy	Copies the media *File* from the *Source* to the *Destination* media
Delete	Deletes the media *File* from the *Source* media
Format	Erases the *Destination* media

Table 3-2: Top Level of the Manage Files Setup Menu

3.7.1. Selecting the Source Media

MANAGE FILES
Media
[serial number]

This menu item is used to select the source media drive that you are working with. Each media drive is identified by the serial number of the compact flash media that is currently in the drive. Units that are not fitted with one of the compact flash expansion drives will only have 1 item in this list.

Use the ↑ or ↓ buttons to display the serial number of the media that will be the source for the file operation and press the **SELECT** button.

3.7.2. Selecting the Media File Name

MANAGE FILES
File: boot
[file name]

This menu item is used to select the file name of the logo or other media file that you want to perform the file operation on.

Use the ↑ or ↓ buttons to display a list of all the media files on the drive selected with the *Media* menu item. When you have selected the desired media file press the **SELECT** button.

3.7.3. Selecting the Destination Media

MANAGE FILES
To
[serial number]

This menu item is used to select the destination media drive that you are working with. Each media drive is identified by the serial number of the compact flash media that is currently in the drive. Units that are not fitted with one of the compact flash expansion drives will only have 1 item in this list.

Use the ↑ or ↓ buttons to display the serial number of the media that will be the source for the file operation and press the **SELECT** button to choose the displayed item.

3.7.4. Copying a File from one Drive to Another

MANAGE FILES
Copy

This menu item is used to make a copy of the file specified by the *File* menu item from the source media (chosen by the *Media* menu item) to the destination media (chosen by the *To* menu item).

Press the **SELECT** button to initiate the copy function. If a file of the same name already exists on the destination media, it will be overwritten in the copy function. If the target item is active (e.g. the logo is being keyed), the copy function will fail.

3.7.5. Deleting a File

MANAGE FILES
Delete

This menu item is used to delete the file specified by the *File* menu item from the source media (chosen by the *Media* menu item).

Press the **SELECT** button to initiate the delete function. If the file is active (e.g. the logo is being keyed), the delete function will fail.

3.7.6. Erasing all the Files from a Media Disk

MANAGE FILES
Format

This menu item is used to delete all the files from the source media (chosen by the *Media* menu item).

Press the **SELECT** button to initiate the format function. If there are active files on the media (e.g. one or more of the logo files are being keyed), the format function will fail.

Warning, this function is not recommended but is provided as last resort. The FORMAT function will completely remove all Media items, logos etc., from the device specified in the MEDIA sub-menu. There is no undo provided.

3.8. MATTE CONFIGURATION ITEMS

The 9625DSK-LGA has a black overlay matte that blacks out video and produces a letterbox effect on the output video. The *MATTE Setup* menu is used to configure the black overlay matte that can be applied over the program video. Table 3-3 shows the items available in the *MATTE Setup* menu. Sections 3.8.1 to 3.8.3 provide detailed information about each of the sub-menus.

Matte On/Off	Selects whether the matte is being keyed over the video or not
Aspect	Sets the aspect ratio of the matte
Top	Sets the last line of the top matte in user defined aspect ratio mode
Bottom	Sets the first line of the bottom matte in user defined aspect ratio mode

Table 3-3: Top Level of the Matte Setup Menu

3.8.1. Turning the Matte On and Off

MATTE
Matte On/Off
Matte: Enabled *Matte: Disabled*

This menu item is used to turn the matte on and off.

Select *enabled* to turn on the black matte overlay. This matte is on the top layer of the keyer and will overwrite all the video on the respective lines of the active picture. The matte does not blank the lines in the vertical interval.

Select *disabled* to turn off the black matte overlay.

3.8.2. Setting the Matte Aspect Ratio

MATTE
Matte Aspect (1:33)
aspect: 1.33
aspect: 1.77
aspect: 1.85
aspect: 2.35
aspect: user

This menu item is used to set the aspect ratio of the matte.

There are three pre-defined aspect ratios available. When you select one of these aspect ratios the 9625DSK-LGA will automatically set the *Matte Top* and *Matte Bottom* menu items.

In addition you can set a user defined aspect ratio by manually changing the *Matte Top* and *Matte Bottom* menu items. (See section 3.8.3.)

3.8.3. Setting a User Defined Matte Aspect Ratio

There are two menu items that allow the user to define custom aspect ratios for the matte. Selecting a pre-defined aspect ratio will lose any changes you have made to the *Matte Top* and *Matte Bottom* menu items unless they are stored using the user presets (see section 3.11). When you manually change the *Matte Top* and *Matte Bottom* settings the *Matte Aspect* will show the aspect ratio as *(user).*

MATTE
Top
Top: x

This menu item is used to set the bottom line of the *Top* matte.

Use the ↑ or ↓ buttons to change the line number to the desired value. Either field 1 or field 2 lines can be used.

MATTE
Bottom
Bottom: x

This menu item is used to set the top line of the *Bottom* matte.

Use the ↑ or ↓ buttons to change the line number to the desired value. Either field 1 or field 2 lines can be used.

3.9. DOWNSTREAM KEYER CONFIGURATION ITEMS

The 9625DSK-LGA has a downstream keyer layer that allows the user to key objects into the output video. The *DSK Setup* menu is used to configure the downstream keyer functions – key type, gain, and thresholds. Table 3-4 shows the items available in the *DSK Setup* menu. Sections 3.9.1 to 3.9.5 provide detailed information about each of the sub-menus.

Key Type	Selects whether the DSK will perform a self key or use the supplied key and fill signals
Key Gain	Adjusts the transparency of the keyed object with respect to the key input
Key Offset	Shifts the base level for the entire range of colour values with respect to the key input
Key Threshold	Sets the level of the Fill signal where the self key will occur
Auto Key Enable	Selects whether automation can turn the Media layer ON and OFF

Table 3-4: Top Level of the DSK Setup Menu

3.9.1. Setting the Downstream Key Type

DSK
Key Type
Type: input Ttype: self

This menu item is used to select whether the downstream keyer will use the key and fill input to perform the keying function or whether it will perform a self-key.

Select *input* to use the key and fill inputs provided on the KEY/C and FILL/B video inputs of the 9625DSK-LGA respectively.

Select *self* to perform a hard self-key of the FILL/B video input using the FILL/B luminance threshold value set in the *Key Threshold* menu item.

3.9.2. Setting the Downstream Key Object Transparency

DSK
Key Gain
Gain: 100 Gain: 50 to 170

This menu item is used to modify the opacity (transparency) of the keyed object used in *input* key mode.

Use the ↑ or ↓ buttons to change the *Key Gain* value. The default *Key Gain* value of 100 will leave the transparency of the keyed object unmodified from that defined by the key signal. Lowering the *Key Gain* value will reduce the opacity of the keyed object (i.e. make it more transparent). Increasing the *Key Gain* value will increase the opacity of the keyed object (i.e. make it less transparent).

3.9.3. Setting the Downstream Key Object Offset

DSK
Key Offset
Offset: 0 Offset: -4096 to 4095

This menu item is used to modify the key offset value used in *input* key mode. This value is the level that will be considered as black on the key input, and should not normally be changed from its default value of 0.

3.9.4. Setting the Downstream Self Key Threshold

DSK
Key Threshold
Thresh.: 4 Thresh: 4 to 1020

This menu item is used to modify the threshold value used in *Self Key* mode. The *Self Key* is a hard key based on the luminance value of the fill signal applied to the FILL/B video input. All luminance values that are above the *Key Threshold* will be keyed from the Fill signal. All values from the key that fall below the *Key Threshold* will be keyed from the background video.

The default value for the *Key Threshold* is 4, which is black.

3.9.5. Allowing Automation to Control the Media Layer

DSK
Auto Key Enable
Ctrl media: yes Ctrl media: no

Some automation systems do not create a distinction between the Media layer (used for keying logos) and the Downstream Keyer layer. This control is provided to prevent the automation from turning the Media layer on and off at the same time as the DSK layer. Verify the functionality of your automation system before changing this menu item.

3.10. TRANSITION CONFIGURATION ITEMS

The 9625DSK-LGA can transition between the video sources using a variety of standard transition types. The *TRANSITION Setup* menu is used to configure the transition type, rate, pause and swap mode. Table 3-5 shows the items available in the *TRANSITION Setup* menu. Sections 3.10.1 to 3.10.4 provide detailed information about each of the sub-menus.

Transition Type	Selects the type of video transition
Transition Rate	Adjusts the rate of the video transition
Transition Swap	Selects whether the Program and Preview Buses will swap after the transition.
Transition Pause	Selects whether the transition can be paused

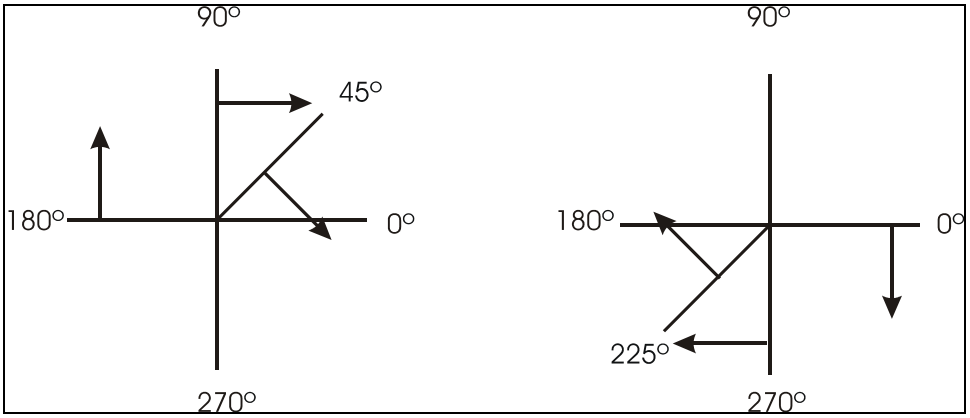
Table 3-5: Top Level of the Transition Setup Menu

3.10.1. Setting the Transition Type

TRANSITION
- *Transition Type*
  - *Type: Fade*
  - *Type: Cut*
  - *Type: Wipe 315*
  - *Type: Wipe 270*
  - *Type: Wipe 225*
  - *Type: Wipe 180*
  - *Type: Wipe 135*
  - *Type: Wipe 90*
  - *Type: Wipe 45*
  - *Type: Wipe 0*

This menu item is used to select the type on transition you would like applied when the **TRANSITION** button is pressed. Transition effects only appear on the program output bus. Transitions on the preview output bus are always a Cut type performed at the end of the transition to program.

The numbers following the wipe patterns reference the angle of the wipe and direction of the wipe. Arrows indicate direction of wipe. For example, a *Wipe 45* transition will start a 45 degree wipe that will progress from the top left of the screen to the bottom right of the screen.



3.10.2. Setting the Transition Rate

TRANSITION
- *Transition Rate*
  - *1 to 600*

This menu item is used to set duration (time) of the transition. The duration is measured in frames.

Use the ↑ or ↓ buttons to change the *Transition Rate* value and press the **SELECT** button.

3.10.3. Setting the Transition Swap Mode

TRANSITION
Transition Swap
Swap: Swap
Swap: No Swap

When set to *Swap* the input video and audio of the Preview Bus and the Program Bus will be swapped at the end of the transition. Logos and other media being keyed on the respective buses will also be swapped with the inputs.

When set to *No Swap* the input video and audio of the Preview Bus will be transferred to the Program Bus transition. Logos and other media being keyed on the Preview Bus will also be transferred to the Program Bus. The Preview Bus will remain unchanged.

3.10.4. Pausing a Transition

TRANSITION
Transition Pause
Pause: On
Pause: Off

This menu item is used to set whether the Transition can be paused.

When set to *On*, the transition may be paused by pressing the **TAKE** button while the transition is being performed. To continue the transition, press the **TAKE** button again.

When set to *Off,* the transition cannot be paused.

3.11. PRESET CONFIGURATION ITEMS

The 9625DSK-LGA has 10 user presets that can store pre-defined configurations for such things as Matte settings, Transition settings and DSK settings. The parameter values stored are the menu settings that are currently based on the status of the Program Bus. Therefore, if you would like to store a preset that has a 2.35 matte applied, you must first configure the *Matte Aspect* and *Matte Enable* menu items, then store the preset at one of the user preset addresses. When presets are recalled, the settings are recalled to the Preview Bus and will not show on the Program Bus until the **TRANSITION** button is pressed, or a GPI trigger invokes the transition.

The *PRESET Setup* menu is used to store and recall user presets as well as to configure the GPI and GPO functions. Table 3-6 shows the items available in the *PRESET Setup* menu. Sections 3.11.1 to 3.11.6 provide detailed information about each of the sub-menus.

After upgrading the 9625DSK-LGA with new firmware, all presets should be recalled using the *Recall Preset* menu item, the values for new features must be set, and the preset must be saved again using the *Store Preset* menu item.

IF THIS IS NOT DONE, OLD PRESETS COULD BE RECALLED WITH UNDESIRABLE SETTINGS.

Recall Preset	Recalls 1 of the 10 user presets to the Preview Bus
Store Preset	Stores the Program Bus settings to 1 of the 10 user presets
Export Preset	Exports 1 of the 10 user presets to the COM A port as ASCII text
Preset Source	Selects whether the settings of the Preview Bus or the Program Bus will be saved as a preset
GPI Setup	Configures the actions triggered by the GPI inputs
GPO Setup	Configures the actions of the GPO outputs

Table 3-6: Top Level of the Preset Setup Menu

3.11.1. Recalling a User Preset

PRESET
- *Recall Preset*
  - *Recall # 1*

This menu item is used to recall 1 of the 10 user presets to the Preview Bus.

Use the ↑ or ↓ buttons to select the preset to restore. When you press the **SELECT** button the preset will be restored to the Preview Bus overwriting the active preset. These settings will show on the Program Bus when the **TAKE** button is pressed, or a GPI trigger invokes the transition.

3.11.2. Storing a User Preset

PRESET
- *Store Preset*
  - *Store # 1*

This menu item is used to store the Program Bus settings to 1 of the 10 user presets.

Use the ↑ or ↓ buttons to select which preset to save the settings to. When you press the **SELECT** button the settings will be saved overwriting any preset that was previously stored at that location.

3.11.3. Exporting a User Preset

PRESET
- *Export Preset*
  - *dump preset # 1*

This menu item is used to send the settings to 1 of the 10 user presets to the console serial port (UPGRADE 232) as ASCII text. This function is useful in archiving the settings of the presets or for diagnostic purposes.

Use the ↑ or ↓ buttons to select the preset that you want to export. When you press the **SELECT** button the settings will be sent as ASCII text to the UPGRADE 232 serial port. To capture these settings you can use any terminal program such as HyperTerminal. Connect the computer using the instruction in section 6.2.2, and then use the Text capture function of your terminal program to save the ASCII text.

3.11.4. Selecting the Source of the Preset Settings

PRESET
Preset Source
store program
store preview

This menu item is used to select the source of the preset settings.

Select *store program* to use the Program Bus as the source of the preset settings.

Select *store preview* to use the Preview Bus as the source of the preset settings.

