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REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Preliminary Version	June 07
0.2	Added new menu items to section 3, change Rear Panel drawings Added *Vista*LINK® section	Nov 07
1.0	Added VLPro section, added Router configuration section, updated Firmware information, reformatted layout & sections.	Jul 08
1.1	Updated Pin Out Description	Oct 08
1.2	Updated playout cache	Nov 08
1.3	Updated Ethernet and VistaLINK® description	Nov 08
1.4	Removed reference to Port A in section 2.1.3	Aug 09

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CHAPTER 1
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1. OVERVIEW

1.1. OVERVIEW

The Evertz 7725DSK-LG/7725DSK-LG-HD Downstream Keyer and Logo Inserter is a complete package that will insert simultaneous static or animated logos over a full bandwidth HD/SD program video signal. The 7725DSK-LG has been designed to manage and store multiple logo objects. Logos 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 Overture™ software. The 7725DSK-LG has a key and fill input to allow for external keyer sources. It supports two video input sources and preview and program bus outputs.

In addition to the support for an external keyer, one animated logo or up to 16 static logos can be keyed simultaneously with independent fade control for each static logo. 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 7725DSK-LG comes with 192MB of playout cache and 1GB compact flash storage.

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. The optional features of the 7725DSK-LG are: a crawl option that provides the ability to insert crawls with static content and an interface for Emergency Alert Systems (EAS).

Features

- HD/SD mixer or downstream keyer with full preview.
- Supports 525i/59.94, 16x9 525i, and 625i/50 video formats (in 7725DSK-LG only).
- Supports 525i/59.94, 16x9 525i, 625i/50, 720p/50, 720p/59.94, 1080i/50, and 1080i/59.94 video formats (in 7725DSK-LG-HD only).
- 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.
- Stores and inserts 1 animated or up to 16 static logos with independent control of logo position, transparency and offset. Independent controls of fade in and fade out for static logos.
- Download logos from a standard PC via Ethernet using overture software.
- 192MB of playout cache; 1GB of compact flash storage.
- LTC input for analog or digital 'Breakfast Clock' logos.
- Built-in Black Generator.
- 8 channel embedded audio support.
- Automatic equalization up to 250m (Belden 8281 or equivalent cable).
- Video input bypass relays for power failure bypass protection.
- Multiple control interface options including GPI, RS232 automation control.
- Optional rack mount control panel.
- Optional crawl support for static crawls.
- Optional desktop remote control panel available.
- Optional temperature probe for temperature logos.

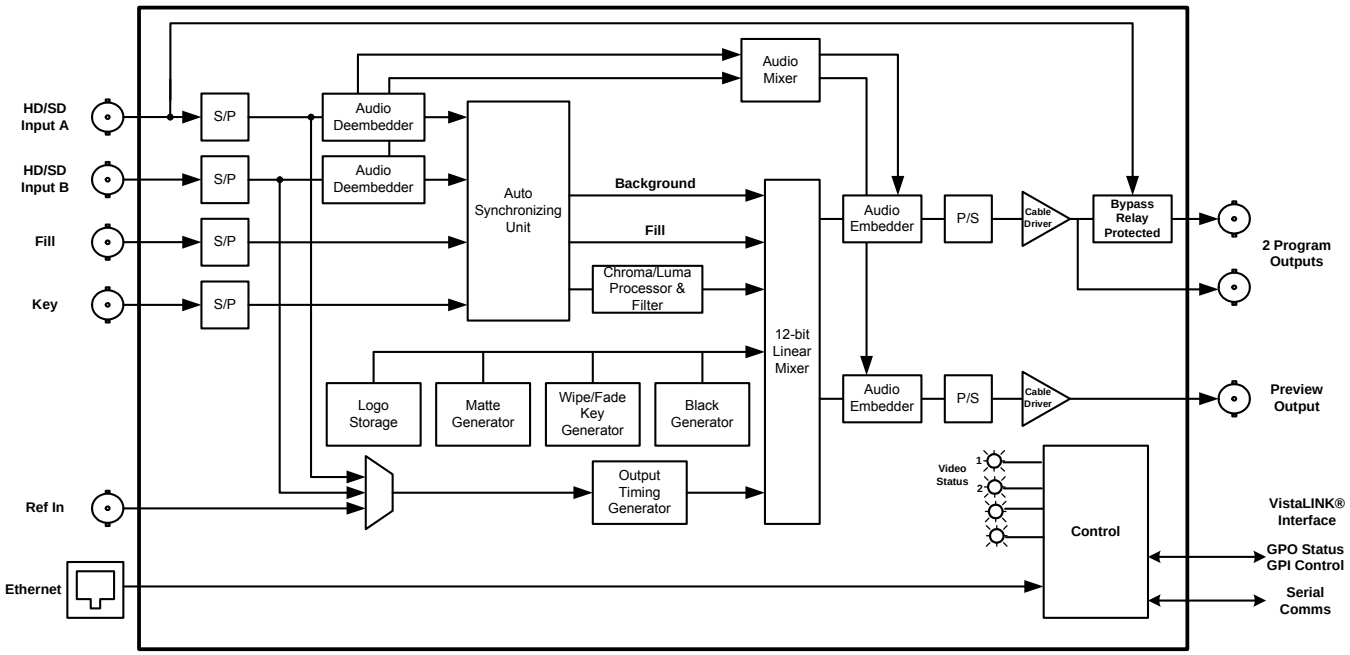

Figure 1-1: 7725DSK-LG Block Diagram

1.2. HOW TO USE THIS MANUAL

This manual is organized into 8 main chapters: Overview, Installation, *Vista*LINK® PRO Front Panel Operation, Front Panel Operation, HTML Audio Setup, Desktop Remote Panel Operation, Technical Description, and Upgrading the Firmware. The overview section contains a brief overview of the 7725DSK-LG 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. Unless otherwise specified, the term 7725DSK-LG will be used throughout this manual to refer to both the Standard Definition 7725DSK-LG and High Definition 7725DSK-LG-HD units.

Chapter 2 provides a detailed description of the rear panel connectors, and how the 7725DSK-LG should be connected into your system.

Chapter 3 describes how to operate the 7725DSK-LG using *Vista*LINK® PRO.

Chapter 4 describes how to operate the 7725DSK-LG using the Front Panel Controls or Rackmount Remote Control Panel. This chapter also includes information on the Setup Menu system.

Chapter 5 provides an overview of the HTML setup page.

Chapter 6 describes how to control the 7725DSK-LG using the Desktop Remote Control Panel.

Chapter 7 provides technical information such as the specifications.

Chapter 8 describes how to upgrade the firmware in the 7725DSK-LG.

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 equal 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 equal 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

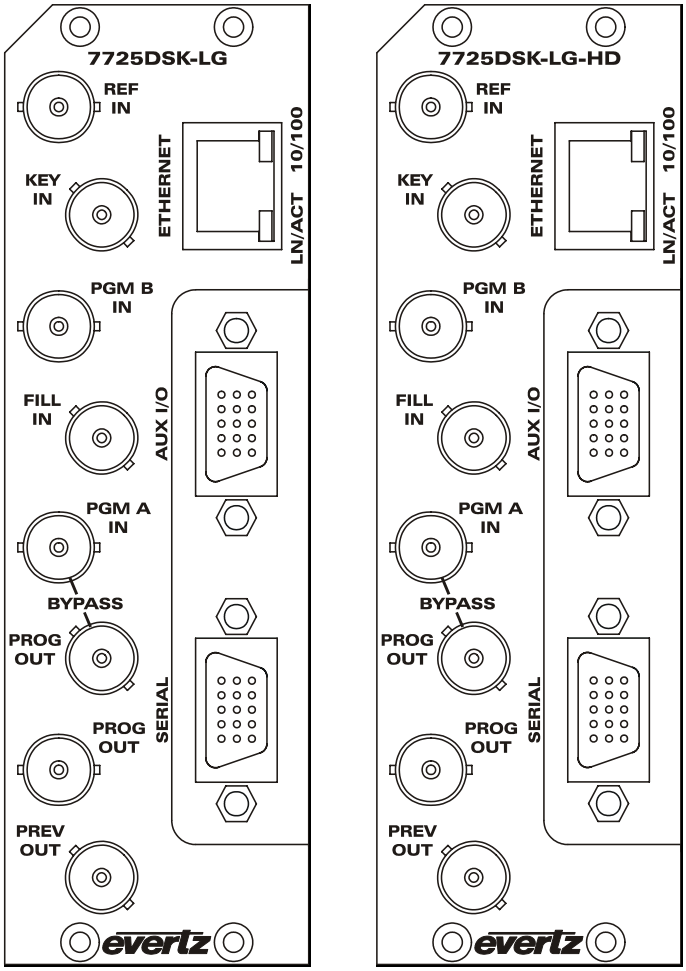


Figure 2-1: 7725DSK-LG and 7725DSK-LG-HD Rear Panel

Figure 2-1 shows the rear panels of the Standard Definition 7725DSK-LG and High Definition 7725DSK-LG-HD units. Sections 2.1.1 to 2.1.5 describe the specific video, audio, and control signals that should be connected to both 7725DSK-LG rear plates. Sections 2.4 to 2.8 describe how to connect them into your system.

2.1.1. Video Connections

PGM IN A: This BNC connector is the program input A to the 7725DSK-LG.

PGM IN B: This BNC connector is the program input B to the 7725DSK-LG.

FILL IN and KEY IN: These BNC connectors are the key and fill HD/SD inputs to the 7725DSK-LG.

PREV OUT: This output BNC connector is the serial component preview video output from the 7725DSK-LG. This preview output connector is normally connected to a preview monitor.

PROG OUT: This output BNC connector is the serial component program video output from the 7725DSK-LG. Connect this output to the next video device in your output path. This output is protected by a bypass relay to the adjacent **PGM IN A** input BNC. When the bypass relay is activated on power loss to the keyer, the **PROG OUT** will be a direct relay connection to the **PGM IN A** input.

2.1.2. Reference Video Connections

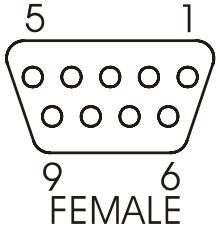
REF IN: This 75 ohm terminated input is for connecting an analog video reference. Connect the **REF IN** connector to the reference input sync. The 7725DSK-LG can also be set to derive its timing from the input video connected to the **PGM IN A** input using the *REFERENCE* menu.

2.1.3. Serial I/O Connections

A breakout cable (Evertz Part # WP-SERIAL-COM-1-0) is provided with each 7725DSK-LG. This breakout cable connects to the **SERIAL** DB9 (Serial Control) connector on the rear plate. The serial connectors on the breakout cable have the following serial I/O connections.

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.

COM B: 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 2-1. See section 2.4 for information on connecting the remote control panel.

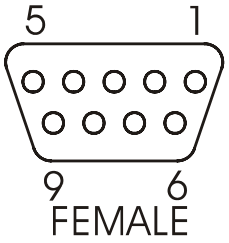


Pin #	Name	Description
1	GND	Chassis ground
2	Tx-	RS-422 Tx-(A) Output
3	Rx+	RS-422 Rx+(B) Input
4	GND	
5		
6	GND	
7	Tx+	RS-422 Tx+(B) Output
8	Rx-	RS-422 Rx-(A) Input
9	GND	

Table 2-1: Remote Panel Port Pin Definitions

COM C and 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 for 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-422 mode of operation the ports have the pinout shown in Table 2-2.

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.



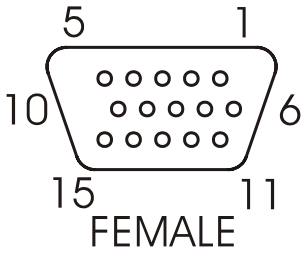
Pin #	Name	Description
1	GND	Chassis ground
2	Tx-	RS-422 Tx-(A) Output
3	Rx-	RS-422 Rx-(A) Input
4		
5	GND	
6		
7	Rx+	RS-422 Rx+(B) Input
8	Tx+	RS-422 Tx+(B) Output
9	GND	

Table 2-2: 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 3.5.1 for VLPRO Configuration Settings and section 4.6.8 for Remote Control Configuration Settings).

2.1.3.1. Serial Port Pin Out Definitions

Table 2-3 shows the pin out definitions for the 15 pin serial port on the rear plate.

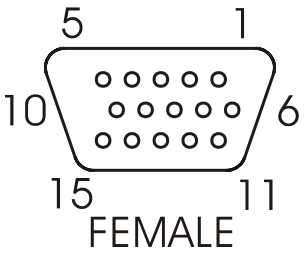


Pin #	Name	Description
1	CTS+ Comm Port B	Clear To Send
2	RTS+ Comm Port B	Request To Send
3	RXD+ Comm Port B	Receive Data
4	RTS- Comm Port B	Request To Send
5	GND	Ground
6	Tx Comm Port C	Transmit Data
7	RTS Comm Port C	Request To Send
8	Rx Comm Port C	Receive Data
9	CTS Comm Port C	Clear To Send
10	LTC -	Local Time Code
11	RTS Comm Port D	Request To Send
12	Rx Comm Port D	Receive Data
13	Tx Comm Port D	Transmit Data
14	CTS Comm Port D	Clear To Send
15	LTC +	Local Time Code

Table 2-3: Serial Port Pin Definitions

2.1.4. GPI/O Connections

GPI/O: This 15 pin female high density 'D' connector (**AUX I/O**) 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 2.8 for information on connecting the general-purpose inputs and outputs. For information on configuring the GPI and GPO functions, see section 3.8 for VLPRO Configuration and sections 4.11.1 and 4.11.2 for RCP Configuration.



Pin #	Name	Description
1	GND	Chassis ground
2	GPOUT1	General purpose output B
3	GPOUT0	General purpose output A
4	GPOUT2	General purpose output C
5	GPIN2	General Purpose Input C
6	GPOUT3	General Purpose Output D
7	GPIN5	General Purpose Input F
8	GPIN0	General Purpose Input A
9	GPIN3	General Purpose Input D
10	+3.3V	Power
11	GPIN7	General Purpose Input H
12	GPIN4	General Purpose Input E
13	GPIN6	General Purpose Input G
14	GPIN1	General Purpose Input B
15	VEXT	External Power Supply for the Inputs2

Table 2-4: GPI/O Connector Pin Definitions

2.1.5. Ethernet Network Connections

ETHERNET: This RJ-45 connector is an Ethernet port used for high-speed firmware upgrades and FTP logo transfers. This Ethernet port also facilitates control via VistaLINK® PRO or Overture software (refer to section 3). See section 2.7 for information on connecting to an Ethernet network. See section 4.6.5 in the *General* menu descriptions for information on configuring the network addresses for the downstream keyer.