3.11.5. Configuring the GPI Inputs

The 9625DSK-LGA is fitted with 8 general purpose inputs (GPIs) that can be configured to trigger 2 different actions - *On Closure* and *On Open*. For example, the *On Closure* event can be used to load a preset and perform a transition to the Program Bus. The *On Open* event for the same GPI can be used to load a different user preset and perform a transition to the Program Bus. For each event you can configure a preset to load, transition to perform and logo to display.

GPI can also be configured using GPI script files, which are text-based files that can be programmed and sent to your unit by Nomad™ or Overture™. The syntax is important as the script represents programming code that will be executed when the allocated GPI trigger event occurs. There are 8 GPI inputs. Each input has 2 events: close and open. You can program scripts for each of these 16 events. If a script file is present on the flash file system then the unit will process the script when the event is triggered. If the script file is not present when a GPI event is triggered, then the internal GPI menu settings will be used.

The GPI script files are text files therefore they can be easily edited in notepad. See section 3.16.7 for more information on GPI scripting.

3.11.5.1. Selecting One of the GPI Inputs to Configure

PRESET
GPI Setup
Configure GPI:A
GPI=A to H

This menu item is used to select one of the GPI inputs that will be configured using the other menu items in the *GPI SETUP* menu branch.

When you first enter this menu branch the selected GPI input will be shown. To change to configuring another GPI input press the **SELECT** button. The display will show `GPI=A` indicating that the GPI input can be changed. Use the ↑ or ↓ buttons to select the GPI input you wish to configure and press the **SELECT** button. You can configure the preset to be affected when the selected GPI input is closed and opened using the other menu items in the *GPI SETUP* menu branch.

3.11.5.2. Configuring the GPI Actions

There are 5 menu items that configure the actions when the selected GPI closes (*CLoad, CTransition*, *CAction, CLogo* and *CVo)*. There are also 5 menu items that configure the actions when the selected GPI opens (*OLoad, OTransition*, *OAction*, *OLogo* and *OVo)*. For the sake of clarity in the manual only, the *On Close* event menu items will be shown. The applicable GPI is shown on the left of the front panel display. Each GPI can be independently configured by first selecting the GPI using the *GPI* menu item described in section 3.11.5.1.

PRESET
GPI Setup
A CLoad Prest:NON
NON
1 to 10

This menu item is used to select the preset that will be loaded when the GPI input is closed to ground.

If you do **not** want to load a user preset when the GPI is closed, select *none* item. If *none* is selected then the existing settings will be used.

Select *1* to *10* to load a specific user preset when the GPI is closed.

PRESET
GPI Setup
A CTransition
A CTransition: No
A CTransition: Ye

This menu item is used to select whether a transition will occur when the GPI is closed to ground.

If you do not want to perform a transition when the GPI is closed, select the *No* item.

Select *Ye* (yes) to perform a transition when the GPI is closed.

PRESET
GPI Setup
A CAction
A CAction: NONE
A CAction: CUE
A CAction: IN
A CAction: OUT
A CAction: TOGGLE
A CAction: DUCK I
A CAction: DUCK O
A CAction: DUCK
A CAction: ALL OU
A CAction: TIMER1
A CAction: Timer2

This menu item is used to select the action that will occur when the GPI input is closed to ground.

Select *None* to not perform any action.

Select *Cue* to load the logo selected by the *CLogo* menu item into memory. The logo will not be displayed by this action.

Select *In* to load the logo selected by the *CLogo* menu item into memory and fade it in.

Select *Out* to fade out the logo selected by the *CLogo* menu item.

Select *Toggle* when the GPI is closed.

Select *Duck I* to begin a 'Duck Audio Insert'. This action is the same as pressing the **EXT AUDIO MIX** button when it is not illuminated.

Select *Duck O* to end a 'Duck Audio Insert'. This action is the same as pressing the **EXT AUDIO MIX** button when it is illuminated.

Select *Duck* to toggle the state of the 'Duck Audio Insert'. If a 'Duck Audio Insert' is in effect it will be stopped or if a 'Duck Audio Insert' is not in effect it will be started. This function is useful if you want to use a momentary contact closure as opposed to a maintained contact closure to trigger a voiceover, but the disadvantage is that the current state of the voiceover is not guaranteed.

Select *All Out* to fade out all logos.

Select *TIMER1* or *TIMER2* to initiate a count up or count down function for a time logo.

- *PRESET*
  - *GPI Setup*
    - *A CLogo: (none)*
      - *None*
      - *List of logos*

This menu item is used to select a logo to be acted on if the *CAction* menu item is set to *Cue, In or Out*

Select *None* to disable any logo actions.

Use the ↑ or ↓ buttons to select from the list of available logos and press the **SELECT** button to make this the active logo for the *CAction* menu item.

- *PRESET*
  - *GPI Setup*
    - *A C Vo*
      - *A C Vo 1L:(A src)*
      - *A C Vo 1R:(A src)*
      - *A C Vo 2L:(A src)*
      - *A C Vo 2R:(A src)*
      - *A C Vo 3L:(A src)*
      - *A C Vo 3R:(A src)*
      - *A C Vo 4L:(A src)*
      - *A C Vo 4R:(A src)*

This menu item is used to select the Voice Over input that will be used when the GPI input is closed to ground. This menu item is only applicable when the *CAction* menu item is set to *Duck, Duck In* or *Duck Out.* For all other *CAction* menu settings, the voiceover input will not be changed when the GPI is closed.

Select the desired audio source input to be used for the voiceover source. See section 3.16.2 for audio source definitions.

3.11.6. Configuring the GPO Outputs

The 9625DSK-LGA is fitted with four contact closure general-purpose outputs (GPOs) that can be used as tallies for various functions. There are individual menu items to configure each of the GPOs. For simplicity, only the menu for GPO A will be shown.

- *GPO Setup*
  - *GPO A*
    - *GPO A: none*
    - *GPO A: Power OK*
    - *GPO A: PSUs Okay*
    - *GPO A: PSU2 Okay*
    - *GPO A: PSU1 Okay*
    - *GPO A: Voice Ove*
    - *GPO A: Logo Stat*
    - *GPO A: DSK Statu*
    - *GPO A: Prog BLK*
    - *GPO A: Prog B*
    - *GPO A: Prog A*

This menu item is used to select the function of the GPO A general-purpose output. The output will be low when it is active.

Select *none* to disable the output.

Select *Power OK* to make the GPO low when either PSU1 or PSU2 are functioning.

Select *PSUs Okay* to make the GPO low when both PSU1 and PSU2 are functioning.

Select *PSU2 Okay* to make the GPO low when PSU2 is functioning.

Select *PSU1 Okay* to make the GPO low when PSU1 is functioning.

Select *Voice Ove* to activate the output when the voiceover on the program output bus is active.

Select *Logo Stat* to activate the output when the media key layer on the program output bus is active.

Select *DSK Statu* to activate the output when the DSK layer on the program output bus is active.

Select *Prog BLK* to activate the output when the program output bus input is the internal black generator.

Select *Prog B* to activate the output when the program output bus input is FILL/B.

Select *Prog A* to activate the output when the program output bus input is BKG/A.

3.12. VOICE OVER TRANSITION CONFIGURATION ITEMS

The 9625DSK-LGA has the ability to mix audio from an external audio input (often referred to as voiceovers) over the normal program audio. This audio can be emergency alerts required by Emergency Alert System (EAS) or other information. For example, this feature could be used to provide information about upcoming programs while the credits from the previous program are being played. See section 3.16 on HTML audio for information on selecting the source of the voiceover audio as well as configuring the audio levels.

The *Audio Over Trans* setup menu is used to configure the fade in and fade out times for the voiceover audio. The following section provides detailed information about each of the sub-menu items:

Audio Over Trans
VO In Rate
VO In Rate: 30
1 to 600

This menu item is used to set the voiceover fade in transition rate. The duration is measured in frames.

Use the ↑ or ↓ pushbuttons to change the *VO In Rate* value and press the **SELECT** button.

Audio Over Trans
VO Out Rate
VO Out Rate: 100
1 to 600

This menu item is used to set the voiceover fade out transition rate. The duration is measured in frames.

Use the ↑ or ↓ pushbuttons to change the *VO Out Rate* value and press the **SELECT** button.

3.13. TEMPERATURE CONFIGURATION ITEMS

The 9625DSK-LGA has the ability to insert a logo that displays the current local temperature. The *Temperature* setup menu is used to configure parameters relating to these types of logos. The following section provides detailed information about each of the sub-menu items:

Temperature
Temp Source
Source: Probe
Source: Manual
Source: METAR

This menu item is used to select the source of the temperature that will be displayed in temperature type logos.

Select *Probe* to take the temperature from the optional temperature probe. See section 2.10 for more information on using the temperature probe.

Select *Manual* to manually set the temperature via the *Set Temperature* menu item.

Select *METAR* to take the temperature from METAR data acquired via the Internet. See section 3.16.6 for more information on configuring the 9625DSK-LGA to acquire METAR data.

Temperature
Temp Format
Format: Fahrenhe
Format: Celsius

This menu item is used to set the format of the temperature as set by the *Set Temperature* menu item.

Select *Fahrenhe* if the temperature entered is in degrees Fahrenheit.

Select *Celsius* if the temperature entered is in degrees Celsius.

Note: This menu item is only used when the *Temp Source* menu item is set to *Manual.* When you create a temperature logo, you select the format as well. If for example you have created a temperature logo that is formatted for Celsius and you manually set the temperature in degrees Fahrenheit, the 9625DSK-LGA will automatically convert the value to degrees Celsius so that the correct value is displayed in the logo.

Temperature *Set Temperature* *Degree: 20* *-600 to 600*	This menu item is used to set the temperature to be displayed in temperature type logos when the *Temp Source* menu item is set to *Manual.* Use the ↑ or ↓ pushbuttons to change the temperature value and press the **SELECT** button to set your desired temperature.

3.14. EAS CONFIGURATION ITEMS (EAS OPTIONED UNITS ONLY)

When the EAS option is added to the 9625DSK-LGA, it has the ability to key Emergency Alert messages received from a Sage or TFT EAS Decoder over the program video. It also inserts the emergency audio over the program audio. In order to insert the audio you will have to convert the analog audio from the decoder to AES and connect it to the AES ALT 4 input of the 9625DSK-LGA. See section 5 for more information on connecting and configuring the EAS decoder.

The *EAS Setup* menu is used to configure items related to the EAS option and is only available on units fitted with the option. Table 3-7 shows the items available in the *EAS Setup* menu. Sections 3.14.1 to 3.14.6 provide detailed information about each of the sub-menus.

Type	Selects how the EAS Crawl will transition onto the video
V	Sets the vertical position of the EAS crawl
Font	Sets the font used to display the EAS crawl
FontHei	Sets the font size used to display the EAS crawl
Rate	Sets the crawl rate of the EAS crawl
Warning BG	Sets the colour of the background for EAS warning messages
Warning FG	Sets the font colour for EAS warning messages
Watch BG	Sets the colour of the background for EAS watch messages
Watch FG	Sets the font colour for EAS watch messages
Test BG	Sets the colour of the background for EAS test messages
Test FG	Sets the font colour for EAS test messages

Table 3-7: Top Level of the EAS Setup Menu

3.14.1. Setting the EAS Display Type

- *EAS*
  - *Type*
    - *Type: Ramp On*
    - *Type: Ramp Off*

This menu item is used to select how the EAS message will transition onto the video.

Select *Ramp On* to have the crawl background appear as the text scrolls from right to left across the screen.

Select *Ramp Off* to have the crawl background appear all at once.

3.14.2. Setting the Vertical Position of EAS Crawl Display

- *EAS*
  - *V:*
    - *V: 21*
      - *V:20*
      - *20 to 248*

This menu item is used to set the vertical position of the EAS scrolling text message. The *V:* value is the video line where the top of the scrolling message will be placed. The range for placement is from 20 to 248.

Upon first entering this menu branch the selected current position will be shown. To change the vertical position, press the **SELECT** button. The display will show `V=21` indicating that the line number can be changed. Use the ↑ or ↓ buttons to select the line number and press the **SELECT** button. The display will show `V:xx` indicating that this is the new display position.

3.14.3. Setting the Font Used for the EAS Crawl Display

- *EAS*
  - *Font*
    - *Font: font*
      - *Font: [fontname]*

This menu item is used to set the font that will be used for the EAS scrolling text message.

When you first enter this menu branch the current font name will be shown. If there are no true type fonts loaded then the display will show *font* as the default font name. To change the font to another true type font, press the **SELECT** button. The display will show `font=font` indicating that the font can be changed. Use the ↑ or ↓ buttons to select from the available true type fonts that have been loaded using the Nomad™ or Overture™ software. When you press the **SELECT** button the display will show `font:fontname` indicating that this is the new display font.

3.14.4. Setting the Font Size for the EAS Crawl Display

- *EAS*
  - *FontHei*
    - *FontHei:xx*

This menu item is used to set the font size that will be used for the EAS scrolling text message.

The EAS height is the vertical size of the font measured in lines of video. The EAS height ranges from 5 to 100.

3.14.5. Setting the Crawl Rate for the EAS Crawl Display

EAS
Rate
Rate:1 *1 to 32*

This menu item is used to set the speed with which the scrolling text moves from right to left across the screen measured in samples per fields.

For example, it will take 120 fields for the text to scroll across a 720 pixel wide standard definition image with a scroll rate of 6. This default value of 6 should provide a comfortable rate, however should you change the size of the font, you should also adjust the scrolling speed.

3.14.6. Setting the Colours for the EAS Crawl Display

There are three different levels of EAS messages – warning messages, watch messages and test messages. Each message typically has a different background and foreground colour associated with it so that the viewer will immediately know the severity of the EAS alert. There are six menu items used to set the foreground and background colours. For the sake of simplicity, only the menu item for setting the warning background colour will be shown in the manual. The other menu items are used in the same way.

EAS
Warning BG
R:255 B: 0 G:0

This menu item is used to set the background colour for the warning messages. When you first enter this menu item you will be shown a set of colour values for each of the RGB colour components. The display will show something similar to the following:

```
R:255G:B   0 G:   0
```

To change the colour value, press the **SELECT** button. The colon (:) after the R will change to an equals (=) sign indicating that you can change the R value. Use the ↑ or ↓ buttons to change the red colour component value. When you press the **SELECT** button the colon after the G will change to an equals sign indicating that you can change the G value. Proceed to set the G and B values in the same way. After changing the B value, press the **SELECT** button and the display will display something similar to the following:

```
R:255G:B 128 G: 128
```

This indicates that the warning background value has been changed.

3.15. MEDIA CONFIGURATION ITEMS

The *MEDIA Setup* menu controls all the parameters for individual logos and audio clips. Table 3-8 shows the items available in the *MEDIA Setup* menu. Sections 3.15.1 to 3.15.3 provide detailed information about each of the sub-menus. Specific menu items apply to certain media types only.

To configure a specific logo exit the *Setup* menu and use the ↑ or ↓ buttons to select a particular media item. If you want to see the logo as you are positioning it then press the **MEDIA IN/OUT** key to fade the logo in. The media key layer must be enabled for the output bus you are viewing in order for the logo to be visible. Press the **SETUP** button to enter the *Setup* menu. Navigate to the *Media* menu using the ↑ or ↓ buttons, then press the **SELECT** button to enter the *Media* menu. If the media key layer is active on the program output bus and the PGM BUS LOCK LED is ON, you will not be able to make changes to the logo settings.

H	Sets the horizontal position of the selected logo
V	Sets the vertical position of the selected logo
Gain	Sets the opacity (inverse of transparency) for the selected logo
Fade In	Sets the fade in duration for the selected logo
Hold	Sets how long the selected logo will be displayed
Fade Out	Sets the fade out duration for the selected logo
UD Timer	Configures the up down timer for the selected logo
Rate	Sets the crawl rate for the selected crawl logo
Repeat	Sets the repeat count for the selected crawl logo
Pause	Sets the pause time between repetitions of the selected crawl logo
Font	Sets the font used to display the text on the selected crawl logo
Font Hei	Sets the font size used to display the text on the selected crawl logo
BG Opacity	Sets the background opacity for the selected crawl logo
FG Opacity	Sets the font opacity for the selected crawl logo
Crawl BG	Sets the colour of the background for the selected crawl logo
Crawl FG	Sets the font colour for the selected crawl logo
CL Repeat	Sets the repeat count for the selected audio clip
CL config	Directs the customer to configure the audio clip through the HTML Setup page
Logo Name	States the Logo Name of the playlist
Audio Name	States the Audio Name of the playlist

Table 3-8: Top Level of the Media Setup Menu

3.15.1. Setting the Logo Horizontal Position

MEDIA
H
H:0 0 to max pixels

This menu item is used to set the horizontal position for the current logo. The position is referenced to the left edge of the logo. The range of values depends on video standard in use.

Use the ↑ or ↓ buttons to adjust the position. The logo will move on the screen as you adjust its position.

3.15.2. Setting the Logo Vertical Position

MEDIA
V
V:0 0 to max lines

This menu item is used to set the vertical position for the current logo. The position is referenced to the top edge of the logo. The range of values depends on video standard in use.

Use the ↑ or ↓ buttons to adjust the position. The logo will move on the screen as you adjust its position.

3.15.3. Setting the Logo Transparency

MEDIA
Gain
Gain: 100%

This menu item is used to adjust the opacity (the inverse of transparency) of the logo as a percentage of the original opacity when the logo was created. When the *Logo Gain* is set at its default value of 100 the logo will be displayed at its original opacity.

For example, if the logo is created at 10% opaque, adjusting the *Gain* value to 200 will render the logo as 20% opaque. If the logo is created at 50% opaque, adjusting the *Gain* value to 200 will render the logo as 100% opaque. *Gain* values resulting in opacity levels above 100% are ignored.

Use the ↑ or ↓ buttons to adjust the *Gain* and then press the **SELECT** button to set the change.

3.15.4. Setting the Logo Fade In Duration

MEDIA
Fade In
Fade In: 30f

This menu item is used to set the fade in rate for the current logo. The range of values is 1 to 600 frames. The *Fade In* menu item only applies to static and crawl logos.

Use the ↑ or ↓ buttons to adjust the *Fade In* time and then press the **SELECT** button to set the *Fade In* time.

3.15.5. Setting the Logo Display Time

MEDIA
Hold
Hold: manual
Hold: 1 to 600f

This menu item is used to set how long the current logo will be displayed. The range of values is 1 to 600 frames. The logo will automatically fade out after the *Hold* Time has been completed. Setting the value to *manual* will cause the logo to be displayed until it is manually faded out. The *Hold Time* menu item only applies to static and crawl logos.

Use the ↑ or ↓ buttons to adjust the *Hold Time* and then press the **SELECT** button to set the *hold.*

3.15.6. Setting the Logo Fade Out Duration

MEDIA
Fade Out
Fade out: 30f

This menu item is used to set the fade out rate for the current logo. The range of values is 1 to 600 frames. The *Fade out* menu item only applies to static and crawl logos.

Use the ↑ or ↓ buttons to adjust the *Fade Out* time and then press the **SELECT** button to set the *Fade Out*.

3.15.7. Setting the Up Down Timer

MEDIA
UD Timer
UD Timer: None
UD Timer: Timer2
UD Timer: Timer1

The UD Timer (Up Down Timer) selects 1 of the 2 timers for the selected media.

The default for the UD Timer is *None*. To change the value press the **SELECT** button then use the ↑ or ↓ pushbuttons to scroll through the Timer options. Pressing **SELECT** again will set the value.

3.15.8. Crawl Logo Configuration Items (Crawl Optioned Units Only)

When the Crawl (CWL) option is added to the 9625DSK-LGA, it has the ability to key scrolling text messages over the program video. In order to set up the crawl logo and enter the text from the crawl logo you will need to use the Nomad™ or Overture™ software. The crawl is rendered by Nomad™ or Overture™ into a logo (EVL) file and sent to the 9625DSK-LGA. See the Nomad™ or Overture™ section of the Evertz Keyer Toolkit manual for more information on preparing crawl logos.

The *Media Setup* menu has several items that are used to configure crawl logos, and these items are only available when you select a crawl logo on units fitted with the crawl option. Sections 3.15.8.1 to 3.15.8.7 provide detailed information about each of the sub-menus.

3.15.8.1. Setting the Crawl Logo Horizontal Crawl Rate

MEDIA
Rate
Rate: 6
1 to 15

This menu item is used to set the speed with which the scrolling text moves from right to left across the screen measured in samples per field.

For example, it will take 120 fields for the text to scroll across a 720 pixel wide standard definition image with a scroll rate of 6. This default value of 6 should provide a comfortable rate, however should you change the size of the font, you should also adjust the scrolling speed.

3.15.8.2. Setting the Crawl Logo Repeat Count

MEDIA
Repeat
Repeat:0 *0 to 30*

This menu item is used to set the number of times that the text will scroll across the screen.

If you set the *Repeat* control to 0 the text will scroll continuously.

3.15.8.3. Setting the Crawl Logo Pause Time between Repeats

MEDIA
Pause
Pause:0 *0 to 30*

This menu item is used to set the length of time (in seconds) before a new crawl begins. The pause time is measured between the time that the text disappears on the left side of the screen until it appears back on the right side of the screen.

3.15.8.4. Setting the Crawl Logo Text Font Size

MEDIA
Font Hei
Font Hei: 30 *5 to 100*

This menu item is used to set the font size that will be used for the crawl logo scrolling text message.

The *Crawl Height* is the vertical size of the font measured in lines of video.

3.15.8.5. Setting the Crawl Logo Text Font

MEDIA
Font
Font: font
Font=font

This menu item is used to set the font that will be used for the crawl logo scrolling text message.

When you first enter this menu branch the current font name will be shown. If there are no true type fonts loaded then the display will show *font* as the default font name. To change the font to another true type font, press the **SELECT** button. The display will show `font=font` indicating that the font can be changed. Use the ↑ or ↓ buttons to select from the available true type fonts that have been loaded using the Nomad™ or Overture™ software. When you press the **SELECT** button the display will show `font:fontname`, indicating that this is the new the display font.

3.15.8.6. Setting the Crawl Logo Transparency

There are two menu items used to set the text (foreground) and background opacity (inverse of transparency) of the crawl logo. For the sake of simplicity, only the menu item for setting the background opacity will be shown in the manual. The other menu item is used in the same way.

MEDIA
BG Opacity
Bg Opacity:0-255

This menu item is used to set the background opacity (the inverse of transparency) for the crawl logo.

Setting the opacity to 255 makes the background completely opaque.

Setting the opacity to 0 makes the background completely transparent.

3.15.8.7. Setting the Crawl Logo Colours

There are two menu items used to set the text (foreground) and background colours of the crawl logo. For the sake of simplicity, only the menu item for setting the background colour will be described in the manual. The other menu item is used in the same way.

MEDIA
Crawl BG
R:255G:B 0 G: 0

This menu item is used to set the background colour for the crawl logo. When you first enter this menu item you will be shown a set of colour values for each of the RGB colour components. The display will be similar to the following:

```
R:255G:B   0 G:   0
```

To change the colour value, press the **SELECT** button. The colon (:) after the R will change to an equals (=) sign indicating that you can change the R value. Use the ↑ or ↓ buttons to change the red colour component value. When you press the **SELECT** button the colon after the G will change to an equals sign indicating that you can change the G value. Proceed to set the G and B values in the same way. After changing the B value, press the **SELECT** button and the display will be similar to the following:

```
R:255G:B 128 G: 128
```

This indicates that the background colour value has been changed.

3.15.9. Audio Clip Configuration Items (Media Keyer Units Only)

The 9625DSK-LGA has the ability to insert audio clips into the program audio path. These clips can be played by themselves or associated with logos in a playlists. In order to set up a playlist, you will need to use the Nomad™ or Overture™ software. The playlist file (EKP) is sent by Nomad™ or Overture™ to the 9625DSK-LGA. See the Nomad™ or Overture™ section of the Evertz Keyer Toolkit manual for more information on preparing playlists.

The *Media Setup* menu has a few items that are used to configure audio clips, and these items are only available when you select an audio clip. Sections 3.14.1 to 3.14.6 provide detailed information about each of the sub-menus.

3.15.9.1. Setting the Audio Clip Repeat Count

MEDIA
CL Repeat:
CL Repeat:0 *CL Repeat:1 to 100*

This menu item is used to set the number of times the audio clip will play.

If you set the *Repeat* control to 0 the audio clip will play continuously.

3.15.9.2. Audio Clip Configuration

MEDIA
CL config:
CL config: HTML

This menu points the user to configure the audio clip in the HTML Setup page.

3.15.10. Playlist Configuration Items

The 9625DSK-LGA has the ability to run playlists that insert logos and associated audio clips. In order to set up a playlist will need to use the Nomad™ or Overture™ software. The playlist file (EKP) is sent by Nomad™ or Overture™ to the 9625DSK-LGA. See the Nomad™ or Overture™ section of the Evertz Keyer Toolkit manual for more information on preparing playlists.

The *MEDIA Setup* menu has two items that are used to view the logo and audio file that will be played when the playlist is faded in. These items are only available when you select a playlist from the front panel. Sections 3.15.10.1 and 3.15.10.2 provide detailed information about each of the sub-menus.

3.15.10.1. Showing the Logo Name for a Playlist

MEDIA
Logo Name
LN: none
LN: Logo name

The *Logo Name* menu item is used to show the logo name for the playlist. In order to change the logo name for a playlist you will need to use the Nomad™ or Overture™ software.

3.15.10.2. Showing the Audio Clip Name for a Playlist

MEDIA
Audio Name
AN: none
AN: Logo name

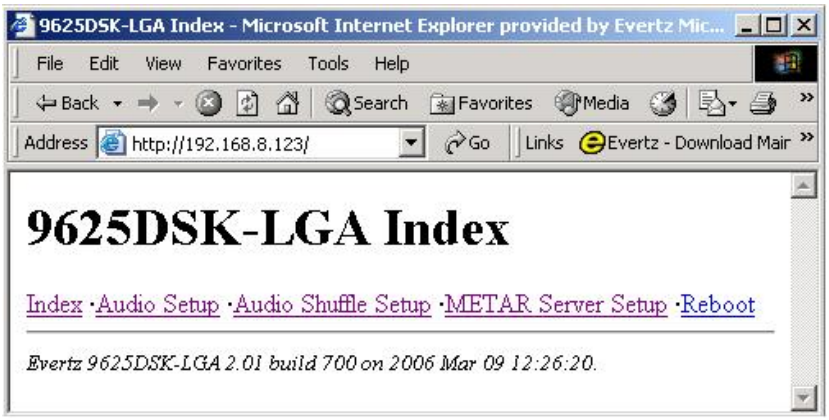
The *Audio Name* menu item is used to show the audio clip name for the playlist. In order to change the audio clip name for a playlist you will need to use the Nomad™ or Overture™ software.

3.16. HTML SETUP PAGE

The Audio Setup for the 9625DSK-LGA is configured through an HTML Setup page. The HTML Setup page also allows the user to configure the unit to acquire METAR data for use with temperature logos. You can access the HTML Setup page by launching your Internet browser and entering the IP address of the 9625DSK-LGA in the address bar. The firmware may have to be updated on your unit before configuring the Audio Setup via the HTML Setup page (see section 6.2). The following sections provide a description of the features available on the HTML Setup page.

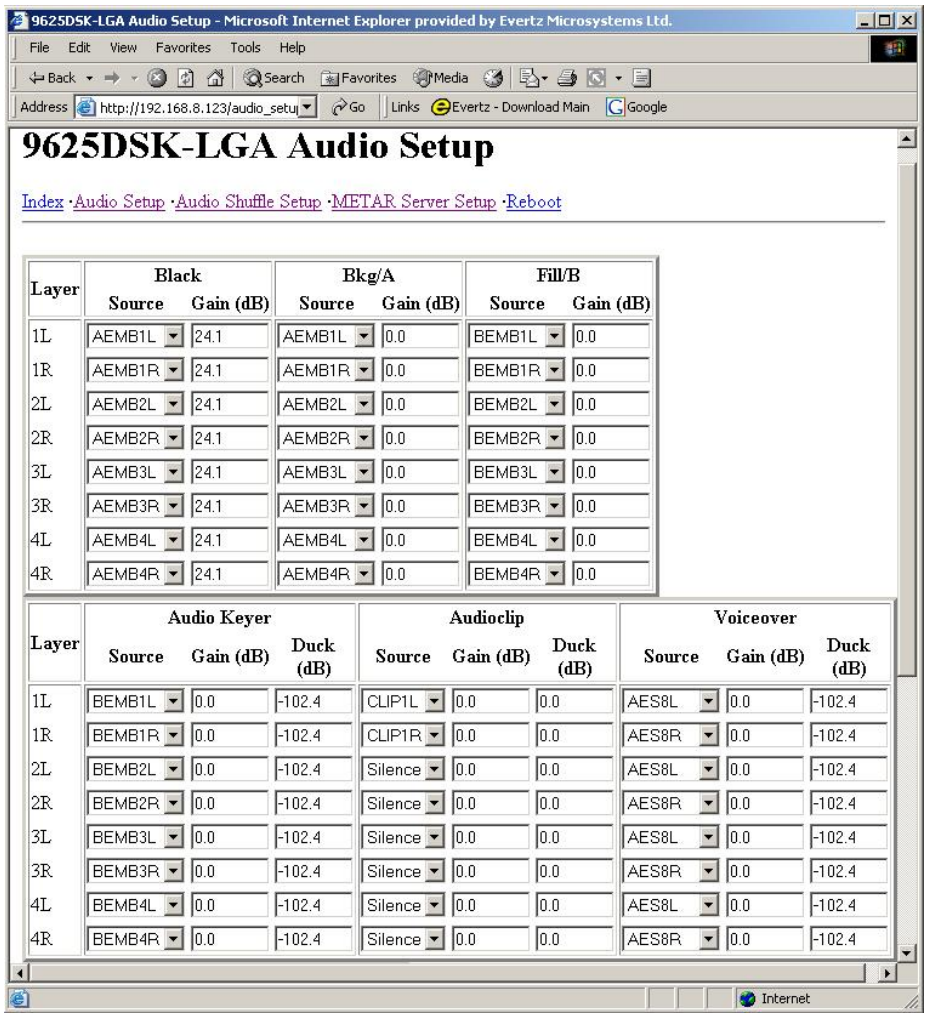
3.16.1. Audio Mapping

After upgrading the unit, log into the HTML server and configure the audio settings. Type the IP address (i.e. 192.xxx.xxx.xxx) into the address line of a browser. This will open the device's Index page. A banner of the product model name and links to the Index, Audio Setup, Audio Shuffle Setup, METAR Server Setup and Reboot should be displayed in the window.