2.2. MOUNTING

The 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

The standard 7725DSK-LG is a 2 slot card contained within the 7700FR. The 7700FR-C frame comes standard with one auto-ranging power supply that automatically senses the input voltage over the range of 100 to 240 VAC. An additional power supply (7700PS) can be ordered to provide fully redundant powering of the frame. When only one power supply is fitted, the frame will be fitted with a 7700PS-FM fan module to ensure the thermal integrity of the frame cooling. Power should be applied by connecting a 3-wire grounding type power supply cord to the power entry module on the rear panel of each power supply. The power cord should be minimum 18 AWG wire size; type SVT marked VW-1, maximum 2.5m in length.

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

CAUTION – TO REDUCE THE RISK OF ELECTRICAL SHOCK, GROUNDING OF THE GROUND PIN OF THE MAINS PLUG MUST BE MAINTAINED.

2.4. CONNECTING THE REMOTE CONTROL PANEL

The 7725DSK-LG is available with a rack mountable or desktop remote control panel. The remote control panel is connected to the **SERIAL CONTROL** connector on the Keyer units using COM B of the breakout cable (Evertz Part # WP-SERIAL-COM-1-0), 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.

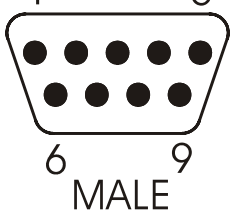
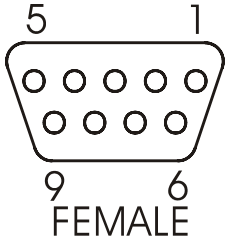
7725DSK-LG End				Remote Panel End		
	9 pin D Male	Pin	Belden 9729	9 pin D Female	Pin	
		1			1	
	Tx-	2	-------1a------	Rx-	2	
	Rx+	3	-------2b------	Tx+	3	
	Rx Gnd	4	---drain 2----	Rx Gnd	4	
		5				
	Tx Gnd	6	---drain 1----	Tx Gnd	6	
	Tx+	7	-------1b-----	Rx+	7	
	Rx-	8	-------2a------	Tx-	8	
		9			9	
	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 HD or SD program video source should be connected to the **PGM IN A** BNC. If you are using the 7725DSK-LG as a two input standard definition video keyer, the alternate video source should be connected to the **PGM IN B** BNC. If you are using a downstream key source for the downstream keyer, the Key video should be connected to the **KEY IN** BNC and the fill should be connected to **FILL IN** BNC. The 7725DSK-LG-HD supports HD or SD digital video in the formats shown in Table 2-6. The video standard must be set manually to match the incoming video type (see section 3.2.1 for VLPRO Configuration and section 4.6.1 for RCP Configuration).

Note: In order for the 7725DSK-LG-HD to operate in SD mode, the user will be REQUIRED to download SD only firmware to the mode. The 7725DSK-LG-HD DOES NOT auto-detect the video format.

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
16x9 525i	720 x 486	29.97	I	SMPTE 125M	NTSC
625i/50	720 x 576	25	I	EBU TECH 3267-E	PAL
720p/50	1280 x 720	25	P	SMPTE 296M	PAL
720p/59.94	1280 x 720	59.94 (60/1.001)	P	SMPTE 296M	NTSC
1080i/50	1920 x 1080	25	I	SMPTE 274M	PAL
1080i/59.94	1920 x 1080	29.97 (30/1.001)	I	SMPTE 274M	NTSC

Table 2-6: Video Input Formats

2.5.2. Video Outputs

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

The **PREV OUT** output contains the video output from the preview and will normally be connected to a HD/SD monitor to allow you to view the program output before it goes on air. When the bypass relay is active, the **PREV OUT** 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 LINEAR TIME CODE

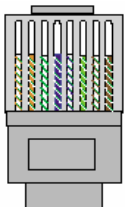
The 7725DSK-LG has a linear time code (LTC) input used to provide time information for the analog or digital clock logos. Connect the LTC output from your house master time code source to the LTC IN XLR connector. When using an unbalanced input to the reader, the signal should be applied to pin 3 of the reader input connector. Normally, the unused input (pin 2) should be connected to ground (pin 1).

2.7. CONNECTING TO AN ETHERNET NETWORK

The 7725DSK-LG 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 7725DSK-LG 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 1



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 7725DSK-LG has established a valid linkage to its hub, and whether the 7725DSK-LG is sending or receiving data. This LED will be ON when the 7725DSK-LG 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 7725DSK-LG is sending or receiving data. The LED will be OFF if there is no valid connection.

2.8. 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.

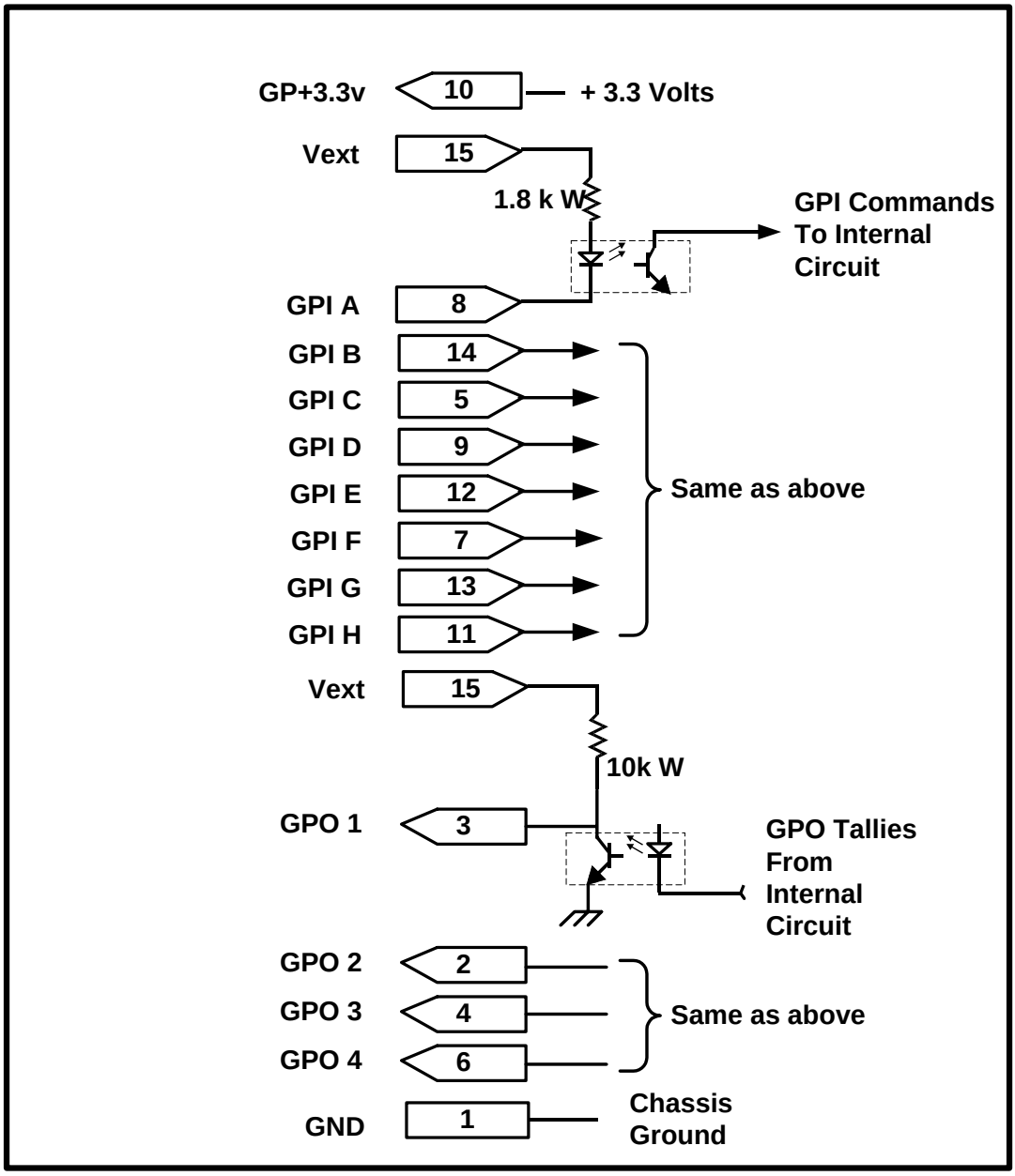


Figure 2-2: Keyer GPIO Opto Isolator Circuitry

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 4.11.5). See section 3.12 of the Preset Control Window for VLPRO Configuration Settings.

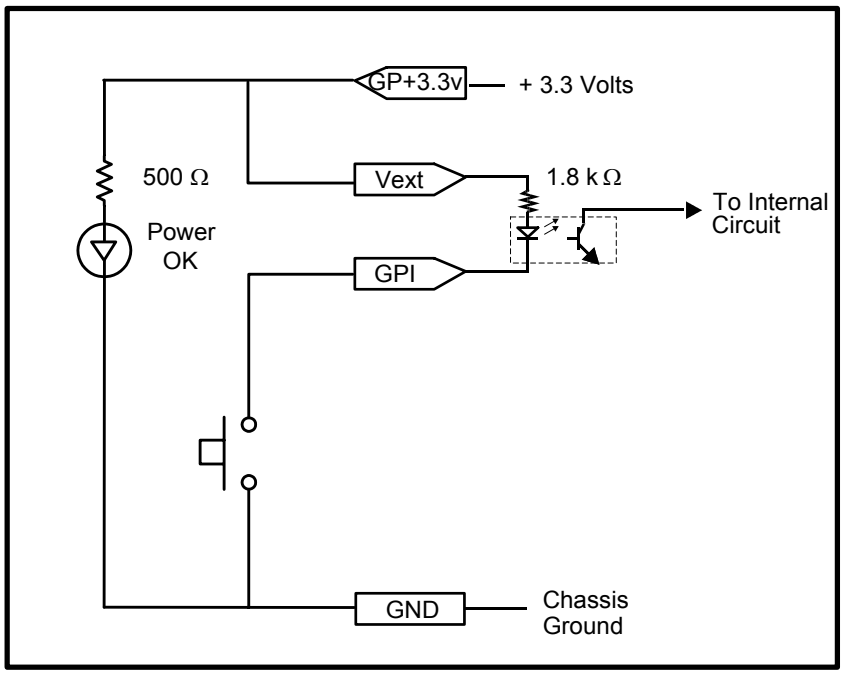


Figure 2-3: Powering the General Purpose Input Opto-Isolators from the Unit

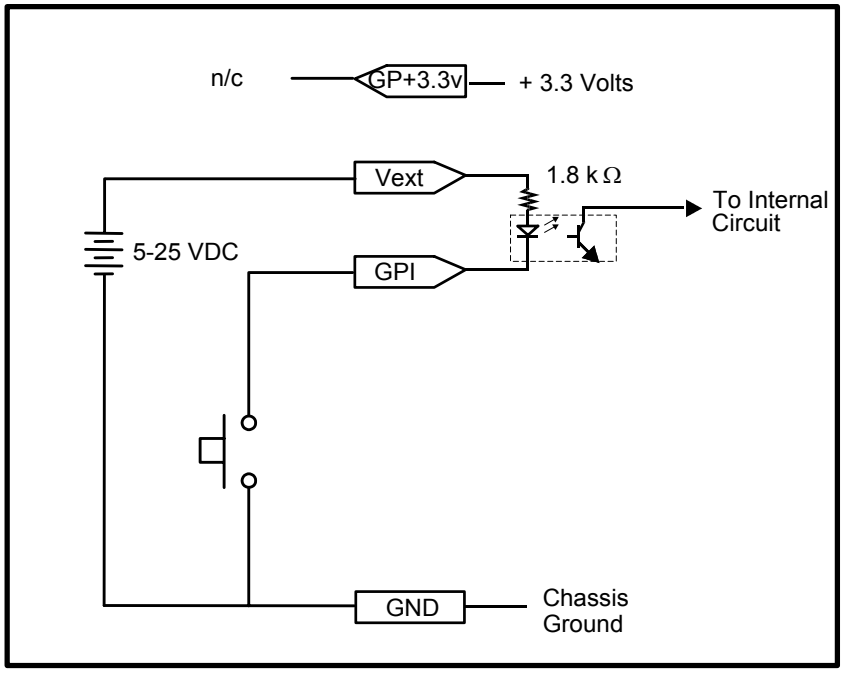


Figure 2-4: Powering the General Purpose Input Opto-Isolators from an External Power Supply

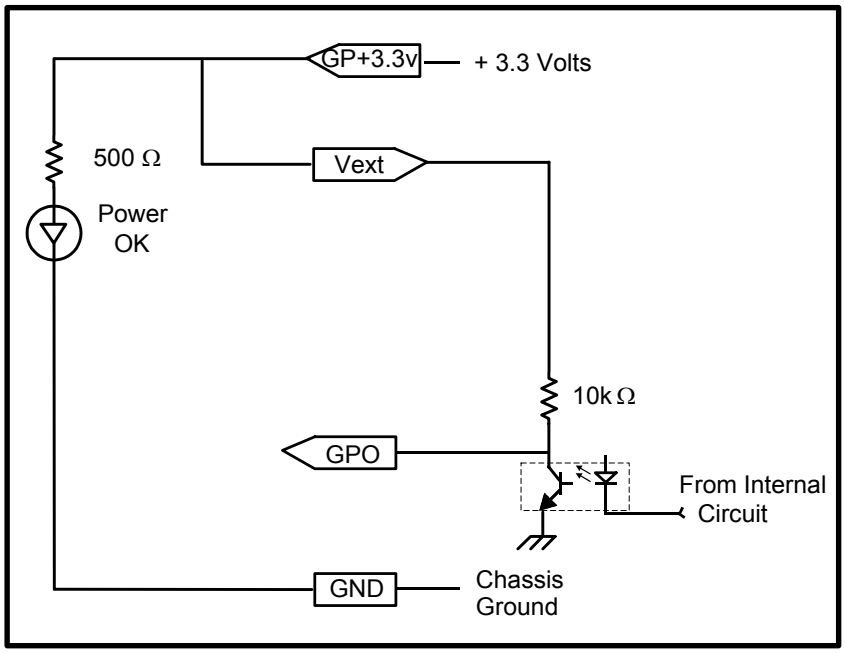


Figure 2-5: Powering the General Purpose Output Opto-Isolators from the Unit

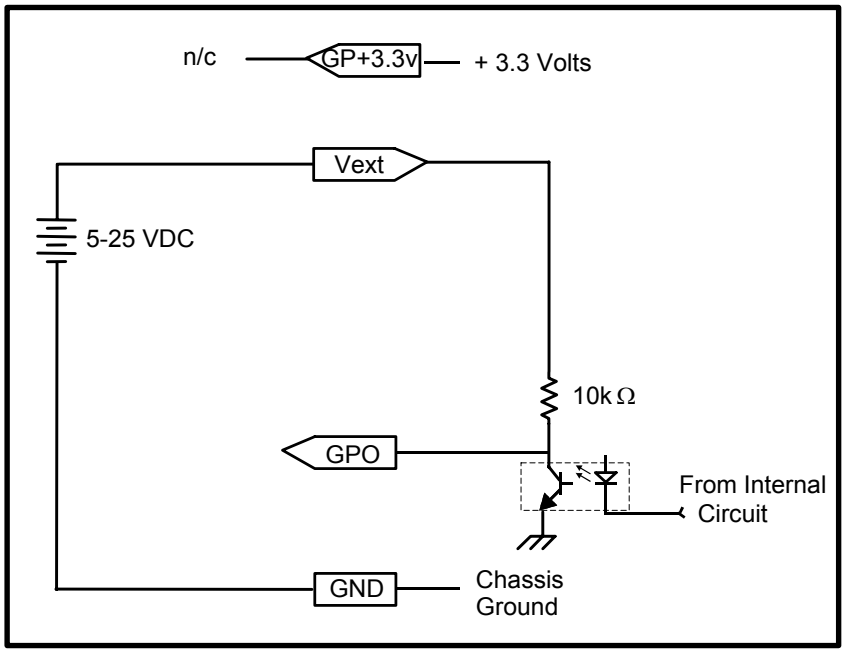


Figure 2-6: Powering the General Purpose Output Opto-Isolators from an External Power Supply

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

2.9. CONNECTING THE OPTIONAL TEMPERATURE PROBE

The 7725DSK-LG 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** or **COM C,** connector on the 7725DSK-LG. 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 7725DSK-LG. The serial port on the 7725DSK-LG must be set for RS-232 operation as described in section 2.1.3.

The temperature probe cable should not exceed 1000 feet.

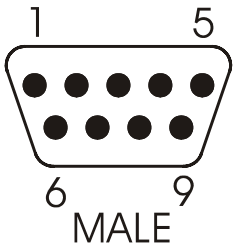
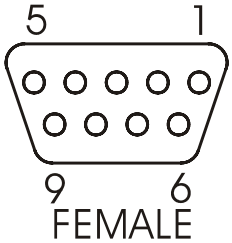
7725DSK-LG End				Temperature Probe End		
	9 pin D Male	Pin	Belden 9729	9 pin D Female	Pin	
		**1**			**1**	
	TxD	**2**	-------1a------	RxD	**2**	
	RxD	**3**	-------1b------	TxD	**3**	
		4		Rx Gnd	**4**	
	Gnd	**5**	---drain 1----	Gnd		
		6			**6**	
		7			**7**	
		8			**8**	
		9			**9**	
	Frame Gnd	**Shield**	---drain 2----	Frame Gnd	**Shield**	

Table 2-9: Temperature Probe Extender Cable

In order for the temperature probe to communicate to the 7725DSK-LG you must configure the **COM C or COM D** port for the correct protocol and baud rate. The *SERIAL CONTROL, or COM D* menu items on the *General* menu are used to accomplish this (depending on which communications port is used for the temperature probe). Set the RCP *General* menu item to *temperature* in order for the temperature probe to communicate to the 7725DSK-LG. See section 4.6.8 for information on setting the serial port protocol.

2.10. MODULE CONFIGURATION

The 7725DSK-LG module's features and parameters are configured through the following tools:

Module serial port: Module IP address network identification.

Remote Control Panel or Desktop Control Panel: Use external control panels (via serial port) to configure (see section 4 for further details)

***Vista*LINK® PRO:** An SNMP software tool that is used to configure the module's parameters for normal operation.

Web Server Interface: A web browser can be used to connect to the 7725DSK-LG to configure some of the audio and time parameters. This interface does not require any additional software to be installed, just web browser software.

Overture: Allows the user to manage and control the media on the 7725DSK-LG.

2.11. CONFIGURING THE MODULE USING THE MODULE SERIAL PORT

1) Through the card-edge's serial port, and using the serial 7700 upgrade cable connected to a PC's serial port running HyperTerminal (or equivalent), the 7725DSK-LG module's IP address and subnet are identified. The 7700 upgrade cable supplied with the 7700FR-C frame is a multi-coloured ribbon cable with a six pin header socket on one end and a female 9 pin D connector on the other end (Evertz part number WA-S76). This cable is normally in the vinyl pouch at the front of the manual binder. Configure the port settings of the terminal program as follows:

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

2) When the card is powered-up, the HyperTerminal connection displays boot-up status information and once completed, ends with the "Status Message" as shown in Figure 2-7.

3) Press the <Enter> key to see the main Menu. In the Main Menu, the options shown in Figure 2-7 are present for module configuration.

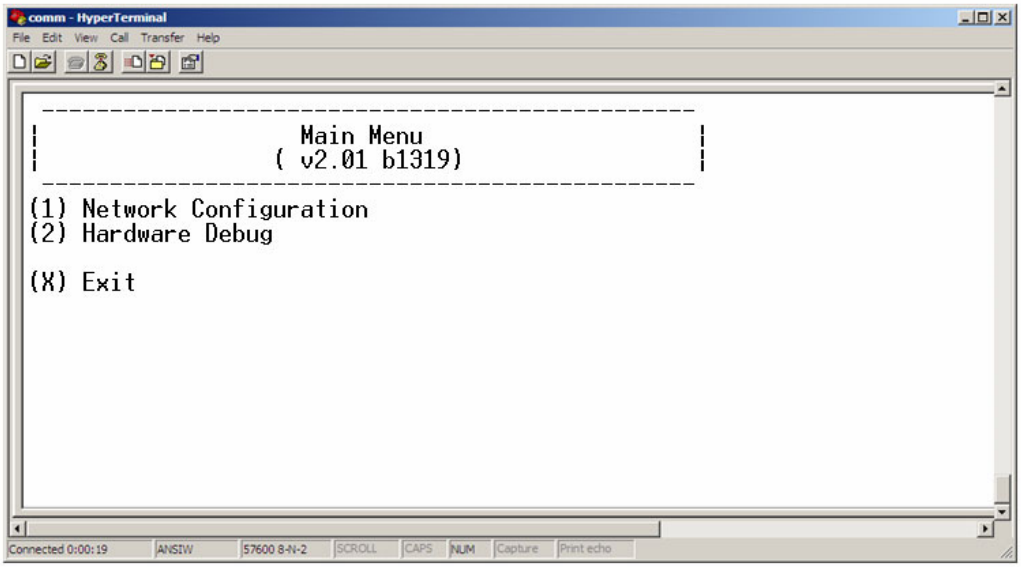


Figure 2-7: HyperTerminal – Main Menu

2.11.1. Network Configuration

4) To open a menu item, type the corresponding number from the list, and then press <ENTER>. Select option (**1**) *Network Configuration* from the Main Menu to set the IP parameters for the 7725DSK-LG module.

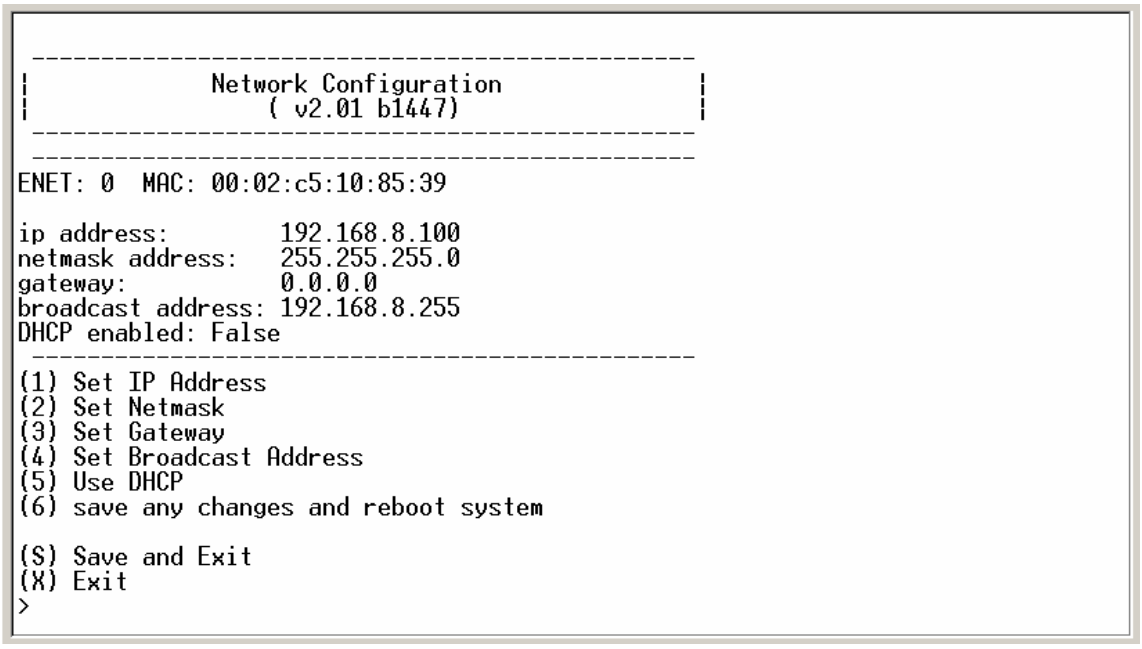


Figure 2-8: HyperTerminal – Network Configuration

5) In the Network Configuration menu item, type the corresponding number from the list, and then press <ENTER>. **Remember to SAVE (S or 6) when a change has been made before exiting the menu**. In the above menu (Figure 2-8), selecting options (1) through (4) allows the user to set the networking parameters of the 7725DSK-LG.
6) Once changes are completed and saved, the 7725DSK-LG module should be power-cycled for the changes to take effect.

2.12. HOW TO INCORPORATE A ROUTER

The 7725DSK-LG has the ability to control an upstream router. This control is done serially using either GVG Ten XL or Quartz Router control protocols. Details on the specific routers can be found in their individual manuals.

2.12.1. Using a Xenon Router

The 7725DSK-LG can control a Xenon router (or other Quartz router) using the Quartz Router control protocol. In conjunction with a QMC-DCP, users can router ANY input source to the PGM IN A, PGM IN B, FILL IN, and KEY IN. The communication between the Xenon and 7725DSK-LG is done over a serial cable.

If multiple 7725DSK-LGs are to be connected to a single Xenon router, then a 7700R-SC will be required to bridge the serial connections to the single router. Please call factory for more information on this configuration.

2.12.2. Using a X1200 Series Router

The 7725DSK-LG can control X1200 series router using the GVG Ten XL protocol. In conjunction with a QMC-DCP, users can router ANY input source to the PGM IN A, PGM IN B, FILL IN, and KEY IN. The communication between the X1200 series router and 7725DSK-LG is done over a serial cable.

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CHAPTER 3
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3. HOW TO OPERATE THE DOWNSTREAM KEYER USING VISTALINK® PRO

3.1. WHAT IS *VISTA*LINK®?

*Vista*LINK® is Evertz's remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. *Vista*LINK® provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through *Vista*LINK® PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, *Vista*LINK® enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

An SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz VistaLINK® Pro Manager graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *Vista*LINK® enabled products.

For more information on connecting and configuring the *Vista*LINK® network, refer to sections 3.2 to 3.13.

3.2. VIDEO TAB

The *Video* tab enables the user to set the parameters for the video connections.

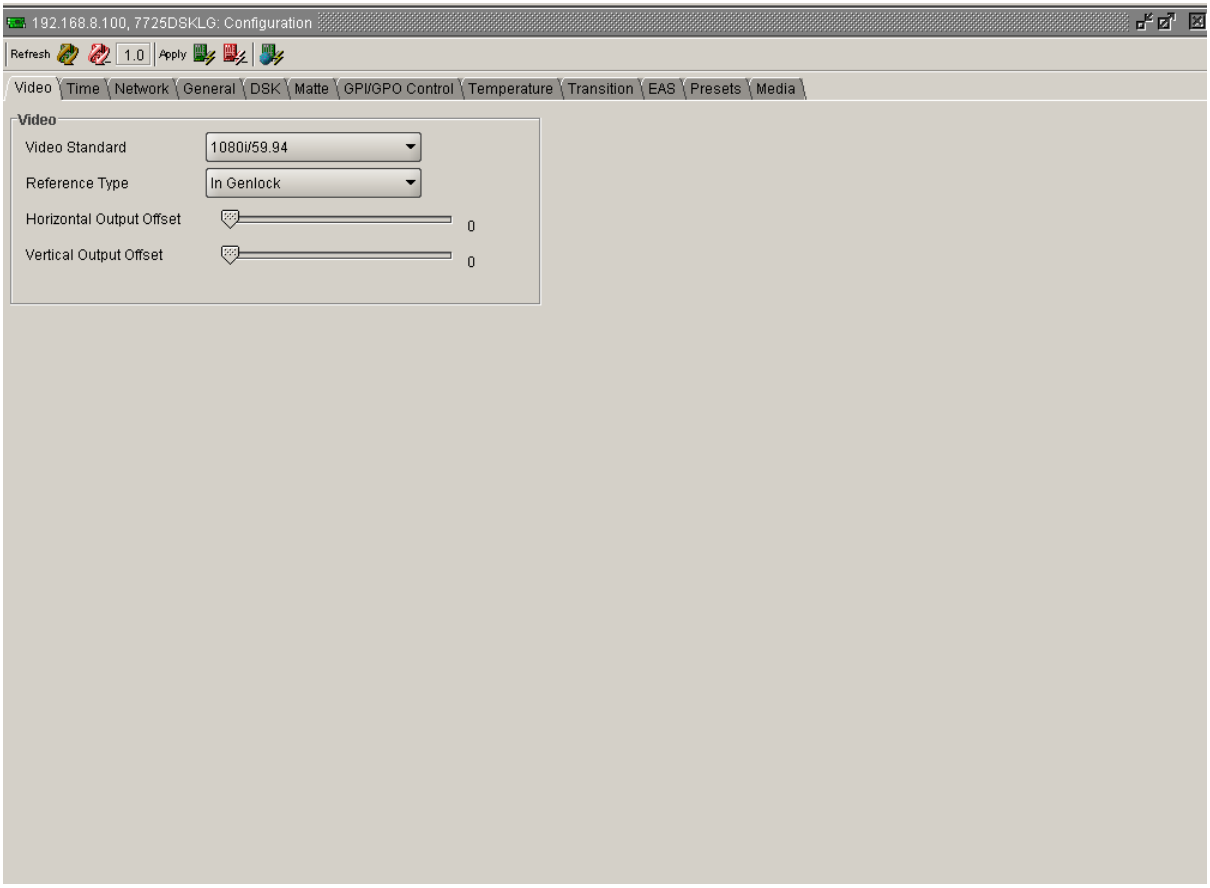

Figure 3-1: Video Window

3.2.1. Video Standard

This option is used to set the video standard in use.

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

16x9 525i: Select 16x9 525i for operation with 16 x 9 aspect ratio 525i video conforming to SMPTE 125M. (SD Units)

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

720p/50: Select *720p/50* for operation with 720p/50 video conforming to SMPTE 296M. (HD units only)

720p/59.94: Select *720p/59.94* for operation with 720p/59.94 video conforming to SMPTE 296M. (HD units only)

1080i/50: Select *1080i/50* for operation with 1080i/50 video conforming to SMPTE 274M. (HD units only)

1080i/59.94: Select *1080i/59.94* for operation with 1080i/59.94 video conforming to SMPTE 274M. (HD units only)

Note: If the user wants to set the video standard to 525i or 625i on an HD unit, load the latest SD 7725DSK-LG firmware onto the HD unit.