3.16.2. HTML Audio Setup Page

If you select the Audio Setup button, a window similar to the following screen will be displayed:



LAYER: This represents the output audio channel for both the AES outputs and the embedded audio out.

BLACK: This column configures the audio that is used when the 9625DSK-LGA is outputting black. The black function is only accessible via automation commands.

INPUT: This column configures the audio that is used when the 9625DSK-LGA is passing the video, which is connected to the INPUT BNC connector. The 9625DSK-LGA has 2 video inputs that can be used for extracting embedded audio or associated with the discrete audio. They are marked as Bkg/A and Fill/B on the rear panel. The 9625DSK-LGA can be set to activate these inputs on the preview or program output using the front panel buttons or automation control. The audio settings in the respective columns will be active when the output is set to these bus selections.

AUDIO KEYER: The gain settings boost the associated input audio channel and the duck affects the Bkg layer. The setting above is only active when the unit is in the DSK mode as indicated by the Front Panel LED bus selection. Switching to DSK mode can be executed through the front panel or automation control protocol.

AUDIOCLIP: This column configures which channel(s) the audioclip audio is to be inserted onto. Using this item you can also specify the desired mix levels for audio clips. The audioclip layer is on top of the Black/Bkg/Fill/Audio Keyer layers, therefore the gain settings boost the clip playout and the duck affects the Black/Bkg/Fill/Audio Keyer layer. The above setting provides for the audio clips (when playing) to output on all audio channels, the audio is mixed with the left and right channels of the pre-recorded audioclip. The left and right channels are then mixed with all the output audio channels. You must configure the audioclip layer in order to hear audio clips on the desired output channels. The logo layer must be enabled as indicated by the LED on the front panel in order for audio clips to be mixed. If the logo layer is off, audio clips will play out in memory, but they will not be mixed with the output audio. The audioclip layer is only active when an audioclip is playing out.

VOICEOVER: This column configures the input source that is to be used for voiceovers as well as the output channel(s), which the voiceover audio is to be inserted into. You can also specify the desired mix levels for voiceovers. The Voiceover layer is on top of the clip and Black/Bkg/Fill/Audio Keyer layers. This layer allows an external source to duck the Black/Bkg/Fill/Audio Keyer/Audio Clip mix and mix in external audio, such as the audio from the EAS decoder. When the voiceover is activated from the front panel button, automation, or GPI, the voiceover layer is activated and the configuration is applied to the output audio.

SOURCE: Specifies the input source for the output audio channel. The following is a description of each of the choices.

AES1L - left channel of AES audio connected to PROG AES IN 1
AES1R - right channel of AES audio connected to PROG AES IN 1
AES2L - left channel of AES audio connected to PROG AES IN 2
AES2R - right channel of AES audio connected to PROG AES IN 2
AES3L - left channel of AES audio connected to PROG AES IN 3
AES3R - right channel of AES audio connected to PROG AES IN 3
AES4L - left channel of AES audio connected to PROG AES IN 4
AES4R - right channel of AES audio connected to PROG AES IN 4
AES5L - left channel of AES audio connected to ALT AES IN 1
AES5R - right channel of AES audio connected to ALT AES IN 1
AES6L - left channel of AES audio connected to ALT AES IN 2

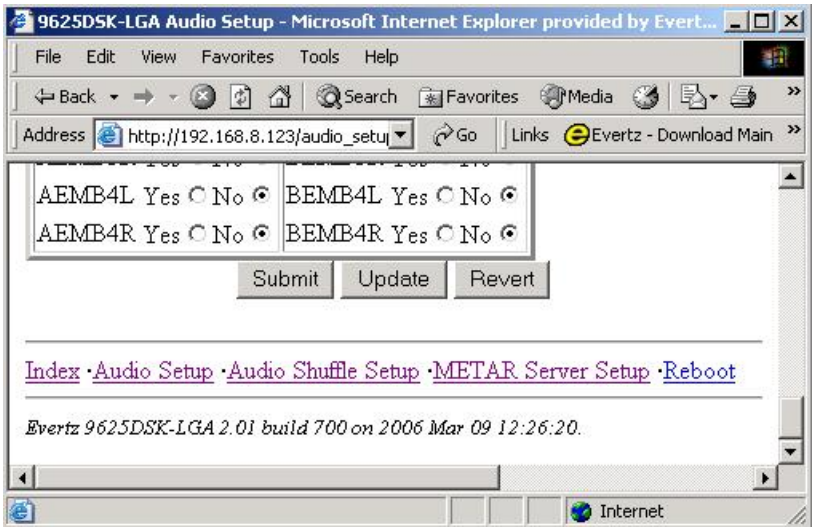
AES6R - right channel of AES audio connected to ALT AES IN 2
AES7L - left channel of AES audio connected to ALT AES IN 3
AES7R - right channel of AES audio connected to ALT AES IN 3
AES8L - left channel of AES audio connected to ALT AES IN 4
AES8R - right channel of AES audio connected to ALT AES IN 4
AEMB1L - group 1 channel 1 of embedded audio on the input video
AEMB1R - group 1 channel 2 of embedded audio on the input video
AEMB2L - group 1 channel 3 of embedded audio on the input video
AEMB2R - group 1 channel 4 of embedded audio on the input video
AEMB3L - group 2 channel 1 of embedded audio on the input video
AEMB3R - group 2 channel 2 of embedded audio on the input video
AEMB4L - group 2 channel 3 of embedded audio on the input video
AEMB4R - group 2 channel 4 of embedded audio on the input video
AES1M - mono mix of AES audio connected to PROG AES IN 1
AES2M - mono mix of AES audio connected to PROG AES IN 2
AES3M - mono mix of AES audio connected to PROG AES IN 3
AES4M - mono mix of AES audio connected to PROG AES IN 4
AES5M - mono mix of AES audio connected to ALT AES IN 1
AES6M - mono mix of AES audio connected to ALT AES IN 2
AES7M - mono mix of AES audio connected to ALT AES IN 3
AES8M - mono mix of AES audio connected to ALT AES IN 4
AEMB1M - mono mix of group 1 channels 1 + 2 of embedded audio on the input video
AEMB2M - mono mix of group 1 channels 3 + 4 of embedded audio on the input video
AEMB3M - mono mix of group 2 channels 1 + 2 of embedded audio on the input video
AEMB4M - mono mix of group 2 channels 3 + 4 of embedded audio on the input video
Silence - the output audio channel will contain silence

GAIN: Sets the output gain for the audio channel in question. To pass the audio through at the received level, set the gain to 0. To boost the audio level, set the gain to a positive value. To reduce the audio level set the gain to a negative value.

DUCK: Sets the gain for the program audio when an audio mix is in effect. To pass the background audio through at the received level, set the duck to 0. To boost the background audio level set the duck to a positive value. To reduce the background audio level set the duck to a negative value.

NON-PCM: Selects whether the embedded audio is PCM. If the audio is PCM, set Non-PCM to No. If the audio is not PCM, such as Dolby-E, set Non-PCM to Yes.

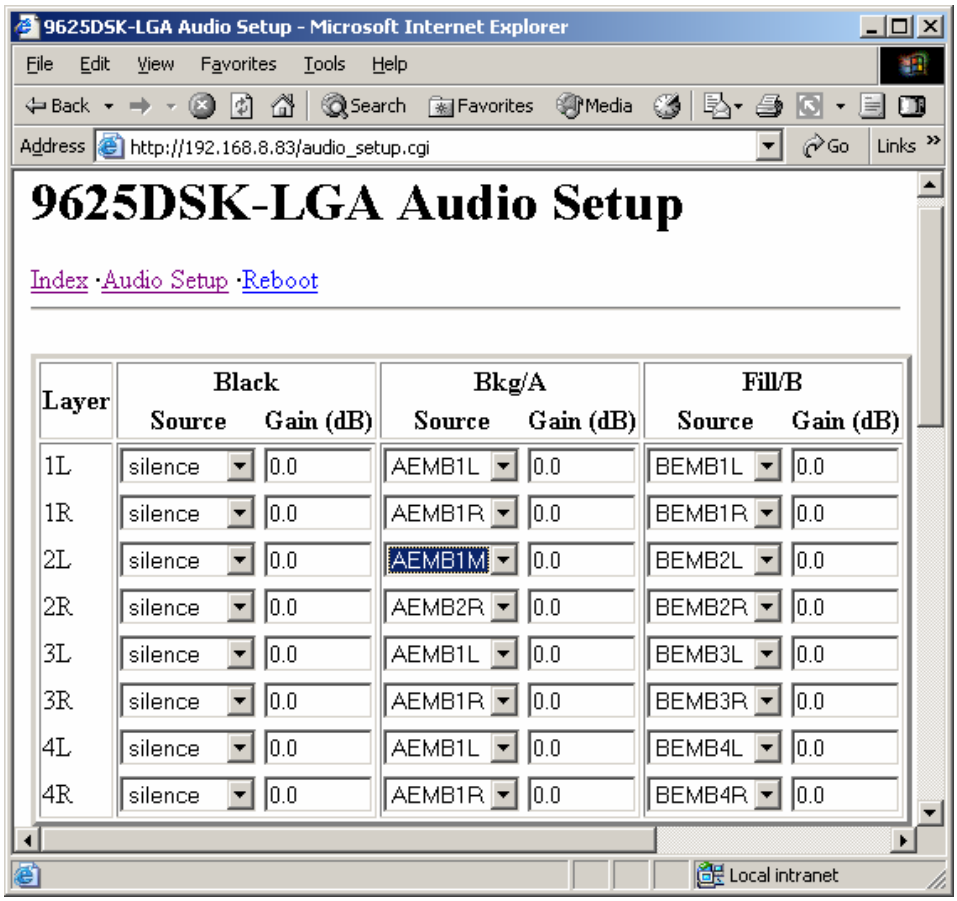
Once the unit is set up as per the above specification, select the *Submit* button to send the configuration to the unit.



The *Update* button captures the changes from the unit that may be applied by GPIs or Automation control and displays the results in the HTML Setup page.

The *Revert* button, removes any changes that were applied but not submitted.

3.16.3. Mono Mix



Layer	Black		Bkg/A		Fill/B	
	Source	Gain (dB)	Source	Gain (dB)	Source	Gain (dB)
1L	silence	0.0	AEMB1L	0.0	BEMB1L	0.0
1R	silence	0.0	AEMB1R	0.0	BEMB1R	0.0
2L	silence	0.0	AEMB1M	0.0	BEMB2L	0.0
2R	silence	0.0	AEMB2R	0.0	BEMB2R	0.0
3L	silence	0.0	AEMB1L	0.0	BEMB3L	0.0
3R	silence	0.0	AEMB1R	0.0	BEMB3R	0.0
4L	silence	0.0	AEMB1L	0.0	BEMB4L	0.0
4R	silence	0.0	AEMB1R	0.0	BEMB4R	0.0

The above screen displays the Bkg/A audio configuration for the insertion of a Mono Mixed pair of audio channels mapped to the L audio channel of the secondary channel audio output. In this mode the primary audio AEMB1L and AEMB1R are mixed together at 50% each and output on the 2L output channel. 2R passes through the input from the Bkg/A embedded 2R channel. The Bkg/A embedded 2L is replaced with the mono mix content from channel 1L and 1R. Output channels 3L, 3R, 4L and 4R are replaced with the primary audio channel content.

3.16.4. Wav File Playout

Wav files must be 48KHz 16bit Stereo Uncompressed audio. The Audioclip layer is on top of the Black/Bkg/Fill/Audio Keyer layers, therefore the gain settings boost the clip playout and the duck affects the active layer of the Black/Bkg/Fill/Audio Keyer layer. The setting above provides for the audio clips (in play mode) to output on all audio channels, the audio is mixed with the left and right channels of the pre-recorded audio clip. The left and right channels are then mixed with all the output audio channels. The audioclip layer must be configured in order to hear audio clips on the desired output channels. The logo layer must be enabled as indicated by the LED on the front panel in order for audio clips to be mixed. If the logo layer is OFF, audio clips will play out in memory, but they will not be mixed with the output audio. In the above example the active audio is lowered by 24dB when a clip plays, and the clip level is raised by 6dB. The audio clip layer is only active when an audio clip is playing out.
Audio clips and logos are treated exactly the same in the media keyers. The naming conventions for both the audio clips and logos are the same.

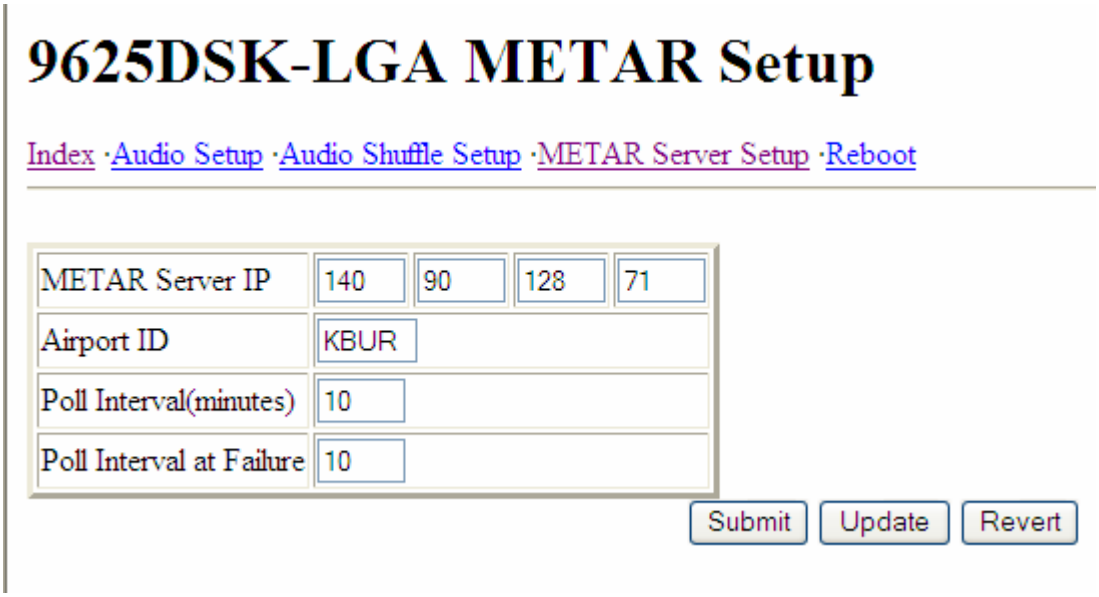
Alphanumeric can be used for logos and audio clips; however, the M2100/Quartz and XY protocol only support numeric file names. If controlling them from automation, the logos and audio clips must be numerically named following the protocol of 2 digits (i.e. 01 02, etc).