3.2.2. Reference Type

This option allows the user to set the reference type (*In Video* and *In Genlock*). The downstream keyer can be referenced by the input video or by the source applied to the **REF IN** BNC.

3.2.3. Horizontal Output Offset

This option allows the user to set the horizontal timing of the output video with respect to the genlock reference input. Setting this control to 0 keeps the output video in time with the genlock reference.

Increasing the value will delay the output video in one-sample increments. In order to advance the horizontal timing of the output video with respect to the genlock video, set the control to the maximum number of samples per line for the output video standard minus the number of samples that you wish to advance the output video. (i.e. for 1080i/59.94 output video the total number of samples per line is 2200, so to advance the output video 5 samples set the value to 2195.)

3.2.4. Vertical Output Offset

This option allows the user to set the vertical timing of the output video with respect to the genlock reference input. Setting this control to 0 keeps the output video in time with the genlock reference.

Increasing the value will delay the output video in one-line increments. In order to advance the vertical timing of the output video with respect to the genlock video, set the control to the maximum number of samples per line for the output video standard minus the number of samples that you wish to advance the output video. (i.e. for 1080i/59.94 output video the total number of samples per line is 2200, so to advance the output video 5 samples set the value to 2195.)

The *H and V 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.

3.3. TIME TAB

The *Time* tab enables the user to set the time settings for the 7725DSK-LG.

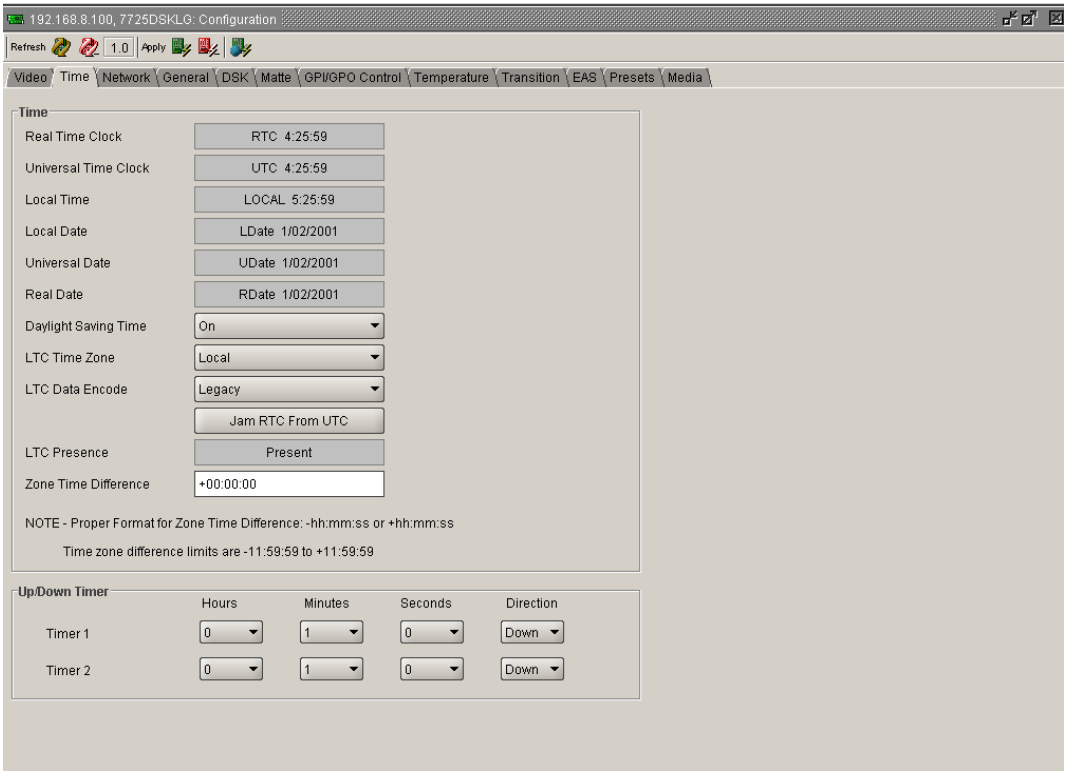

Figure 3-2: Time Window

3.3.1. Displaying Real Time Clock

The 7725DSK-LG 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 7725DSK-LG 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 7725DSK-LG 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).

3.3.2. Displaying the Universal Time Clock Time

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

3.3.3. Displaying the Local Time

This option 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.

3.3.4. Displaying the Local Date

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

When there is a valid LTC input to the 7725DSK-LG, the LTC time will overwrite the Real Time clock that has been entered.

3.3.5. Displaying the Universal Date

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

3.3.6. Displaying the Real Time Date

This option is used to display and set the real time date in the keyer.

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

3.3.7. Enabling Daylight Saving Time Compensation

This option 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 7725DSK-LG 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 7725DSK-LG in sync with the correct local time, connect a source of linear time code that contains local time to the LTC IN connector.

3.3.8. Selecting Whether the Time Code input is UTC or Local Time

This option 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.

3.3.9. Setting the LTC Date Format

This option is used to select the format of the date encoded in the user bits of the LTC. Use the drop down menu to choose from the Date Formats.

The **LTC DATA ENCODE** drop down menu lists the following options:

- AUTO
- SKOTEL
- SMPTE MJD
- SMPTE BCD
- Production
- Legacy
- None

For Skotel time code generators, choose *Skotel.* For all other time code generators choose *Auto.*

3.3.10. LTC Presence

The LTC Presence displays whether an LTC connection to the 7725DSKLG has been made.

Note: LTC Presence is not included in *Vista*LINK®

3.3.11. Synchronizing the Real Time Clock to the UTC Time

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 option allows the user to synchronize the RTC to the UTC Clock time immediately.

Note: In order to enable this option, the *Jam RTC* from the *UTC* option must be selected.

3.3.12. Setting the Time Zone Offset

This option 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 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 -)

3.3.13. Up Down Timer

3.3.13.1. Setting the Up Down Timer

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

HOURS: Sets the hours for the timer. It can be set to values from 0 to 23 hours.

MINUTES: Sets the minutes for the timer. It can be set to values from 0 to 59 minutes.

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

DIRECTION: Sets the direction for the Timer.

3.4. NETWORK TAB

The *Network* tab enables the user to view the network settings.

None of the network settings can be changed with *Vista*LINK® Pro. The network settings can be changed either in the serial menu or the Remote Control Panel menu.

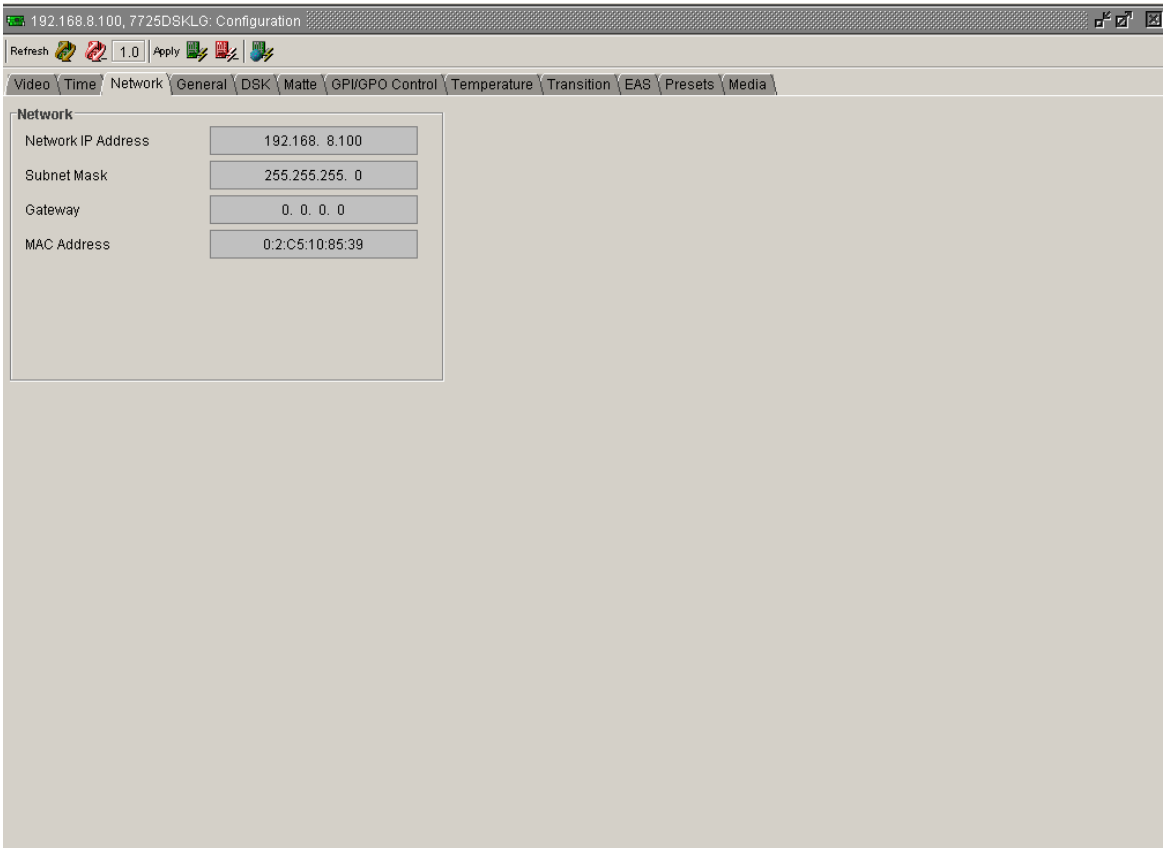

Figure 3-3: Network Window

3.4.1. IP Address

This option displays the unique IP address of the 7725DSK-LG within the network. 192.168.1.XXX is an example of an IP address in a private (internal) network.

3.4.2. Sub Net Mask

This option displays the "subnet mask" of the network. Specifically, this parameter outlines all the IP addresses that can communicate with the 7725DSK-LG.

3.4.3. Gateway

This option identifies the IP address of the "gateway" (commonly referred to as the "firewall").

3.4.4. MAC Address

This item displays the Network hardware (MAC) address of the unit (which can not be changed).

3.5. GENERAL TAB

The *General* tab enables the user to configure the port, firmware, AFD and MCP controls for the 7725DSK-LG.

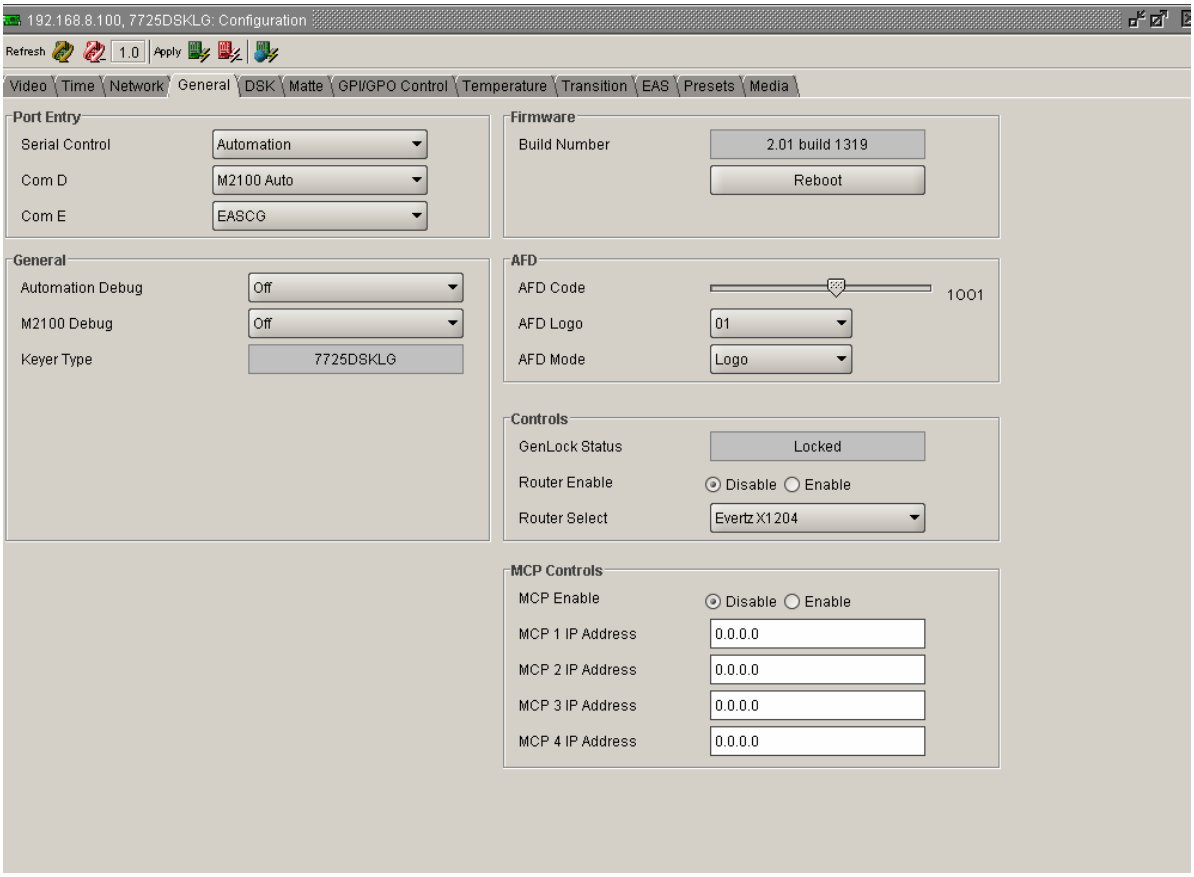

Figure 3-4: General Window

3.5.1. Port Entry

The menu items for Serial Control, COM D, and COM E are the same. For simplicity, only the COM D menu items will be shown in the manual.

Serial Control: Configures the function of the SERIAL CONTROL (COM C) Port.

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

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

EAS CG: Select *EAS CG* when the EAS option (+EAS) is enabled and the EAS decoder is connected to the appropriate port.

Temperature: Select *Temperature* when you have the optional temperature probe connected to the port. See section 2.9 for more information about connecting the temperature probe. The temperature is displayed using a preformatted Temperature logo, which is created using Overture™ software. See the Overture™ manual on creating the Temperature logo.

There are three settings that are used when the 7725DSK-LG is under automation control. See your automation vendor for information about the protocols that are supported.

Automation: Select *Automation* when you want to control the 7725DSK-LG using the Evertz automation protocol. This is the setting you should use when you are controlling the 7725DSK-LG from the Evertz MetaCast 2 software.

M2100-AUTO: Select *M2100-AUTO* when you want to control the 7725DSK-LG using the Grass Valley M2100 7725DSK-LG automation protocol.

XY-AUTO: Select *XY-AUTO* when you want to control the 7725DSK-LG using the xy logo inserter automation protocol. Note that only logo functions of the 7725DSK-LG can be controlled using the xy automation protocol.

Xenon Router: Select *Xenon Router* when you want to control the 7725DSK-LG while using the Xenon Router or an X1200 Series Router.

Ten XL Control: Select the *Ten XL Control* when you want to control the 7725DSK-LG using a router.

Note: When connecting Xenon or X1204 routers using 7725DSK, the Xenon Protocol or Ten XL protocol can be set to either on Port C or Port D. When using the 9625SW package with Xenon router or X1204 router only certain ports can be assigned to the Ten Xl or Xenon protocols. For more information please refer to 9625SW manual.

COM E: Configures the function of the virtual serial port (COM E).

3.5.2. General

3.5.2.1. Automation Debug Functions

Two automation debug functions are provided in the *GENERAL* window. 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.

Keyer Type: Displays the current product model number.

3.5.3. Firmware Version

This parameter informs the user of the build number.

Reboot: This option allows the user to reboot the unit. Once selected, a message will appear in order to confirm whether the user would like to proceed with the reboot.

Note: Firmware upgrades can be performed most easily through Overture Media Manager software provided in the Keyer Tool Kit CD.

3.5.4. AFD

AFD (Active Format Description) is intended to guide video equipment regarding the display of aspect ratio. A logo can be used to mask out areas that are not relevant to a particular aspect ratio of a program shown within an HD format. The AFD feature is VANC based, and therefore, only available when running HD video standard.

AFD CODE: This parameter allows the user to detect a particular AFD code in the HD VANC. The codes are based on SMTPE 2016. Please note that the codes are represented in binary.

Note: The slider is available for selecting *H* and *V Offsets* for *Timing Under Video*, selecting the *AFD Code*, etc. To increment by one, click right of the slider and to decrement, click left of slider. The slider can be selected and dragged across if gross movement is desired.

AFD LOGO: Select the drop down menu to choose the desired logo, under *AFD Logo* tab.

AFD MODE: This parameter allows the user to select what action will be taken when a trigger is received.

When set to *DSK* mode the downstream keyer will be turned on.

When set to *Logo* mode the logo that is specified will be turned on when a trigger is received.

3.5.5. Controls

GENLOCK STATUS: This option displays the status of the keyer in regards to genlock. The status will indicate whether the keyer is locked to reference or not.

ROUTER ENABLE: This option allows the user to enable or disable the router controls.

ROUTER SELECT: This option allows the user to select the desired router type.

3.5.6. MCP Controls

In order for a QMC-DCP to control a 7725DSK, the 7725DSK must contact the QMC-DCP first. This menu allows you to configure the IP address of up to four QMC-DCP panels. Once configured the QMC-DCP should allow the user to select and control the 7725DSK.

Please refer to the QMC-DCP manual for configuration of communications to the 7725DSK-LG. In the QMC-DCP manual, configuration to control a PKG9625SW and a 7725DSK-LG are equivalent.

3.6. DSK TAB

The 7725DSK-LG has a downstream keyer layer that allows the user to key objects into the output video. The *DSK Setup* window is used to configure the downstream keyer functions – key type, gain, and thresholds.

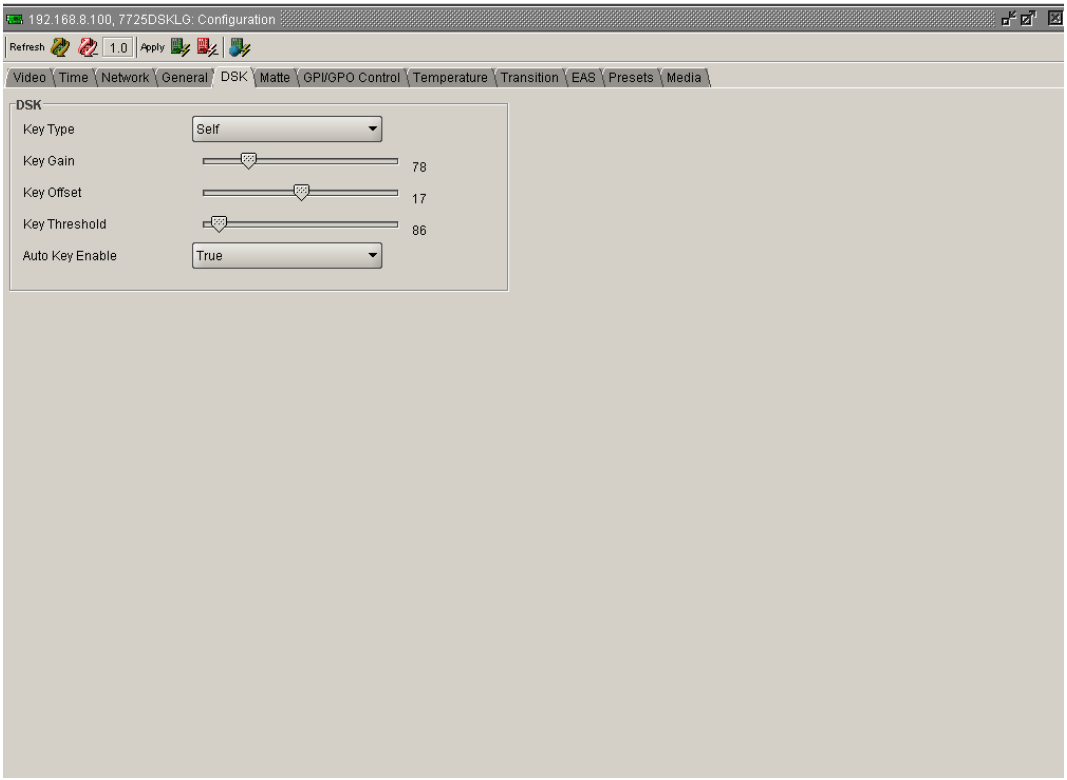

Figure 3-5: DSK Window

3.6.1.1. Setting the Key Type

This option 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** and **FILL** video inputs of the 7825DSK2-LG-HD respectively.

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

3.6.1.2. Setting the Key Gain

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

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).

3.6.1.3. Setting the Key Offset

This option 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.

3.6.1.4. Setting the Key Threshold

This option 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** 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.

3.6.1.5. Setting the Auto Key Enable

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

3.7. MATTE TAB

The 7725DSK-LG has a black overlay matte that blacks out video and produces a letterbox effect on the output video. The *MATTE Setup* window is used to configure the black overlay matte that can be applied over the program video.

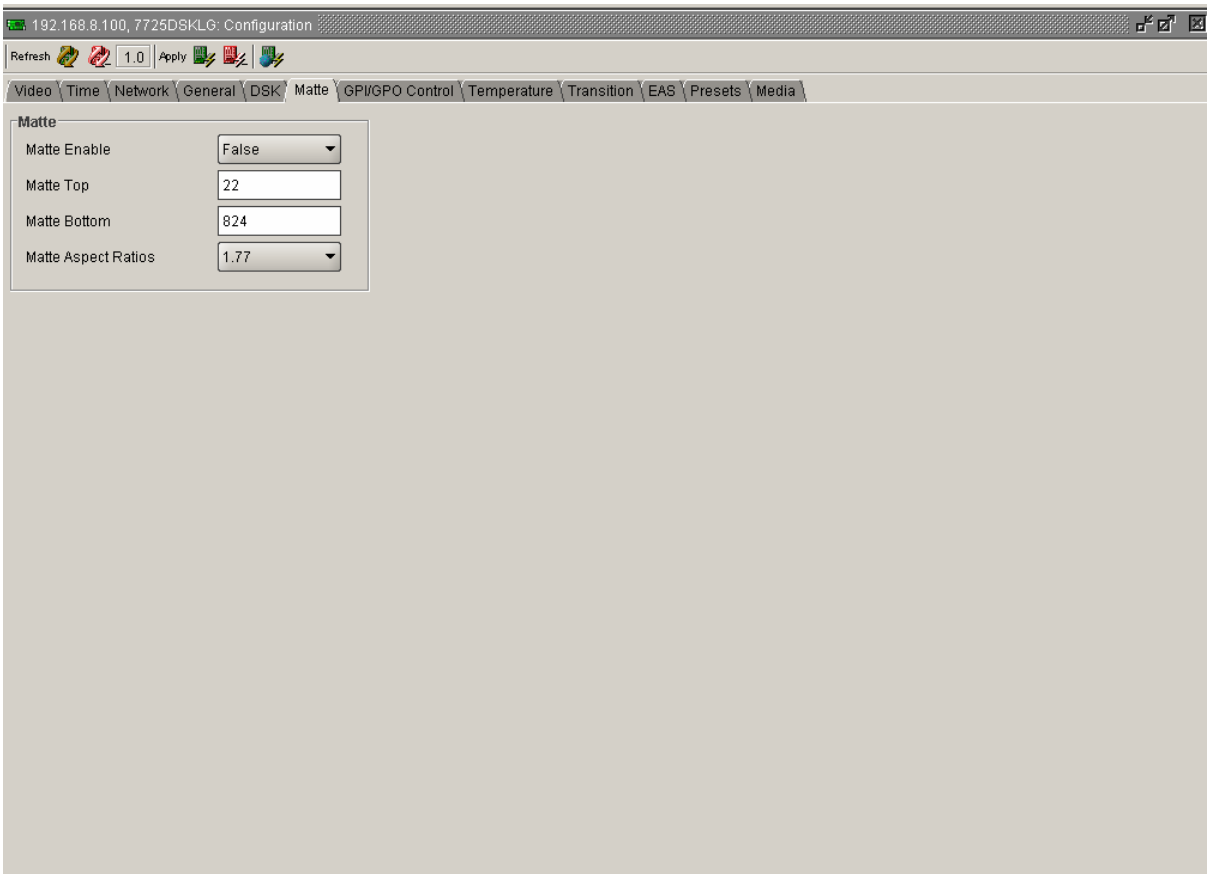

Figure 3-6: Matte Window

3.7.1. Matte Parameters

3.7.1.1. Setting the Matte Enable Function

This option is used to turn the matte on and off.

Select *True* 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 *False* to turn off the black matte overlay.

3.7.2. Setting a User Defined Matte Aspect Ratio

There are two options that allow the user to define custom aspect ratios for the matte. Selecting a pre-defined aspect ratios will lose any changes you have made to the *Matte Top* and *Matte Bottom* options unless they are stored using the user presets (see section 3.12). When you manually change the *Matte Top* and *Matte Bottom* settings the *Matte Aspect* will show the aspect ratio as *(user).*

3.7.2.1. Setting the Matte Top

The Matte Top parameter is used to set the bottom line of the *Top* matte.

3.7.2.2. Setting the Matte Bottom

The Matte Top parameter is used to set the top line of the *Bottom* matte.

3.7.3. Setting the Matte Aspect Ratio

This option 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 7825DSK2-LG-HD 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 3.7.2)

Please note that aspect 1.33 is only available on SD Units.

3.8. GPI/GPO CONTROL TAB

The *GPI/GPO Control* enables the user to configure the General Purpose Inputs and Outputs.

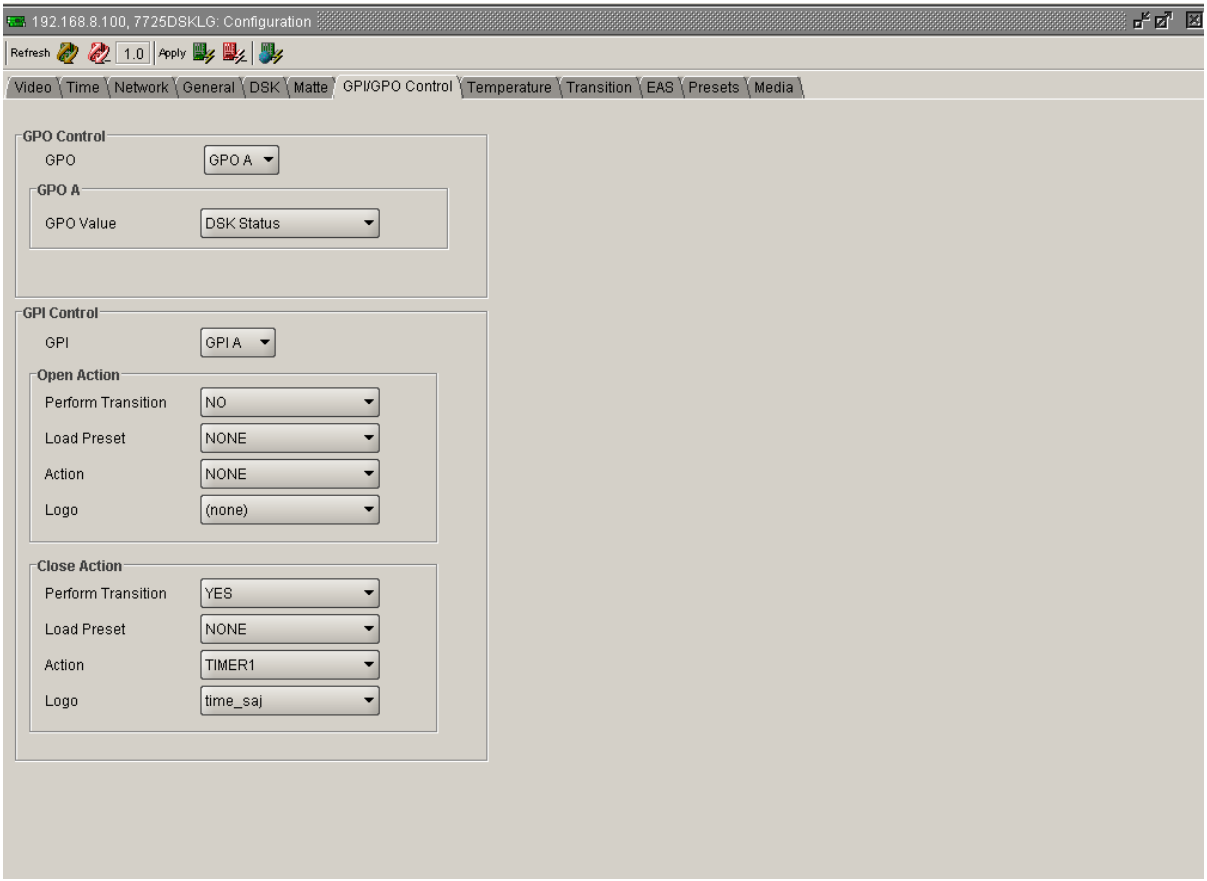

Figure 3-7: GPI/GPO Control Window

3.8.1. Configuring the GPO Outputs

The 7725DSK-LG 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 discussed.

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

None: Select *none* to disable the output.

Bypass: Select *Bypass* to indicate the unit is running bypass mode.

Trans: Select *Trans.* to indicate the transitions.