3.16.5. HTML Audio Shuffle Page

This feature has been implemented specifically for Harris automation systems, which have the ability to do audio shuffling. The audio channels are called by number (0 through 15). The HTML Audio Shuffle menu enables the user to assign an audio channel to each number.

3.16.6. METAR Setup Page

METAR is widely used in the aviation industry to obtain meteorological data from airports. The 9625DSK-LGA can extract the temperature from the data and use it for temperature logos. Use of this feature requires a connection to the Internet.



METAR SERVER IP: Enter the IP address of the desired METAR server. A known IP address for one METAR server is 140.90.128.71.

AIRPORT ID: Enter the airport code for the desired airport from which to obtain the temperature. The *Airport ID* must be entered in all upper case letters.

POLL INTERVAL: Enter how often you would like the 9625DSK-LGA to obtain the temperature. Temperature logos will be immediately updated each time the temperature is retrieved from the METAR server.

POLL INTERVAL AT FAILURE: Enter the desired length of time the 9625DSK-LGA is to wait before trying to retrieve the temperature from the METAR server after a failed attempt.

3.16.7. GPI Scripting

GPI script files are text-based files that can be programmed and sent to your unit by Nomad™ or Overture™. The syntax is important as the script represents programming code that will be executed when the allocated GPI trigger event occurs. There are 8 GPI inputs. Each input has 2 events: close and open. You can program scripts for each of these 16 events. If a script file is present on the flash file system the unit will process the script when the event is triggered. If the script file is not present when a GPI event is triggered, then the internal GPI menu settings will be used.

The GPI script files are text files, which can be easily edited using notepad.

The title of a script is used by the system to figure out which GPI event this file is applicable to.

Ex. gpi-h-close, gpi-a-open

In this case, *gpi* states that the script will be running off the state of a GPI trigger. The *h* represents which specific GPI trigger the script will react to. GPI triggers range from A to H. *Close* shows that the script will run when the GPI is in a closed state.

In the programming language the script utilizes, a comment is represented by the symbol #. Any text that follows this symbol on a line of code will not execute a command or conduct any sort of action.

Ex. # this file describes the complete state of the keyer

CMD represents a command that is to be executed by the script when it runs.

Ex. cmd load_preset(1)

There are many different kinds of commands that can be run, and each command will perform a specific action when the script is run.

- cmd load_preset(1): This command will load preset 1 (not implemented).
- cmd udt_start(1): This command will start up/down timer #1.
- cmd media_all_out(): This command fades out all logos and audio clips.
- cmd media_cue("02.evl"): This command will cue up logo “02.evl”.
- cmd media_in("03.evl"): This command will fade in logo “03.evl”.
- cmd media_out("04.evl"): This command will fade out logo “04.evl”.
- cmd media_toggle("05.evl"): This command will toggle the state of logo “05.evl”, if the logo is faded out it will be faded in, if it is faded in then it will be faded out.
- cmd udt_stop(2): This command will stop up/down timer #2.
- cmd udt_toggle(1): This command will toggle the start/stop state of the up/down timer #1, if the timer is started it will stop, if stopped it will start.
- cmd udt_reload(2): This command will reset up/down timer #2 to the timer start time.
- cmd voiceover_enable(): This command will enable the voiceover function.
- cmd voiceover_disable(): This command will disable the voiceover function.
- cmd voiceover_toggle(): This command will toggle the state of the voiceover function, if the state is enabled it will be disabled, if disabled it will be enabled.
- cmd transition("video"): This command will enable a video transition setting the Preview Bus to the Program Bus using the transition settings specified either in the script or from the panel.
- cmd transition("audio"): This command will enable an audio transition from the device.
- cmd transition("key,audio"): This command will enable the DSK layer and enable an audio transition from the device.
- cmd transition("bg,audio"): This command will transition the background video and audio.

The script can also direct the actions of channels coming from the device.

```
object bus_setup ("1") {
object channel ("1L") {
source = "AES1L" gain = 0 router = "1" }
}
```

In this case, the script is telling the channel “1L” of input 1 that both its sources will come from the discrete input 1L of ABO 1 side A and the gain on will be 0.

Transition options are as follows:

- "Cut", mode_cut
- "Fade", mode_fade

- "BarWipeTopToBottom", mode_wipe_0
- "DiagonalWipeTopLeft", mode_wipe_45
- "BarWipeLeftToRight", mode_wipe_90
- "DiagonalWipeBottomLeft", mode_wipe_135
- "BarWipeBottomToTop", mode_wipe_180
- "DiagonalWipeBottomRight", mode_wipe_225
- "BarWipeRightToLeft", mode_wipe_270
- "DiagonalWipeTopRight", mode_wipe_315
- "BoxWipeBottomLeft", mode_wipe_blbox
- "BoxWipeBottomRight", mode_wipe_brbox
- "BoxWipeTopLeft", mode_wipe_tlbox
- "BoxWipeTopRight", mode_wipe_trbox
- "BarnDoorWipeVerticalClose", mode_wipe_lrcurt
- "BarnDoorWipeHorizontalClose", mode_wipe_tbcurt
- "BarnDoorWipeVerticalOpen", mode_wipe_lrsplit
- "BarnDoorWipeHorizontalOpen", mode_wipe_tbsplit
- "IrisWipeRectangleClose", mode_wipe_box_in
- "IrisWipeRectangleOpen", mode_wipe_box_out
- "IrisWipeCircleClose", mode_wipe_circle_in
- "IrisWipeCircleOpen", mode_wipe_circle_out
- "IrisWipeDiamondClose", mode_wipe_diamond_in
- "IrisWipeDiamondOpen", mode_wipe_diamond_out
- "CutFade", mode_cut_fade
- "FadeFade", mode_fade_fade
- "FadeCut", mode_fade_cut

Audio channel setups are handled as an object configuration:
object bus_setup ("1") {
object channel ("1L") {
source = "AES1L" gain = 0 router = "1" }
object channel ("2R") {
source = "Silence" gain = 0 router = "none" }
object channel ("4L") {
source = "AES4L" gain = 0 router = "12"}
}
The values for the router property are "1", "2", ..., "12", "none". One router property is needed for each channel pair (the latter one overwrites the first if different router values are specified for both left and right channels).

This example sets the output audio channel 1L to the AES discrete input 1L, which is the first channel of the first AES BNC in the program BNC block on the rear of the unit. This input will be active whenever you select the Bkg/A from the front panel, gpi or automation. This will also be the source for the background audio when the unit is in DSK mode.

3.16.7.1. Scripting Object Syntax

object TYPE (name) {
object TYPE (name)
PROPERTY = value
command
}

Note: 'obj' can be used in place of object

Defined TYPE
bus_setup
channel
router
transition
matte
key
audio
source
misc

Defined PROPERTY
pgm_source
PRV_source
key_source
fill_source
type
swap
rate
enable
top
bottom
source
router
mode
offset
threshold
gain
nonpcm
line21_protect
b_blanking

Individual object constructs

object bus_setup ("bus names")
{
object channel ("channel names")
{
source = "audio_source_name"
gain = "gain_db"
router = "1", …, "12", "none"
nonpcm = "1" or "0"
}
}

Source, gain, and router do not have to be specified all in one object. Left and right channels are routed in pairs. As a result, the latter router definition for a pair overrides the earlier one if there is any.

nonpcm is not implemented in current version

bus names
“black”
“white”
“1”, “2”, “3”, “4”, “5”, “6”, “7”, “8”, “9”, “10”, “11”, “12”

channel names
“1L”, “1R”, “2L”, “2R”, “3L”, “3R”, “4L”, “4R”

audio_source_names
AES1L, AES1R, AES2L, AES2R,
AES3L, AES3R, AES4L, AES4R,
AES1M, AES2M, AES3M, AES4M,
EMB1L, EMB1R, EMB2L, EMB2R,
EMB3L, EMB3R, EMB4L, EMB4R,
EMB1M, EMB2M, EMB3M, EMB4M
Silence

object router()
{
pgm_source = “bus_name”
PRV_source = “bus_name”
key_source = “bus_name”
fill_source = “bus_name”
}

Values for bus_name are the same as for object bus_setup.
key_source and fill_source are not implemented in the current version.

object transition()
{
type = “transition type”
rate = “integer number of fields”
swap = “1” or “0”
}
Note: “1” to enable swap

transition type
Cut, Fade,
BarWipeTopToBottom, DiagonalWipeTopLeft,
BarWipeLeftToRight, DiagonalWipeBottomLeft,
BarWipeBottomToTop, DiagonalWipeBottomRight,
BarWipeRightToLeft, DiagonalWipeTopRight,
BoxWipeBottomLeft, BoxWipeBottomRight,
BarnDoorWipeVerticalClose, BarnDoorWipeHorizontalClose,

BarnDoorWipeVerticalOpen, BarnDoorWipeHorizontalOpen,
IrisWipeRectangleClose, IrisWipeRectangleOpen,
IrisWipeCircleClose, IrisWipeCircleOpen,
IrisWipeDiamondClose, IrisWipeDiamondOpen,
CutFade, FadeFade, FadeCut

object matte()
{
enable = “1” or “0”
top = “integer number of lines”
bottom = “integer number of lines”
}

Note: “1” to enable matte.

object key ()
{
mode = “input” or “self”
offset = “integer offset”
threshold = “integer threshold”
}

object misc ()
{
line21_protect = “1” or “0”
b_blanking = “1” or “0”
}

Note: “1” to enable line 21 protect or b_blanking.

3.16.7.2. Scenario Samples SAP Programming

Audio must always be present on audio channel 3 (Group 1 Pair 2 channel 1).

Default operation is mono mix of 1 & 2 on 3.
GPI scripts are used to configure the audio from automation control.
GPI_A_Close Pass 3 to 3 – file name: gpi-a-close
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES2L" gain = 0 }
}
GPI_A_Open Revert to Mono Mix of 1 & 2 on 3 – file name: gpi-a-open
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES1M" gain = 0 }
}
GPI_B_Close Remap channel 4 to channel 3 – file name: gpi-b-close

```
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES2R" gain = 0 }
}
GPI_B_Open Revert to Mono Mix of 1 & 2 on 3 – file name: gpi-b-open
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES1M" gain = 0 }
}
```

3.16.7.3. Bring Up a Trouble Slide Called “trouble”

These 2 GPI scripts will fade out all displayed logos and stop all audio clips as well as invoke a full screen logo called “trouble” or a trouble slide. The slide must first be prepared in InstaLogo™ or Overture™ and uploaded to the unit.

```
GPI_H_Close – file name: gpi-h-close
# Logo commands
cmd media_all_out()
cmd media_in("trouble")
GPI_H_Open – file name: gpi-h-open
# Logo commands
cmd media_all_out()
```

The Logo Layer must be enabled for logos and audio clips to playout on the desired output bus of DSK-LGA and SW units. If you want to preview an audio clip, make sure the logo layer for the Preview Bus is enabled and disable the logo layer on the Program Bus for the DSK-LGA and SW units. Use Cue in the LGA units, however, there is a known bug in that cued audio clips playout on the program output.

3.16.7.4. EAS for Audio Voiceover

These 2 GPI scripts will enable and disable the voiceover function mixing the output audio with the configurations set on the HTML voiceover settings.

```
GPI_H_Close – file name: gpi-h-close
# Voiceover Commands
cmd voiceover_enable()
GPI_H_Open – file name: gpi-h-open
# Voiceover Commands
cmd voiceover_disable()
```

When the voiceover is disengaged, the audio that was active will still be active as the background source selections are not affected.

3.16.7.5. EAS for Audio Voiceover Using 1 Other Voiceover

These 2 GPI scripts will enable and disable the voiceover function mixing the output audio with the configurations set from the source selections in the file and then reset the voiceover to the standard inputs. GPI H remaps and invokes the voiceover. GPI H is connected to the tally out from the EAS decoder, while GPI G will be used for normal voiceovers.

Warning, GPI G Open could disable the voiceover function while the EAS voiceover is active.

GPI_G_Close – file name: gpi-g-close
Voiceover Commands
cmd voiceover_disable()
insert appropriate VO audio source selection code here
cmd voiceover_enable()
GPI_G_Open – file name: gpi-g-open
Voiceover Commands
cmd voiceover_disable()
insert appropriate VO audio source selection code here
GPI_H_Close – file name: gpi-h-close
cmd voiceover_disable()
insert appropriate VO audio source selection code here
cmd voiceover_enable()
GPI_H_Open – file name: gpi-h-open
cmd voiceover_disable()
insert appropriate VO audio source selection code here

When the voiceover is disengaged, the audio that was active will still be active as the background source selections are not affected, however the voiceovers will be off.

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4. HOW TO OPERATE THE DOWNSTREAM KEYER USING THE DESKTOP CONTROL PANEL

The 9625DSK-LGA is available as a 1RU chassis with a separate 1RU desktop remote control panel. This chapter describes the operation of the 9625DSK-LGA using the desktop remote control panel. For information about connecting the desktop remote control panel to the 9625DSK-LGA see section 2.4.

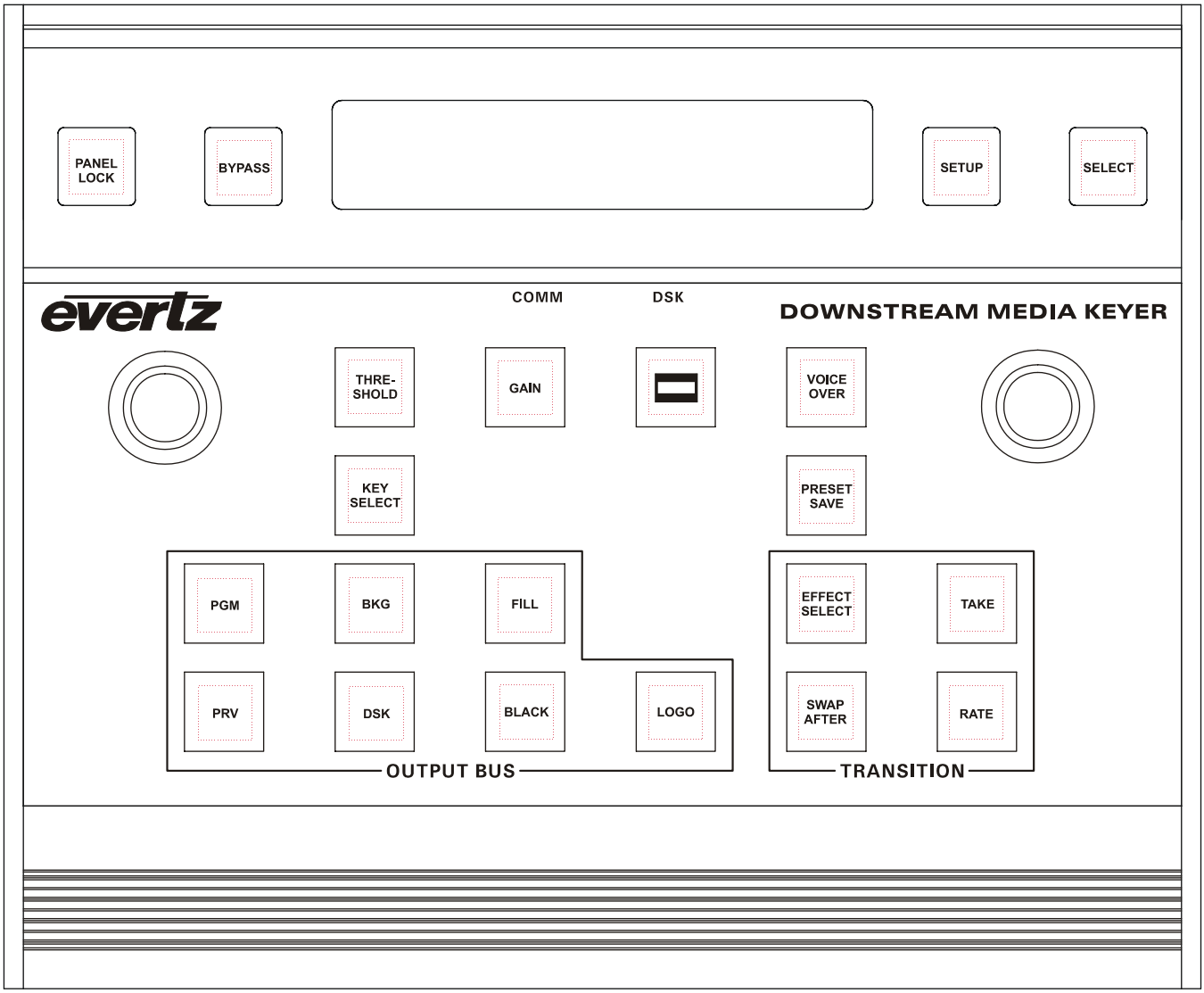

Figure 4-1: 9625DSK-LGA – Desktop Control Panel Layout

4.1. AN OVERVIEW OF KEY AND DISPLAY FUNCTIONS

The Desktop panel controls consist of two shaft encoder knobs, a 16 digit alphanumeric display, and 25 illuminated buttons. The illuminated buttons will come ON to indicate that their controlled function is active.

The buttons are used to provide control of the 9625DSK-LGA, to switch the various input sources, and to navigate the front panel *Setup* menu system, a quick and simple method of configuring the 9625DSK-LGA Downstream Keyer for your application. See sections 3.3 to 3.15 for information on configuring the 9625DSK-LGA using the *Setup* menu system.

4.1.1. Output Bus Button Group

PGM: This button sets the other buttons in the Output Bus button group so that they operate on the Program Bus. If the button LED is ON solid, then the **BKG**, **FILL, DSK, BLACK** and **LOGO** buttons are controlling the Program Bus. The LEDs in the **BKG**, **FILL, DSK, BLACK** and **LOGO** buttons will be ON solid if they are active on the Program Bus and flashing if they are active on the Preview Bus.

PRV: This button sets the other buttons in the Output Bus button group so that they operate on the Preview Bus. If the button LED is ON, then the **BKG**, **FILL, DSK, BLACK** and **LOGO** buttons are controlling the Preview Bus. The LEDs in the **BKG**, **FILL, DSK, BLACK** and **LOGO** buttons will be flashing if they are active on the Preview Bus and ON solid if they are active on the Program Bus.

BKG: This button selects the video from the BKG/A input, as well as selecting the audio source. If the button LED is flashing then the BKG/A video and associated audio is being output on the Preview Bus. If the button LED is ON solid then the BKG/A video and associated audio is being output on the Program Bus. Selecting **BKG** deselects the **FILL**, **BLACK** and **DSK** buttons for the applicable bus. You can use the **PGM** and **PRV** buttons to toggle control/status between the two buses to verify the input status for each bus.

FILL: This button selects the video from the FILL/B input, as well as selecting the audio source. If the button LED is flashing then the FILL/B video and associated audio is being output on the Preview Bus. If the button LED is ON solid then the FILL/B video and associated audio is being output on the Program Bus. Selecting **FILL** deselects the **BKG**, **BLACK** and **DSK** buttons for the applicable bus. You can use the **PGM** and **PRV** buttons to toggle control/status between the two buses to verify the input status for each bus.

DSK: This button controls the downstream keyer layer for the selected output bus. If the button LED is not illuminated, then the downstream keyer layer is not active. If the button LED is flashing then the downstream keyer layer is enabled on the Preview Bus. If the button LED is ON solid then the downstream keyer layer is enabled on the Program Bus. Selecting **DSK** deselects the **BKG, FILL** and **BLACK** buttons for the applicable bus. You can use the **PGM** and **PRV** buttons to toggle control/status between the two buses to verify the downstream keyer layer status for each bus.

To control the downstream keyer layer, first select the bus you want the downstream key to appear on using the **PGM** and **PRV** buttons. To enable the downstream keyer layer on the selected output video bus, press the **DSK** button. The button LED will be illuminated (On Solid for Program Bus, flashing for Preview Bus). To disable the logo key layer from the selected output video bus, press the **DSK** button. The button LED will be OFF.

When the downstream keyer layer is enabled, the video present on the FILL/B video input is mixed with the background video (on the BKG/A input) based on the key signal provided on the KEY/C video input, or it can be self-keyed, using user defined thresholds. See section 3.9 for information about setting up the *DSK MODE* and other settings.

BLACK: This button selects the video from the built in Black generator. If the button LED is flashing then the Black video is being output on the Preview Bus. If the button LED is ON solid then the Black video is being output on the Program Bus. Selecting **BLACK** deselects the **BKG**, **FILL** and **DSK** buttons for the applicable bus. You can use the **PGM** and **PRV** buttons to toggle control/status between the two buses to verify the input status for each bus.

LOGO: This button controls the complete media key layer for the selected output bus. The media key layer includes the logo layer for the video and the voiceover layer for the audio. Logos cannot be displayed and voiceovers cannot be performed when the media key layer is off. If the button LED is not illuminated, then the media key layer is not active. If the button LED is flashing then the media key layer is enabled on the Preview Bus. If the button LED is ON solid then the media key layer is enabled on the Program Bus. You can use the **PGM** and **PRV** buttons to toggle control/status between the two buses to verify the downstream keyer layer status for each bus.

To control the media key layer, first select the bus you want the media key layer to appear on using the **PGM** and **PRV** buttons. To enable the media key layer on the selected output bus, press the **LOGO** button. The button LED will be illuminated (On Solid for Program Bus, flashing for Preview Bus). To disable the media key layer from the selected output video bus, press the **LOGO** button. The button LED will be OFF.

4.1.2. Transition Button Group

TAKE: This button starts a transition of what is displayed on the Preview Bus to the Program Bus. The transition *Type, Rate* and *Swap Mode* are set using the **EFFECT SELECT, RATE** and **SWAP MODE** buttons or using the menu items in the *Transition* menu item (see section 3.10). Transitions can also be triggered using GPI, or automation control (see section 3.11.3). The button LED indicates that a transition from the Preview Bus to the Program Bus is in progress when it is illuminated, regardless of how the transition was triggered.

EFFECT SELECT: This button provides immediate access to the *Transition Type* menu item of the *TRANSITION* menu. See section 3.10.1 for more information on the *Transition Type* menu item. After pressing the **EFFECT SELECT** button you may use the shaft encoders to cycle through the Transition types available. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

RATE: This button provides immediate access to the *Transition Rate* menu item of the *TRANSITION* menu. See section 3.10.2 for more information on the *Transition Type* menu item. After pressing the **RATE** button you may use the shaft encoders to cycle through the Transition rate range measured in video frames. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

SWAP AFTER: This button provides immediate access to the *Transition Swap* menu item of the *TRANSITION* menu. See section 3.10.3 for more information on the *Transition Swap* menu item. After pressing the **SWAP AFTER** button you may use the shaft encoders to choose *Swap* or *No Swap* mode. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

When the *Transition Swap Mode* is set to *Swap* the input video and audio of the Preview Bus and the Program Bus will be swapped at the end of the transition. Logos and other media being keyed on the respective buses will also be swapped with the inputs.

When the *Transition Swap Mode* is set to *No Swap* the input video and audio of the Preview Bus will be transferred to the Program Bus transition. Logos and other media being keyed on the Preview Bus will also be transferred to the Program Bus. The Preview Bus will remain unchanged.

4.1.3. DSK Button Group

KEY SELECT: This button provides immediate access to the *Key Type* menu item of the *DSK* menu. See section 3.9.1 for more information on the *Key Type* menu item. After pressing the **KEY SELECT** button you may use the shaft encoders to choose *Input* or *Self Key* DSK *Key Type*. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

GAIN: This button provides immediate access to the *Key Gain* menu item of the *DSK* menu. This menu item is used to adjust the transparency of the keyed image from the transparency of the Key signal when the *Key Type* is set to *Input*. See section 3.9.2 for more information on the *Key Gain* menu item. After pressing the **GAIN** button you may use the shaft encoders to cycle through the *Key Gain* values. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

THRESHOLD: This button provides immediate access to the *Key Threshold* menu item of the *DSK* menu. This menu item is used to set the luminance value of the Fill signal that will be used to key the image when the *Key Type* is set to *Self Key*. See section 3.9.4 for more information on the *Key Threshold* menu item. After pressing the **THRESHOLD** button you may use the shaft encoders to cycle through the *Key Threshold* values. Press **SELECT** to accept the changes or **SETUP** to escape without making any changes.

4.1.4. Function Button Group

VOICE OVER: This button will mix the AES audio that has been configured in the HTML Setup page.

PRESET SAVE: This button provides immediate access to the *Store Preset* menu item of the *PRESETS* menu. This menu item is used to save the settings of the unit to one of ten user preset areas so they can be recalled later. See section 3.11.2 for more information on the *Store Preset* menu item. After pressing the **PRESET SAVE** button you may use the shaft encoders to select the preset number to save the settings to. When you press the **SELECT** button, the settings will be saved overwriting any preset that was previously stored at that location. Press **SETUP** to escape without saving the preset.

PANEL LOCK: This button is used to lock the control panel interface from accidental changes. The button LED will turn ON indicating that the control panel keys are disabled. When any of these buttons are pressed, the front panel display will show the message `Panel Locked` for a few seconds. Pressing the **PANEL LOCK** key again will return the front panel keys to their normal functions and the button LED key will go OFF indicating that the panel controls are enabled.

BYPASS: This button is used to operate the bypass relays in the 9625DSK-LGA. When the bypass relays are in Bypass mode, the BKG/A video input will be directly connected to the PROG SDI output, and the AES PROG inputs will be directly connected to the AES PROG outputs. The PREV SDI output and the PREV AES outputs will not have any signals on them when the bypass relays are active. The button LED will turn ON when the bypass relays are in Bypass mode. Pressing the **BYPASS** button again will return the bypass relays to their normal mode and the button LED key will go OFF indicating that the video and audio signals are being processed by the 9625DSK-LGA. The bypass relays will also operate in bypass mode if the 9625DSK-LGA loses power preserving the output video and audio paths.

MATTE: This button allows the user to turn the black overlay matte on and off. See section 3.8 for more information on the *MATTE* menu which is used to configure the aspect ratio of the matte.

4.1.5. Shaft Encoder Knobs

SHAFT ENCODER: When the 9625DSK-LGA is in one of the *Setup* menus, the **SHAFT ENCODER** knob is used to move to various items in the menu system or change a menu item's parameter value. (See also section 3.2)

When the 9625DSK-LGA is not in one of the *Setup* menus, the **SHAFT ENCODER** knob is used to select logos and audio clips that are stored in the file system. When the desired logo or audio clip is shown on the display, press the **SELECT** button to fade in the logo or play the audio clip.

4.1.6. Setup Button Group

SETUP: This button is used to enter the *Setup* menu, which is used to configure the operating modes of the downstream keyer. (See section 3.2 for an overview of the *Setup* menu.) Once in the *Setup* menu, this button is used to back out of menu selections to the next higher menu level or to exit the *Setup* menu and return to normal panel operation.

SELECT: When in the *Setup* menu, this button is used to choose a sub-menu and navigate to the next level down in the menu structure. When you are at the bottom level of the menu system this button is also used to accept numeric values or to make the displayed menu choice the active value for that menu item.

When you are not in the *Setup* menu, this button is also used to fade logos in and out on the selected output bus.

SHAFT ENCODER: When in the *Setup* menu, the **SHAFT ENCODERS** are used to move to various items at the current menu level in the menu system. The **SHAFT ENCODERS** are also used to enter numeric parameter values at the bottom level of the menu system. Both **SHAFT ENCODERS** operate the same when you are in the menu system.

4.1.7. Control Panel Status Indicators

The illuminated buttons show operational status of the 9625DSK-LGA at a glance. When they are on they indicate that the function associated with the button is active. The solid LED Output Bus buttons indicate the status for the Program output bus, and when the buttons are flashing the status of the preview output bus is indicated.

DSK: This LED indicates that the downstream keyer or media key layer is enabled on the Program Bus when it is ON. When it is OFF it indicates that the keyer layers are both disabled on the Program Bus.

COMM: This LED is used to signal two types of communication to the 9625DSK-LGA. The LED flashing ON approximately every 1.5 seconds indicates that the control panel is communicating with the main microprocessor in the unit. When the 9625DSK-LGA is under automation control, or logos or other media files are being transferred to or from the unit using the Nomad™ or Overture™ software, the LED will be ON when the unit is receiving data from the control source.

If the LED is continuously OFF then the control panel has lost communications with the main unit. If this occurs and you are using a remote control panel, check the cabling to make sure it is correct. Otherwise the unit may require a reboot if the control buttons on the control panel are not responding.

4.2. OVERVIEW OF DESKTOP CONTROL PANEL OPERATION

4.2.1. Audio Follow Video Switching

The 9625DSK-LGA has two video buses and two sets of four audio buses. The 9625DSK-LGA can be used as a simple two input audio follow video switcher. In this mode the audio on the AES PROG audio inputs will follow the BKG/A video input and the audio on the ALT AES audio inputs will follow the FILL/B video input when audio is configured accordingly in the HTML Setup page. The OUTPUT BUS buttons select which inputs will be routed to the preview and Program Bus outputs.