Vid A- C Val: Select *Vid* A- C *Val* to indicate that the signal is present.

Vid A - C Inv: Select *Vid A - C Inv* to indicate that the signal is not present.

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

Logo+Media: Select *Logo+Media* to make the GPO low when the media layer is turned on and a logo is being keyed on the Program bus.

Media Status: Select *Media Status* to make the GPO low when the media layer is turned on for the Program bus.

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

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

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

Prog B: Select *Prog B* to activate the output when the program output bus input is **PGM IN B**.

Prog A: Select *Prog A* to activate the output when the program output bus input is **PGM IN A**.

3.8.2. Configuring the GPI Inputs

The 7725DSK-LG 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 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.

GPI CONTROL: This option is used to select one of the GPI inputs (A to H) that will be configured using the other menu items in the *GPI SETUP* menu branch.

The Open action section enables the user to configure the GPI Actions. There are 4 options that configure the actions when the selected GPI closes (*CTransition*, *CLoad, CAction,* and *CLogo)*. There are also 4 options that configure the actions when the selected GPI opens (*OTransition*, *OLoad, OAction*, and *OLogo)*. For the sake of brevity in the manual, only the *On Close* event options will be shown.

3.8.2.1. Configuring the Perform Transition Function

The **Perform Transition** option is used to select whether a transition will occur when the GPI is closed to ground. The following items are available in the drop down menu:

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

YES: Select *YES* to perform a transition when the GPI is closed.

3.8.2.2. Configuring the Load Preset Function

The **Load Preset** option is used to select the preset that will be loaded when the GPI input is closed to ground. The following items are available in the drop down menu:

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

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

3.8.2.3. Configuring the Action

The **Action** option is used to select the action that will occur when the GPI input is closed to ground. The following items are available in the drop down menu:

NONE: If you do not wish to perform any action, select *NONE*.

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

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

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

TOGGLE: Select *TOGGLE* when the GPI is closed.

DUCK IN: Select *DUCK IN* to begin a 'Duck Audio Insert'.

DUCK OUT: Select *DUCK OUT* to end a 'Duck Audio Insert'.

DUCK: 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 voice-over, but the disadvantage is that the current state of the voice-over is not guaranteed.

ALL OUT: Select *ALL OUT* to fade out all logos.

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

3.8.2.4. Configuring the Logo Function

The **Logo** option is used to select a logo to be acted on if the "Closed Action" item is set to *CUE, IN* or *OUT*.

NONE: Select *NONE* to disable any logo actions.

3.9. TEMPERATURE TAB

The 7725DSK-LG has the ability to insert a logo that displays the current local temperature. The *Temperature* setup window is used to configure parameters relating to these types of logos.

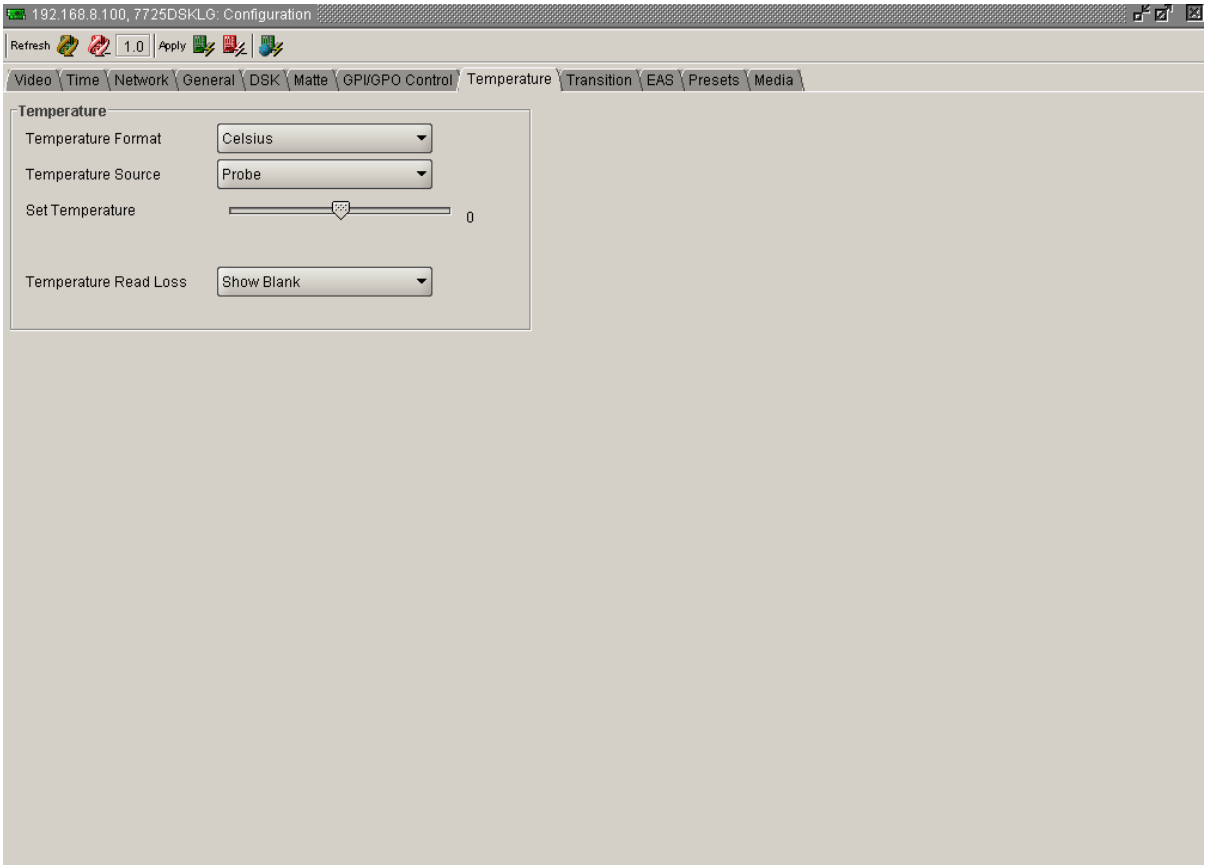

Figure 3-8: Temperature Window

3.9.1. Setting the Temperature Format

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

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

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

Note: This option is only used when the *Temperature Source* option 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 7725DSK-LG will automatically convert the value to degrees Celsius so that the correct value is displayed in the logo.

3.9.2. Setting the Temperature Source

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

Probe: Select *Probe* to take the temperature from the optional temperature probe.

See section 2.9 for more information on using the temperature probe.

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

METAR: Select *METAR* to take the temperature from METAR data acquired via the Internet.

3.9.3. Setting the Static Temperature

This option is used to set the temperature to be displayed in temperature type logos when the "Temperature Source" is set to *Manual.*

3.9.4. Temperature Read Loss

This option is used to set the behaviour when the temperature source is lost.

Show Blank: Selecting *Show Blank* will display nothing.

Last Valid: Selecting *Last Valid* will display the last valid temperature.

3.10. TRANISITION TAB

The 7725DSK-LG can transition between the video sources using a variety of standard transition types. The *TRANSITION* setup window is used to configure the transition type, rate, pause, and swap mode.

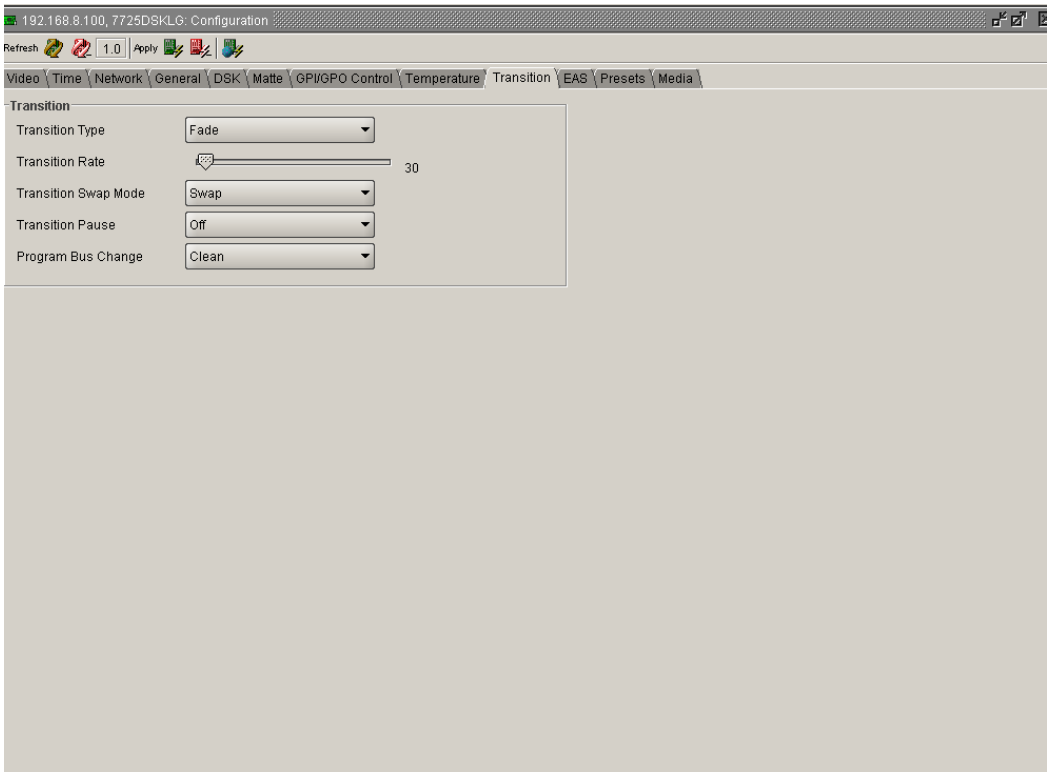

Figure 3-9: Transition Window

3.10.1. Setting the Transition Type

This option is used to select the type on transition you would like applied when the *DO TRANSITION* button is pressed. (See section 3.13.5) 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.

In order to select the desired transition type, choose the following from the drop down menu under the *Transition Type* tab:

Fade	**Box Out**	**BL Box**
Cut	**Box In**	**Wipe 315**
Fade-Cut	**TB Split**	**Wipe 270**
Fade-Fade	**LR Split**	**Wipe 225**
Cut-Fade	**TB Curtain**	**Wipe 180**
Diamond Ou	**LR Curtain**	**Wipe 135**
Diamond In	**TR Box**	**Wipe 90**
Circle Out	**TL Box**	**Wipe 45**
Cirlce In	**BR Box**	**Wipe 0**

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. Please refer to Figure 3-10.

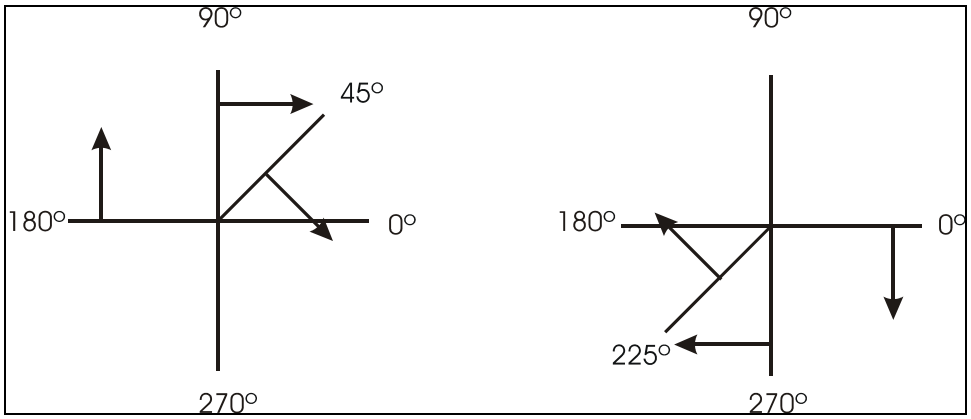

Figure 3-10: Wipe Pattern Angles

3.10.2. Setting the Transition Rate

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

3.10.3. Setting the Transition Swap Mode

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

This option 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.

3.10.5. Setting Program Bus Change

This menu describes the action when the user makes a “Hot cut” on the program bus. For instance, rather than selecting the next source on the Preset bus and then executing a transition, the next source will out directly onto the Program bus.

Clean: When set to *Clean*, the audio and video transition will be a clean, smooth action.

Hard: When set to *Hard*, the audio and video transition will be a hard, abrupt action.

3.11. EAS TAB

The *EAS* tab enables the user to configure the EAS parameters.

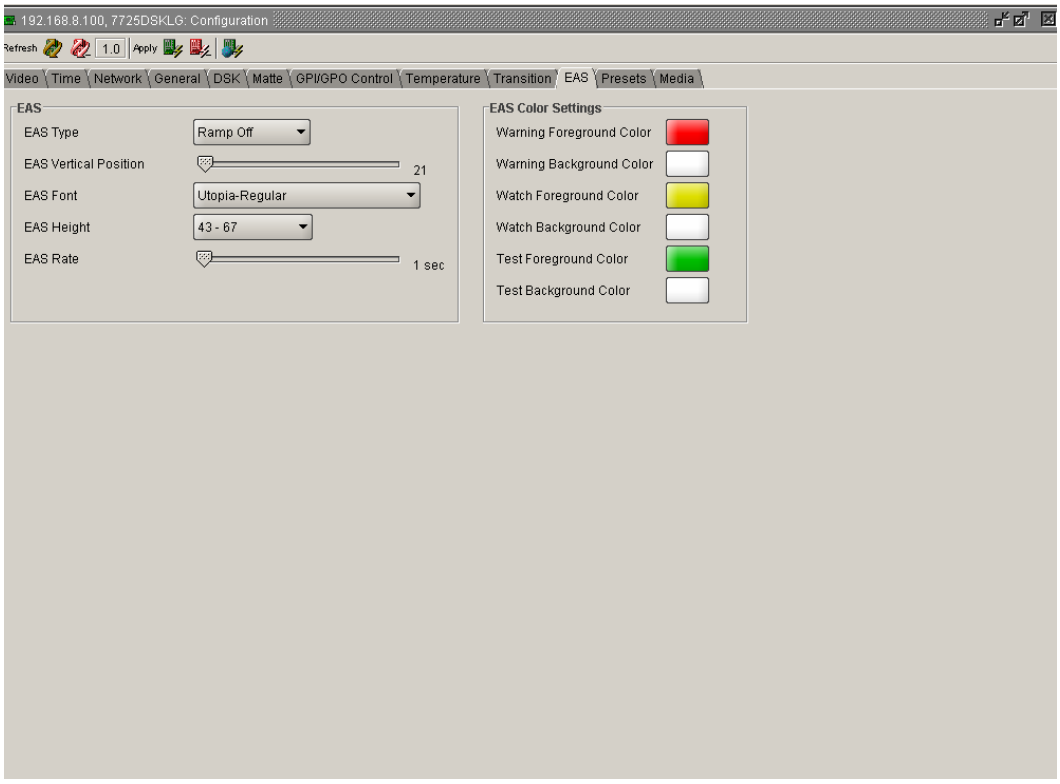

Figure 3-11: EAS Window

3.11.1. EAS over TCP/IP

The 7725DSK-LG firmware implements the DVS/168 protocol, referred to informally as EAS over TCP/IP. FTP is used to send text files to insert as crawls and WAV files to play as audio clips. Refer to HTML section 5 to configure the playback of the EAS audio.