To select an input for the Preview Bus, you must first select the Preview Bus pressing the **PRV** button. The Preview Bus is selected when the **PRV** button LED is ON. Select the desired input for the Preview Bus by pressing the **BKG/A**, **FILL/B**, **DSK** or **BLACK** buttons. When the desired input is selected the button LED for that bus will flash ON and OFF (if that input is not selected for the Program Bus). The button LED for the input that is active on the Program Bus will be ON. When you select one of the **BKG/A**, **FILL/B**, **DSK** or **BLACK** buttons, the other buttons for the Preview Bus are automatically deselected. The **BKG/A** button selects the video source from the BGND/A video input. If you are using embedded program audio then the audio embedded on the BGND/A video will appear on the AES PREV outputs. If you are using discrete program audio then the audio from the AES PROG inputs will appear on the AES PREV outputs. The **FILL/B** button selects the video source from the FILL/B video input and the Key is the KEY/C video input. The **DSK** button displays the background video with the selected FILL/B video mixed, based on the Key video. For more information about the DSK function refer to section 3.9. The **BLACK** button selects the internal black generator.

To select an input for the Program Bus, you must first select the Program Bus by pressing the **PGM** button. The Preview Bus is selected when the **PGM** button LED is ON. Select the desired input for the Program Bus by pressing the **BKG/A**, **FILL/B**, **DSK** or **BLACK** buttons. When the desired input is selected the button LED for that bus will be ON. The button LED for the input that is active on the Preview Bus will flash ON and OFF. When you select one of the **BKG/A**, **FILL/B** or **DSK** buttons, the other buttons for the Program Bus are automatically deselected. The **BKG/A** button selects the video source from the BGND/A video input. If you are using embedded program audio then the audio embedded on the BGND/A video will appear on the AES PROG outputs. If you are using discrete program audio then the audio from the AES PROG inputs will appear on the AES PROG outputs. The **FILL/B** button selects the video source from the FILL/B video input and the Key is the KEY/C video input. The **DSK** button displays the background video with the selected FILL/B video mixed, based on the Key video. For more information about the DSK function refer to section 3.9.

To transition the Preview Bus to the Program Bus press the **TAKE** button. The transition *Type, Rate* and *Swap Mode* are set using the **EFFECT SELECT, RATE** and **SWAP MODE** buttons or using the menu items in the *Transition* menu item (see section 3.10). When the *Transition Swap Mode* is set to *Swap* the input video and audio of the Program Bus as well as logos and other media being keyed on Program Bus will be swapped back to the Preview Bus at the end of the transition. When the *Transition Swap Mode* is set to *No Swap* the input video and audio of the Preview Bus will remain unchanged.

4.2.2. Displaying Logos

To control whether a logo is keyed or not, you must first enable the media key layer by pressing the **LOGO** button for the bus you want the logo to appear on. The **LOGO** LED for the respective bus must be illuminated for logos to display on that bus (see section 4.1.1). Scroll to the logo required using the **SHAFT ENCODERS**. If the logo is currently being keyed its name will flash in the front panel display. To key the logo into the output video bus with the media layer enabled, press the **SELECT** button. The logo name display will be flashing. To remove a keyed logo from the selected output video bus, press the **SELECT** button. The logo name display will stop flashing.

4.3. AN OVERVIEW OF THE SETUP MENU SYSTEM

The *SETUP* menu system uses the 16 digit alphanumeric display and provides a quick, intuitive method of configuring the 9625DSK-LGA. These items are often only required to be set up at installation time, and do not pertain to the day-to-day operation of the unit.

4.3.1. Navigating the Setup Menu

To enter the *Setup* menu, press the **SETUP** button. This will bring you to the main *Setup* menu where you can use the **SHAFT ENCODERS** to move up and down the list of available sub-menus. Top level menu items are shown in UPPERCASE. Once you have chosen the desired sub-menu, press the **SELECT** button to select the next menu level.

Once in a sub-menu, there may be another menu layer (shown in Title Case), or there may be a list of parameters to adjust (shown in lower case). If there is another set of menu choices, use **SHAFT ENCODERS** to select the desired menu item and press the **SELECT** button. Continue this process until you get to the bottom of the menu tree where the list of parameters to be adjusted is shown.

To adjust any parameter, use the **SHAFT ENCODERS** to move up or down the parameter list to the desired parameter. To view the possible values for that item, press the **SELECT** button. The current value for that parameter will be shown with an asterisk (*). Turning one of the **SHAFT ENCODERS** allows you to show the possible values for the selected parameter. The various parameter values that are not currently selected will NOT have an asterisk (*). When you have stopped at the desired value, press the **SELECT** button to save your selection. The value will be shown with an asterisk (*) indicating that it is now the current value. To move up one level in the menu press the **SETUP** button.

You can select other parameters from that sub-menu by using the **SHAFT ENCODERS**, followed by the **SELECT** button. Alternately you can move up one menu item by pressing the **SETUP** button.

When you have made all the desired changes, press the **SETUP** button one or more times until you return to the top of the Menu tree and exit the *Setup* menu.

Each of the menu items, with a function explanation, is described in sections 3.5 to 3.15.

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Figures

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5. OPTIONAL EAS DECODER INTERFACE (EAS OPTIONED UNITS ONLY)

The 9625DSK-LGA with the EAS option fitted is the perfect solution for on-air insertion of channel branding bugs and Emergency Alert Service messages. The 9625DSK-LGA is designed to receive Emergency Alert message data and audio from a Sage or TFT EAS decoder unit and insert it over the program video and audio. This chapter describes how to connect your unit to your EAS decoder, configure the 9625DSK-LGA and EAS decoder, and perform some tests to verify the unit is functioning properly.

5.1. CONNECTING THE 9625DSK-LGA TO THE EAS DECODER

Make sure that the basic video and audio connections are wired as recommended in section 2.5 and 2.6. You will also have to route the output program video to an appropriate monitor to view the On Screen scrolling messages generated by the 9625DSK-LGA's built in character generator. Please ensure that your 9625DSK-LGA is out of the broadcast path when testing functionality. Figure 5-1 provides a simplified connection overview.

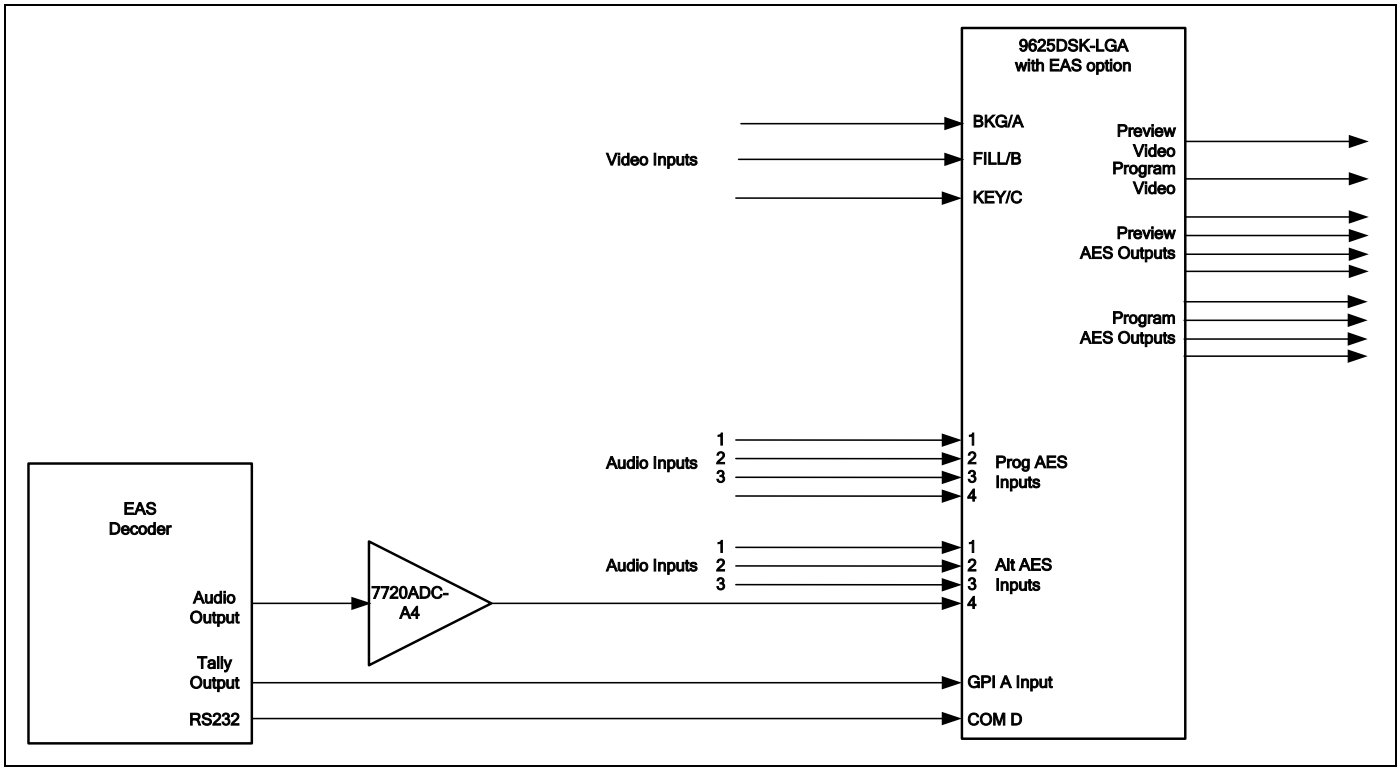


Figure 5-1: EAS Decoder Connection

5.1.1. Connecting the Serial Port

Connect a straight-through RS232 cable (shipped with unit) to either the Serial Control C or COM D serial ports on the keyer unit. The other end of the cable will connect to the EAS decoder (see the section specific to your encoder manufacturer). For a permanent installation, you will require a custom length cable that fits between the EAS decoder unit and the 9625DSK-LGA. You can purchase any off the shelf 9 pin straight-through serial cable, or you may create this cable yourself according to the cable drawing in Table 5-1. This cable should not exceed 50 feet. Note that the serial port on the keyer unit must be set for RS-232 operation as described in section 2.1.5.

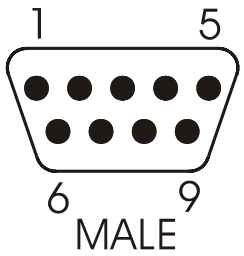
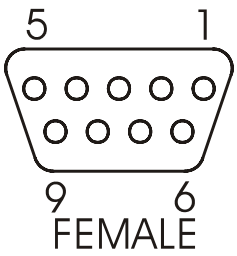
9625DSK-LGA End				EAS Decoder End		
	9 pin D Male	**Pin**	**Belden 9729**	**9 pin D Female**	**Pin**	
		1			1	
	TxD	2	-------1a------	RxD	2	
	RxD	3	-------2b------	TxD	3	
		4		Rx Gnd	4	
	Sig Gnd	5	---drain 1----	Sig Gnd		
		6		Tx Gnd	6	
	RTS	7	-------1b-----	CTS	7	
	CTS	8	-------2a------	RTS	8	
		9			9	
	Frame Gnd	Shield	---drain 2----	Frame Gnd	Shield	

Table 5-1: EAS Decoder Extender Cable

If you are using a Sage model EAS decoder please see section 5.1.2 for port configuration information. If you are using a TFT model EAS decoder please see section 5.1.3 for port configuration information.

5.1.2. Sage Decoder Configuration

The Sage provides six serial ports that can be used for a variety of purposes. Each serial port is wired like a standard PC 9-pin connector. Refer to the Sage manual for specific port pin outs. (They are contained in section 12 of their manual at the time of this writing.) Plug the female end of the straight-through RS232 cable into the COM 2 port of the Sage decoder. If this port is already in use you may use the COM 6 port.

The Sage port must be configured to output the type of data that the 9625DSK-LGA unit is expecting. To do this, follow these steps on the Sage unit.

1) Press **Menu**
2) Scroll down to *Devices*
3) Press **Enter**
4) Scroll down to *COM2* or *COM6* (depending on the COM port you connected to)
5) Press **Enter**
6) Scroll down to *Device Type*
7) Press **Enter**
8) Scroll down to *Generic CGEN*
9) Press **Enter**
10) Enter *Password*

11) Scroll up to *Go Back*
12) Press **Enter**

Your Sage is now configured to work with the 9625DSK-LGA. Proceed to section 5.1.4 to connect the audio and GPI controls, to configure the 9625DSK-LGA and verify that the connections are functioning as expected.

5.1.3. TFT Decoder Configuration

The TFT unit has a number of communication ports on the rear of the unit marked as COM 1 to COM 3 and J103 and J104. The baud rate is fixed at 9600 within the 9625DSK-LGA and it is configured to communicate using the *Alternate TFT I/F for Trilithic EAS Sytems ALT1 option*. This means you must plug the female end of the straight-through RS232 cable into the COM 2 port of the TFT decoder and configure the port accordingly. The serial port is wired like a standard PC 9-pin connector. This will require that your TFT unit be equipped with the Four Port Expander Board option. If your unit is not equipped, please contact TFT and order this field installable option.

The TFT port must be configured to output the type of data that the 9625DSK-LGA unit is expecting. To do this, follow these steps on the TFT unit.

1) Press **Password**
2) Enter *Primary Password*
3) Press **Password**
4) Enter *Setup Password*
5) Scroll down to item 18 *Enable Character Generator Interface*
6) Press **Enter**
7) Scroll down to *Alt1 Alternate TFT I/F for Trilithic EAS Systems*
8) Press **Enter**
9) Scroll down to item 27 *Enable CG Text for RWT*
10) Press **Enter**
11) Scroll up or down to *Yes*
12) Press **Enter**
13) Press **Exit**

Your TFT unit is now configured to work with the 9625DSK-LGA. Proceed to section 5.1.4 to connect the audio and GPI controls, to configure the 9625DSK-LGA and verify that the connections are functioning as expected.

5.1.4. Connecting the Audio

The emergency audio from the Sage or TFT decoders must be converted to an AES audio stream before it can be used with the 9625DSK-LGA. You can use the Evertz 7720ADC-A4 Analog Audio to AES Converter module, or other suitable device to do this. Connect the AES1 output from the 7720ADC-A4 into the AES ALT 4 input on the 9625DSK-LGA. You will also need to configure the 9625DSK-LGA's voiceover audio in the HTML Setup page.

5.1.5. Connecting the GPI Tally Control

The EAS decoders give out a tally control to indicate when an EAS alert message is to be inserted into the program video and audio. This tally output must be connected to one of the GPI inputs on the 9625DSK-LGA to 'duck insert' the emergency audio into the program audio. For the sake of simplicity only one GPI will be described in this section. Connect the tally output from the decoder to the GPI A input on the 9625DSK-LGA. (See Table 2-4 for a pinout of the GPIO connector on the keyer unit.)

5.2. CONFIGURING THE 9625DSK-LGA FOR EAS

5.2.1. Configuring the Serial Port

In order for the EAS decoder to communicate to the 9625DSK-LGA you must configure the SERIAL CONTROL C or COM D port for the correct protocol and baud rate. The *COM D* menu item on the *General* menu is used to accomplish this. Set this menu item to *EAS CG* in order for the EAS decoder to communicate with the 9625DSK-LGA. See section 3.6.7 for information on setting the serial port protocol.

Alternatively you may also connect the EAS decoder to the 9625DSK-LGA via the virtual COM E port using a serial to Ethernet converter in the same manner as you would to connect the optional temperature probe. Only one device may be connected to the COM E port.