EAS over TCP/IP (EAS over Ethernet) is supported with Trilithic's EASy Plus box. For further details, refer to the step-by-step instructions in the Trilithic “EASyPlus” Setup Tech Note. EAS over TCP/IP is also supported by the Dasdec device. For further details refer to Dasdec’s documentation or support.

3.11.2. EAS Values

The **EAS Type** option is used to select how the EAS message will transition onto the video. The following items are available in the drop down menu:

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

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

3.11.2.1. Setting the EAS Vertical Position

The **EAS Vertical Position** option is used to set the vertical position of the EAS scrolling text message. The *Vert Pos'n* value is the video line where the top of the scrolling message will be placed. The range for placement is from 21 to 379 as set by the FCC rules.

3.11.2.2. Setting the EAS Font

The **EAS Font** option is used to set the font that will be used for the EAS scrolling text message.

3.11.2.3. Setting the EAS Height

The **EAS Height** option 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.

3.11.2.4. Setting the EAS Rate

The **EAS Rate** option is used to set the speed with which the scrolling text moves from right to left across the screen measured in seconds.

The default is 16.0 seconds. The parameter is adjusted in 0.1 second increments.

3.11.3. EAS Colour Settings

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.

In order to change colour settings for the background and foreground parameters, select the colour palette on the right of the EAS screen and the "Choose a Colour " dialog box will appear. In this dialog box the user can select a colour using Swatches, HSB, and RGB formats.

3.12. PRESETS TAB

The 7725DSK-LG 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" options, and 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 *DO TRANSITION* button is pressed, or a GPI trigger invokes the transition.

The *PRESET* setup window is used to store and recall user presets.

After upgrading the 7725DSK-LG 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.

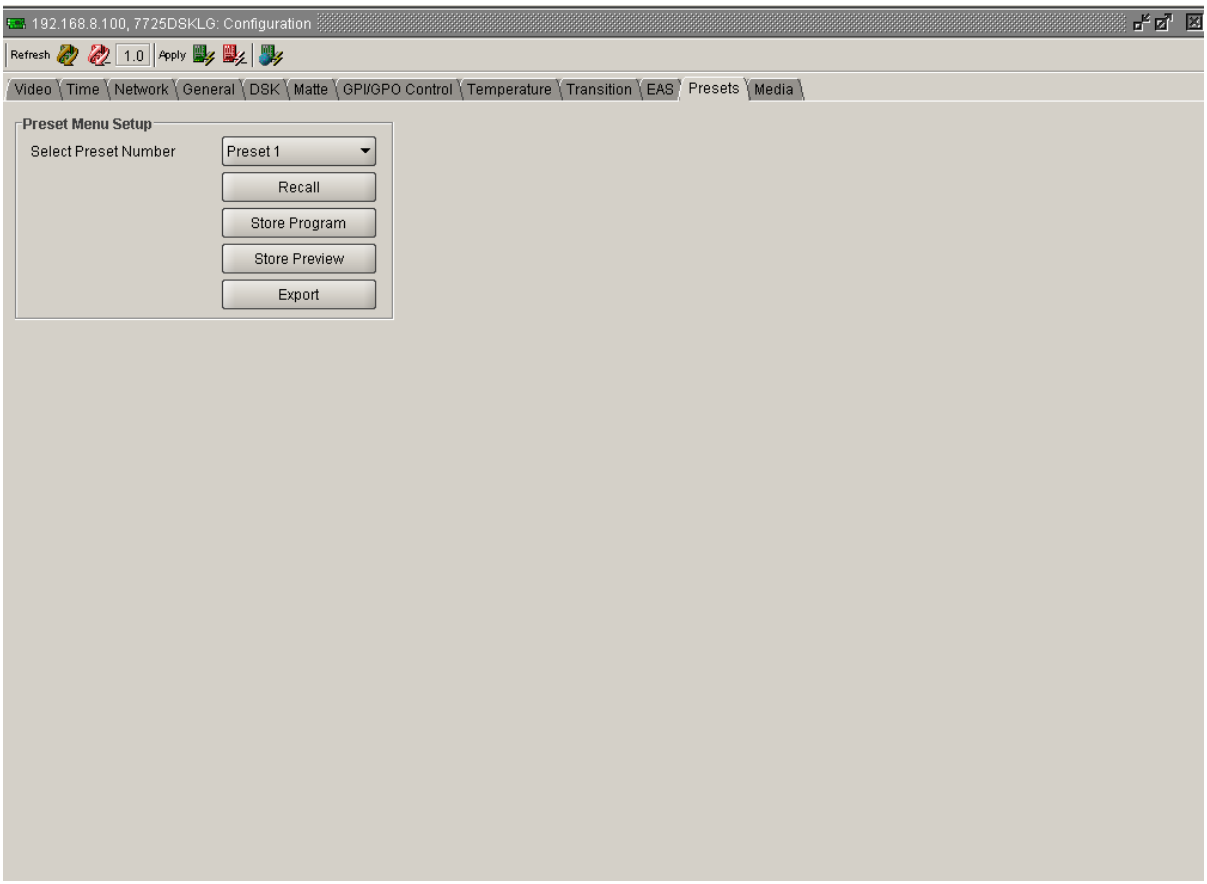

Figure 3-12: Presets Window

PRESET: Select the preset number to store or recall.

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

STORE PROGRAM: This menu item is used to store the Program Bus settings to 1 of the 10 user presets. Select *Store Program* to use the Program Bus as the source of the preset settings.

STORE PREVIEW: Select *Store Preview* to use the Preview Bus as the source of the preset settings.

EXPORT: 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.

3.13. MEDIA TAB

The *MEDIA* setup window controls all the parameters for individual logos and media. It also controls the Program and Preview bus for the 7725DSK-LG.

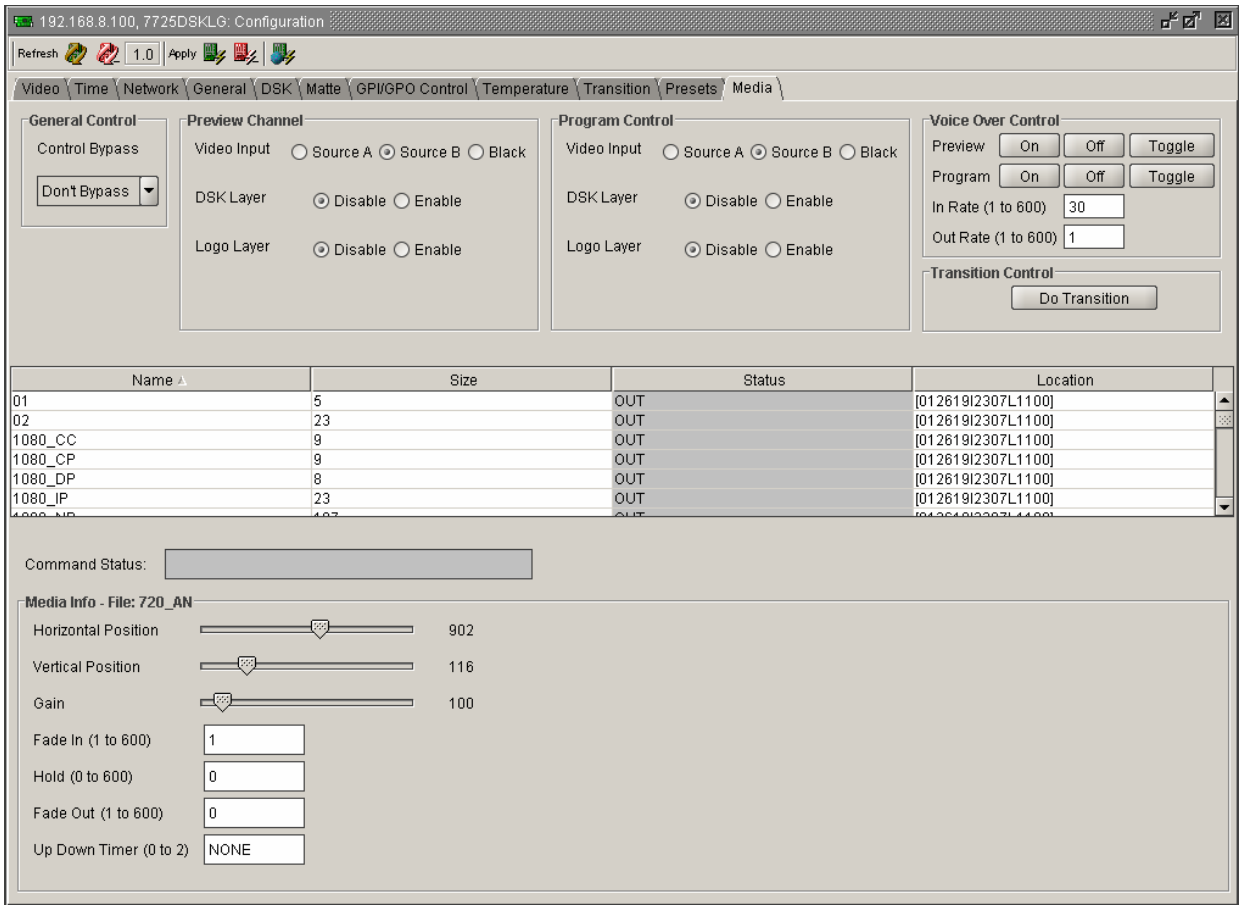

Figure 3-13: Media Window

3.13.1. General Control

3.13.1.1. Setting the Control Bypass

The **Control Bypass** option controls the bypass relay. When the *Don't Bypass* option is selected, the unit will run in normal operation mode. When the *Bypass* option is selected, the unit will run in bypass mode.

3.13.2. Preview Channel

3.13.2.1. Setting the Video Input

The **Video Input** section allows the user to select one of the following three sources: *Source A*, *Source B*, or *Black* (internal black video generator) as the source for the preview video bus.

3.13.2.2. Setting the DSK Layer

The **DSK Layer** control allows the user to enable or disable the downstream keyer layer for the Preview Bus.

3.13.2.3. Setting the Logo Layer

The **Logo Layer** allows the user to enable or disable the media key layer for the Preview Bus.

3.13.3. Program Control

3.13.3.1. Setting the Video Input

The **Video Input** control allows the user to select one of the following three video inputs: *Source A*, *Source B*, or *Black* (internal black video generator) as the source for the program video bus.

3.13.3.2. Setting the DSK Layer

The **DSK Layer** allows the user to enable or disable the downstream keyer layer for the Program Bus.

3.13.3.3. Setting the Logo Layer

The **Logo Layer** control allows the user to enable or disable the media key layer for the Program Bus.

3.13.4. Voice Over Control

The Voice Over control allows the user to adjust the Voice Over options.

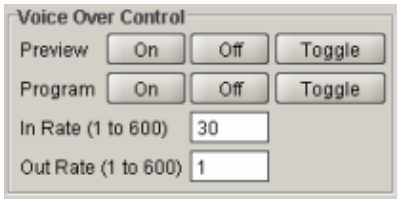

Figure 3-14: Voice Over Control Options

On: Selecting the *On* tab (on the Preview or Program bus) will enable the Voice Over control in preview and program outputs.

Off: Selecting the *Off* tab will disable the Voice Over control.

Toggle: Selecting the *Toggle* tab will enable the user to toggle between Voice Over controls.

Voice Over In Rate: The rate at which Voice Over fades in with program audio and is measured in fields.

Voice Over Out Rate: The rate at which Voice Over fades out with program audio and is measured in fields.

3.13.5. Transition Control

The *DO TRANSITION* 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 options in the *Transition* window (see section 3.10). Transitions can also be triggered using GPI, or automation control.

Within the "Transition" window, 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.

If the *Enable Dynamic Apply* icon is selected, all changes will apply automatically.

3.13.6. Static Logo Configuration Settings

Click on a logo in the media list and the media control menu will appear at the bottom of the view.

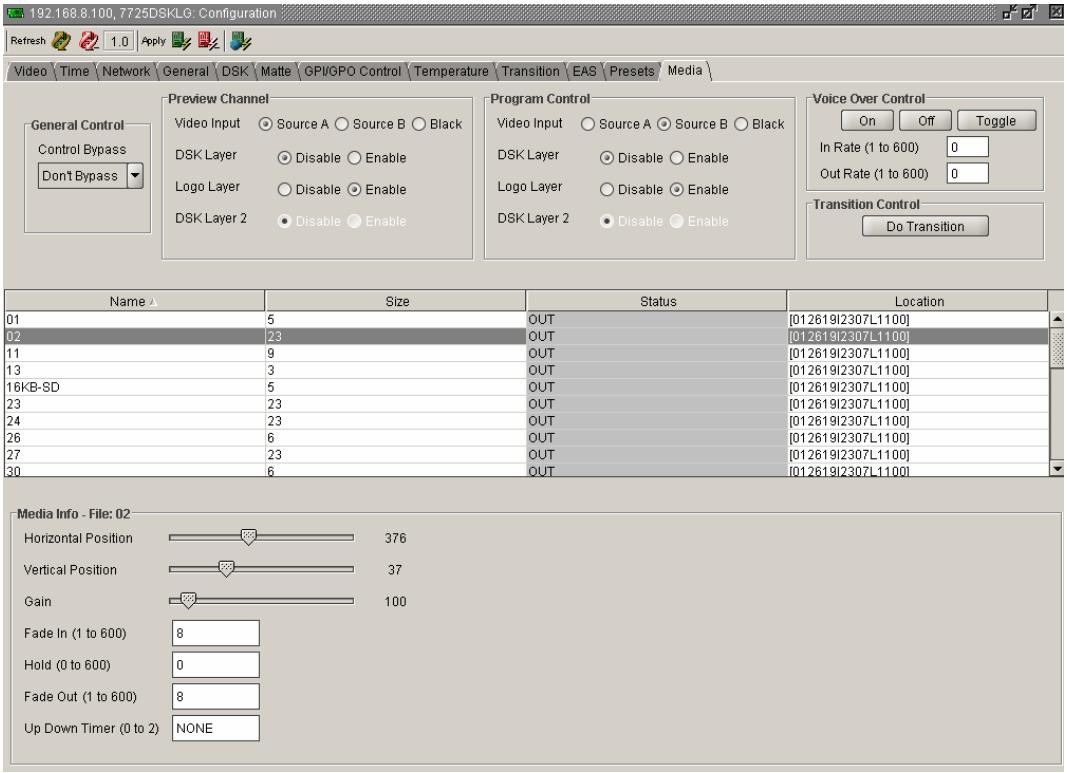

Figure 3-15: Static Logo Configuration Settings

3.13.6.1. Setting the Logo Horizontal Position

This option 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.