5.2.2. Configuring the GPI Input

In order to use the GPI to signal the EAS alert you must configure the GPI A input as shown in Table 5-2. See section 3.11.3 for information on configuring the GPI inputs.

Menu Item	Setting
Cprest	None
Ctransition	No
Caction	Duck In
Clogo	None
Cvo	1L to 4R audio source of Vo
Oprest	None
Otransition	No
Oaction	Duck Out
Ologo	None
Ovo	1L to 4R audio source of Vo

Table 5-2: GPI settings for EAS Tally Control

5.2.3. Configuring the EAS Controls

The EAS menu items are used to configure the EAS crawl position, size, and colours. See section 3.14 for a complete description of these menu items. The brief descriptions of the menu items will guide you in setting up the unit quickly.

VERT POSITION: The default value should be adequate but you need to ensure that the messages fall within the safe area of the video display so that the entire message is legible once the message is broadcast.

HEIGHT: Sets the size of the Scrolling text in video lines. Font size ranges from 5 to 100.

RATE: Sets the speed of the scrolling text message in pixels per field. Rate 1 is the slowest possible scrolling speed and 32 is the fastest scrolling speed. If you adjust the font size you will have to adjust the scroll rate. The smaller the font size the slower you will have to scroll the text box.

5.3. TESTING THE SYSTEM

Please ensure all output video from the 9625DSK-LGA is out of your on-air broadcast path for this test.

5.3.1. Testing the Sage Decoder

On the Sage decoder:

1) Press **Week**
2) Enter *Password*
3) Press **Enter**

The video monitor should now show a scrolling EAS weekly test message. If you do not see the test message, double check your video connections and ensure that you have the correct video standard selected in the 9625DSK-LGA. Ensure that the correct Sage port and Device Type are configured for the correct port and that the serial cable is valid and connected to the correct ports. Check the Evertz Web site at www.evertz.com for any new firmware releases for the 9625DSK-LGA. Ensure that you are running the most up to date firmware in your Sage decoder at www.broadcast.harris.com.

Evertz tested this configuration with the Sage decoder model 1822 with firmware version 5.111

5.3.2. Testing the TFT Decoder

On the TFT decoder

1) Press **Weekly Test** button

The monitor should now show a scrolling EAS weekly test message. If you do not see the test message, double check your video connections and ensure that you have the correct video standard selected in the 9625DSK-LGA. Double check that you have configured the correct CG Interface Type and that the serial cable is valid and connected to the correct ports. Check the Evertz Web site at www.evertz.com for any new firmware releases for the 9625DSK-LGA. Check that you are running the most up to date firmware in your TFT decoder. Phone: 1-800-347-3383.

Evertz tested this configuration with the TFT decoder model EAS 911 with firmware version T.838.

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CHAPTER 6
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6. TECHNICAL DESCRIPTION

6.1. SPECIFICATIONS

6.1.1. Serial Digital Video Input

Standard:	270 Mb/sec Serial digital component SMPTE 259M-C standards supported shown in Table 2-6, software selectable
Number of Inputs:	1 Background, 1 Fill, 1 Key
Connector:	BNC IEC 61169-8 Annex A
Equalization:	Automatic to 200m @ 270 Mb/s with Belden 8281or equivalent cable
Return Loss:	> 15 dB up to 270 Mb/s

6.1.2. Serial Digital Video Outputs

Standard:	SMPTE 259M-C, same as input
Number of Outputs:	1 Program bypass protected, 1 preview
Connectors:	BNC IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	900ps nominal
Overshoot:	<10% of amplitude
Wide Band Jitter:	< 0.2 UI
Impedance:	75 ohm

6.1.3. Video Reference

Type:	Menu selectable - depends on video format NTSC or PAL Colour Black 1 V p-p
Connectors:	BNC IEC 61169-8 Annex A
Termination:	75 ohm

6.1.4. AES Audio Inputs

Standards:	SMPTE 276M single ended AES
Number of Inputs:	4 AES Channels Program (bypass protected), 4 AES Channels Voiceover
Connector:	BNC IEC 61169-8 Annex A
Signal Level:	1 V p-p ± 10%

6.1.5. AES Audio Outputs

Standards:	SMPTE 276M single ended AES
Number of Outputs:	4 AES Channels Program (bypass protected), 4 AES Channels Preview
Connector:	BNC IEC 61169-8 Annex A
Signal Level:	1 v p-p
Reference:	From Video Reference

6.1.6. LTC Reader

Standard: SMPTE 12M
Frame Rate: 25 and 30 Fps nominal
Connectors: 3 pin female XLR type connector
Level: 0.2 to 4V p-p, balanced or unbalanced

6.1.7. Control

Upgrade 232 Port: 9 pin female “D”, RS-232 57600 baud, 8 bits, no parity
firmware upgrade

Remote Panel Port: 9 pin female “D”, RS-422 9600 baud, 8 bits, no parity
Remote control panel interface (only available on RCP or DCP versions)

Serial Control Port: 9 pin female “D”, RS-232/422 8 bits, no parity, baud rate depends on protocol
Selectable protocols: Automation, EAS Interface, temperature probe interface

COM D Port: 9 pin female “D”, RS-232/422 8 bits, no parity, baud rate depends on protocol
Selectable protocols: Automation, EAS Interface, temperature probe interface

Ethernet Port: RJ-45 100Base T Ethernet, TCP/IP, logo transfers, Virtual serial ports

6.1.8. General Purpose Inputs and Outputs

Number of Inputs: 8, programmable control functions
Number of Outputs: 4, programmable tally functions
Type: opto-isolated, active low
Connector: 15 pin female High-density D
Signal Level: Pulled up to Vext supplied voltage. 3.3V DC provided

6.1.9. Processing Delay

Delay is typically much less than a line. Probably less than 100 sample clocks.

Maximum delay (in reference mode) is just over a line.

6.1.10. Physical

Dimensions:

Electronics:	19“ W x 1.75” H x 18.75” D. (483mm W x 45mm H x 477mm D)
Rack Mount Control Panel:	19“ W x 1.75” H x 4.25” D. (483mm W x 45mm H x 110mm D)
Desktop Control Panel:	7.75“ W x 2.0” H x 6.5” D. (197mm W x 50mm H x 160mm D)

6.1.11. Electrical

Power:

Electronics:	Auto-ranging 115/230 VAC 50/60 Hz, 30 VA
Optional Remote Control Panel:	12 VDC 9 watts, Auto-ranging 100-240 VAC 50/60 Hz power adapter provided

Safety:	ETL listed Complies with EU safety directive
EMI/RFI:	Complies with FCC Part 15 Class A, EU EMC Directive

6.2. UPGRADING THE FIRMWARE

6.2.1. Overview

The firmware in the 9625DSK-LGA is contained on a FLASH EPROM. Occasionally firmware updates will be provided to add additional features to the unit. The firmware update can be initiated using either the front panel, a terminal program or through the Nomad™ or Overture™ software application.

You will need the following equipment in order to update the Firmware:

- A PC with an available communications port. The communication speed is 57600 baud, therefore a 486 PC or better with a 16550 UART based communications port is recommended.
- "Straight-thru" serial extension cable (DB9 female to DB9 male).
- Terminal program that is capable of Xmodem file transfer protocol (such as HyperTerminal).
- Nomad™ or Overture™ application (optional).
- New firmware supplied by Evertz.

After upgrading the 9625DSK-LGA with new firmware, all presets should be recalled using the *Recall Preset* menu item, the values for new features must be set, and the preset must be saved again using the *Store Preset* menu item.

IF THIS IS NOT DONE, OLD PRESETS COULD BE RECALLED WITH UNDESIRABLE SETTINGS.

6.2.2. Terminal Program Setup

1. If you are updating the keyer unit firmware, connect the serial cable to the **UPGRADE RS232** DB9 connector on the keyer unit rear panel.

2. Connect the 9 pin connector on the end of the serial update cable to the PCs' RS-232 communications port.

3. Start the terminal program.

4. Configure the port settings of the terminal program as follows:

Baud	**57600**
Parity	**no**
Data bits	**8**
Stop bits	**2**
Flow Control	**None**

5. Power up the unit.

6.2.3. Initiating Firmware Upgrade Mode via the Front Panel

The upgrade is activated through the *GENERAL* Setup menu branch. If you cannot invoke the upload mode via the front panel as outlined in step 6 then follow the steps in section 6.2.4.

6. You can invoke the Firmware upgrade mode using the front panel Setup Menu. (See section 3.3 and 3.4 for information on how to operate the front panel menus.) Press the **SETUP** button to enter the top level of the Setup menu. Use the ↑ or ↓ buttons to find the *GENERAL* menu item and then press the **SELECT** button. Use the ↑ or ↓ buttons to find the *Update Code* menu item and then press the **SELECT** buttons. If you want to upgrade the operating firmware in the keyer unit, press the **SELECT** button or press the **SETUP** button if you want to abort the programming operation.

   When you press the **SELECT** button the keyer unit will be placed in programming mode and its serial port is opened to communicate with the terminal software program. The following message will appear on the terminal screen:

```
EVERTZ 7700FC BOOT MONITOR
MON8240 1.1 BUILD 9
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD. ALL RIGHTS RESERVED
EXEC RESULT 0
UPLOAD MAIN PROGRAM
```

   Proceed to section 6.2.5 for instructions on uploading the firmware using the terminal program.

6.2.4. Initiating Firmware Upgrade Mode from the Terminal Program

You may send commands to the keyer unit boot monitor in order to upgrade the application firmware.

7. Power up the unit. After the unit powers up, a banner with the boot code version information should appear in the terminal window. The cursor to the right of the word “BOOT>” should be spinning.

   For example:

```
EVERTZ 7700FC BOOT MONITOR
MON8240 1.1 BUILD 9
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD. ALL RIGHTS RESERVED
EXEC RESULT 0
COLD BOOT |
```

8. The following is a list of possible reasons for failed communications:
   - Defective Serial Upgrade cable.
   - Wrong communications port selected in the terminal program.
   - Improper port settings in the terminal program. (Refer to step 4 for settings). Note that HyperTerminal will not change port settings while connected. Click on HyperTerminal’s “Disconnect” Button then click the “Reconnect” button to activate changes to the port settings.

9. While the cursor is spinning press the <CTRL> and <X> keys, this should stop the cursor from spinning. The spinning prompt will only remain for about 5 seconds. You must press <CTRL-X> during this 5 second delay. If the unit continues to boot-up, simply cycle the power and repeat this step.

10. Hit the <ENTER> key on your computer once.

11. Type the word “upgrade”, without quotes, and hit the <ENTER> key once.

12. The boot code will ask for confirmation. Type "y", without quotes.

6.2.5. Uploading the New Firmware

13. You should now see a prompt asking you to upload the file.

14. Upload the “*.bin” file supplied using the X-Modem transfer protocol of your terminal program. If you do not start the upload within 10 minutes the unit’s Boot code will time out. You can restart the upgrade process by power cycling the unit.

    The application firmware contained in a “bin” file will have a name consisting of the version number and the product name.

    For the 9625DSK-LGA keyer unit the name will be similar to: 1v02_5_9625DSK-LGA.bin

15. The boot code will indicate whether the operation was successful upon completion of the upload. For Example:

```
UPLOAD OKAY
```

16. The following is a list of possible reasons for a failed upload:

- If you get the message "transfer cancelled by remote" you must restart the terminal program and load the bin file, then remove and install the module again.
- The supplied “*.bin” file is corrupt.
- Wrong file specified to be uploaded.
- Wrong file transfer protocol used – make sure you specify Xmodem, not Xmodem 1K.
- The PCs’ RS-232 communications port cannot handle a port speed of 57600.
- Noise induced into the Serial Upgrade cable.

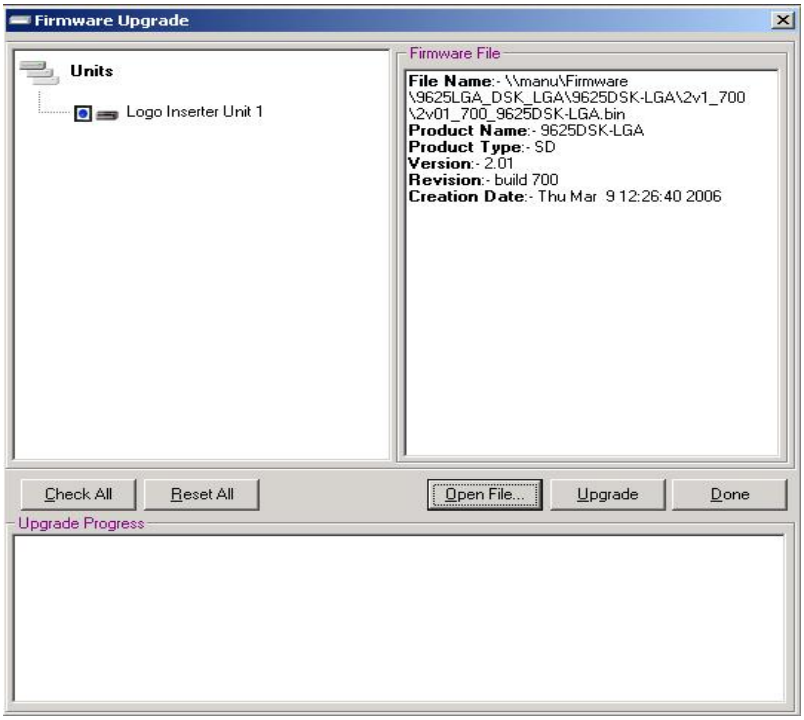
6.2.6. Completing the Upgrade

17. If you initiated the upload from the menu system, Nomad™ or Overture™ application, the 9625DSK-LGA will reboot automatically. If you initiated the upgrade using the terminal program then type the word “boot”, without quotes, and hit the <ENTER> key once. The unit should now reboot.

18. You can now close the terminal program and disconnect the RS-232 serial cable from the PC.

6.2.7. Firmware Upgrade via Nomad Application

1. Select “Upgrade Firmware” under the tools tab or click on the green upgrade button. The following window will pop up:



2. Select the keyer unit to upgrade, (you can check off multiple units of the same model to be upgraded simultaneously if on the same network).

3. Click the “Open file…” to browse for the .bin firmware file.

4. Click the “Upgrade” to start the firmware upgrade. Once transfer is complete a green check mark will appear in the *in box* of the units select for upgrade. You can now close the window.

6.3. SERVICING INSTRUCTIONS

CAUTION – These servicing instructions are for use by qualified service personnel only. To reduce risk of electric shock, do not perform any servicing instructions in this section of the manual unless you are qualified to do so.

6.3.1. Changing the Fuse

The fuse holder is located inside the power entry module. To change the fuses, disconnect the line cord from the power entry module and pull out the fuse holder from the power entry module using a small screwdriver. The fuse holder contains two fuses, one for the line and one for the neutral side of the mains connection. Pull out the blown fuse and place a fuse of the correct value in its place. Use slo blo (time delay) 5 x 20 mm fuses rated for 250 Volts with a current rating of 1 amp. Carefully reinsert the fuseholder into the power entry module.

Never replace with a fuse of greater value.

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