3.13.6.2. Setting the Logo Vertical Position

This option 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.

3.13.6.3. Setting the Logo Transparency (Gain)

This option 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 *Gain* value 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.

3.13.6.4. Setting the Logo Fade In Duration

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

3.13.6.5. Setting the Logo Display Time (Hold)

This option 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* option only applies to static and crawl logos.

3.13.6.6. Setting the Logo Fade Out Duration

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

3.13.6.7. Setting the Up Down Timer

The UD Timer (Up Down Timer) selects 1 of the 2 timers for the selected media. The default for the UD Timer is *NONE.*

Note: The Up Down Timer is only used for time objects.

3.13.7. Crawl Logo Configuration Settings

When the Crawl (+CLH) option is added to the 7725DSK-LG, 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 Overture™ software. The crawl is rendered by Overture™ into a logo (EVL) file and sent to the 7725DSK-LG. See the Overture™ manual for more information on preparing crawl logos.

The *Media tab* 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 3.13.7.8 to 3.13.8.1 provide detailed information about each of the settings.

Click on a logo in the media list and the media control menu will appear at the bottom of the view.

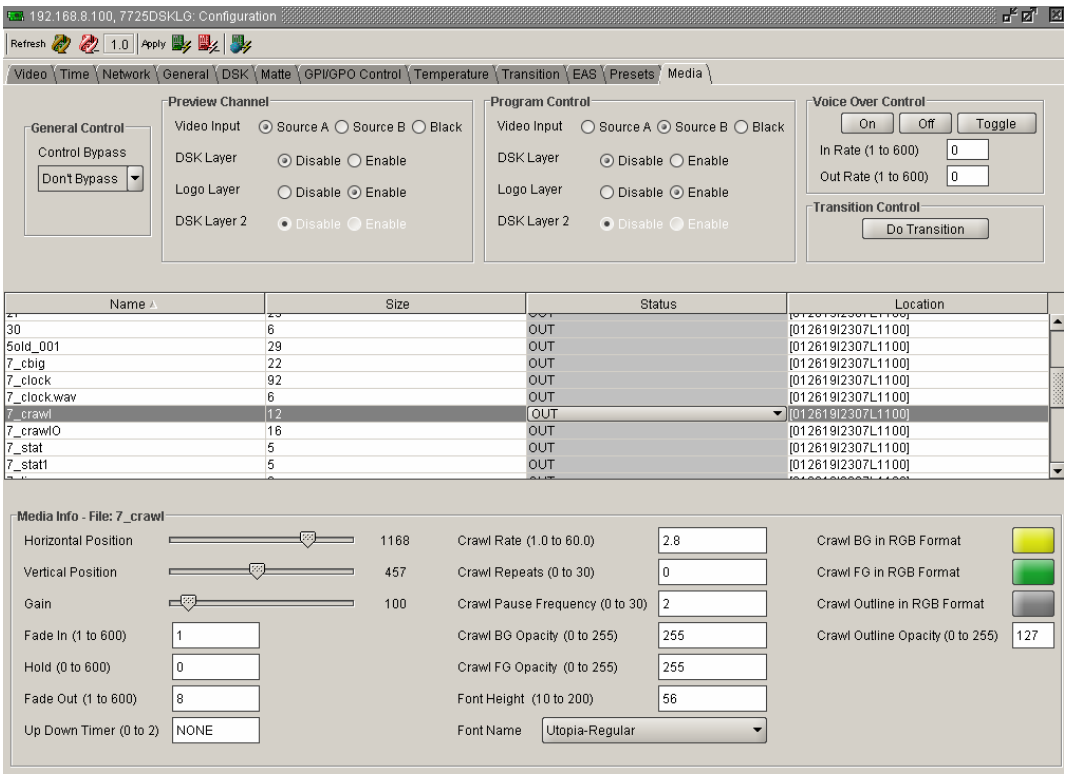

Figure 3-16: Crawl Logo Configuration Settings

3.13.7.1. Setting the Crawl Logo Horizontal Position

This option 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.

3.13.7.2. Setting the Crawl Logo Vertical Position

This option 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.

3.13.7.3. Setting the Crawl Logo Transparency (Gain)

This option 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 *Gain* value 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.

3.13.7.4. Setting the Crawl Logo Fade In Duration

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

3.13.7.5. Setting the Crawl Logo Display Time (Hold)

This option 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* option only applies to static and crawl logos.

3.13.7.6. Setting the Crawl Logo Fade Out Duration

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

3.13.7.7. Setting the Up Down Timer

The UD Timer (Up Down Timer) selects 1 of the 2 timers for the selected media. The default for the UD Timer is *NONE.*

3.13.7.8. Setting the Crawl Rate

This option 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.

3.13.7.9. Setting the Crawl Repeats Count

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

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

3.13.7.10. Setting the Crawl Pause Frequency

This option 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.

3.13.7.11. Setting the Crawl BG Opacity

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

The *Crawl BG opacity* menu item is used to set the background opacity (the inverse of transparency) for the crawl logo.

The opacity value ranges from 0 to 255. Setting the opacity to a value of 255 makes the background completely opaque. Setting the opacity to a value 0 makes the background completely transparent.

3.13.7.12. Setting the Font Height

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

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

3.13.7.13. Setting the Font Name

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

3.13.8. 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 *Crawl FG in RGB Format* is set the same way.

The *Crawl BG in RGB Format* option is used to set the background colour for the crawl logo.

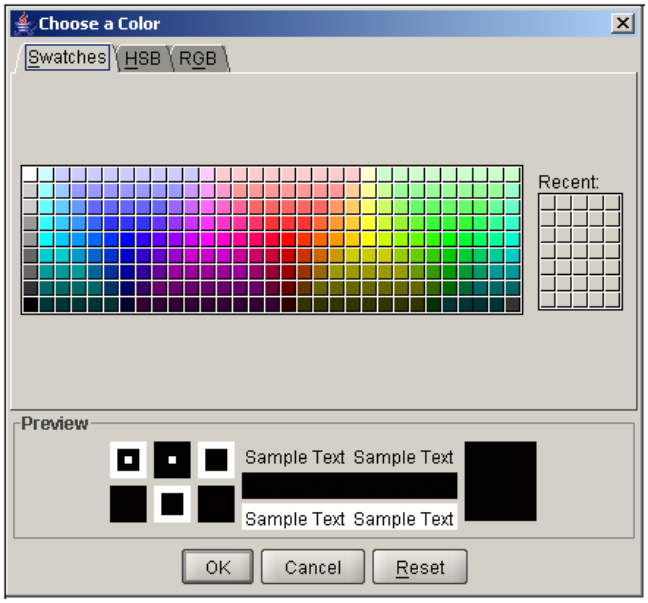

Figure 3-17: "Choose a Colour" Dialog Box

In order to change the colour settings for crawls, select the colour palette on the bottom right of the screen and the "Choose a Colour" dialog box will appear as illustrated in Figure 3-17. In this dialog box the user can select a colour using Swatches, HSB, and RGB formats.

3.13.8.1. Setting the Crawl Outline Opacity

The *Crawl Outline Opacity* control is used to set the opacity of the crawl outline. The opacity value ranges from 0 to 255. Setting the opacity to a value of 255 makes the crawl outline completely opaque. Setting the opacity to a value of 0 makes the crawl outline complete transparent.

3.13.9. Selecting a Logo or Media Item and Issuing a Fade/Cue/Fade Out

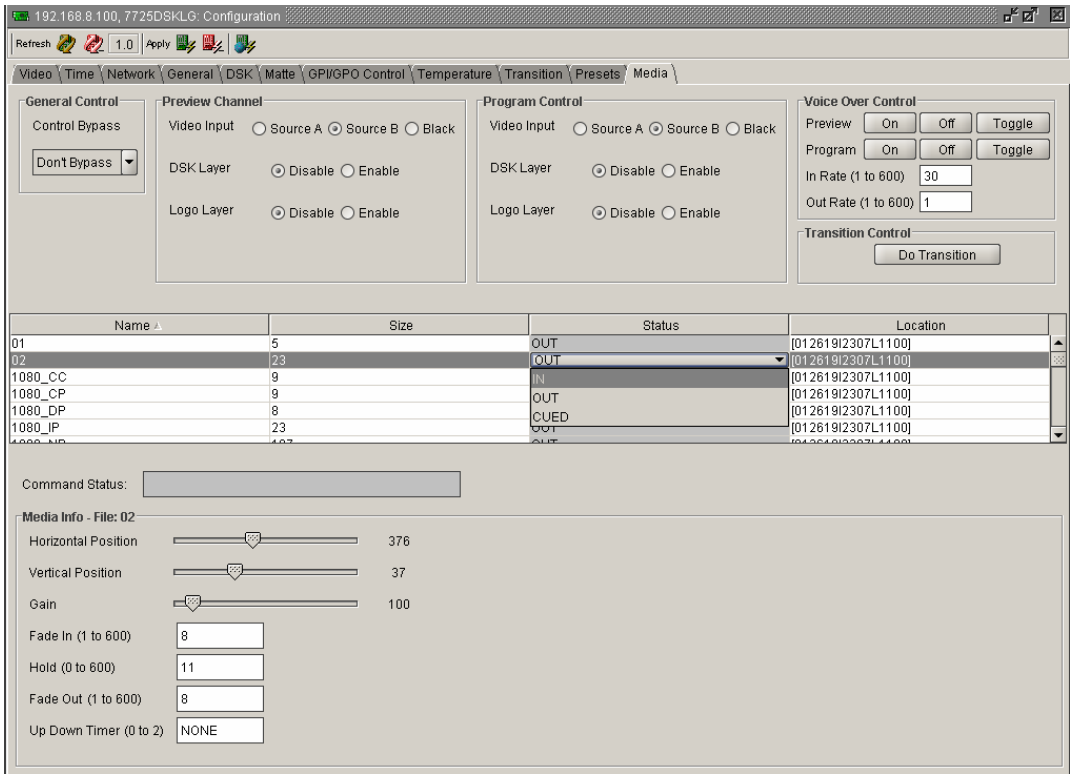

Figure 3-18: Issuing a Fade/Cue/Fade Out

Upon selecting a logo or media item under the “Name” column, the user can click on the “Status” column, adjacent to the desired logo, and a drop down screen for selecting ‘IN, CUED, OUT” will appear. This will allow user to cue, fade in, and fade out the logo or media item.

Command Status indication will be displayed in the middle of the screen to indicate that the command has been processed and the logo action is successful.

Note: The logos or media items can be ordered alphabetically (using the “Name” column), numerically (by “Size”), or by IN/CUE/OUT status (using the “Status” tab). Simply click on one of the three column headings to view logos or media items in the preferred order.

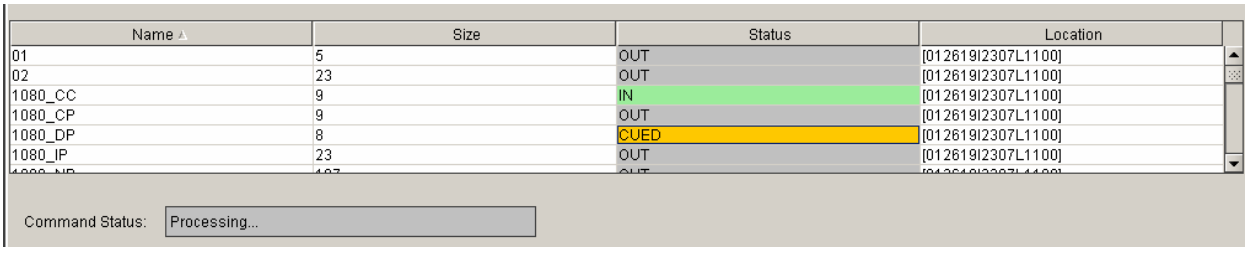

Figure 3-19: Command Status Table

As shown in Figure 3-19, logos that are “on air” are highlighted in green, and logos that are cued are highlighted in orange.

3.13.10. Audio Clip Configuration Settings

The 7725DSK-LG has the ability to insert audio clips into the program audio path.

Please note that the 7725DSK-LG does not currently support playlists, and therefore the audio clips can only be played by themselves.

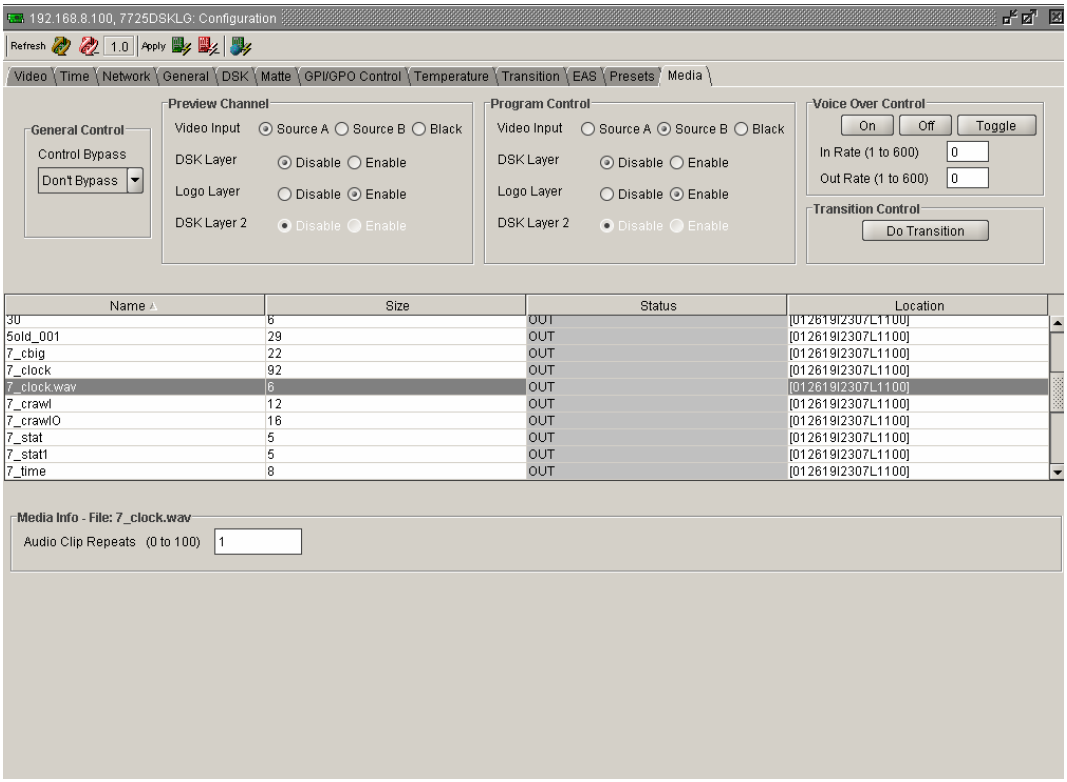

Figure 3-20: Audio Clip Configuration Settings

3.13.11. Setting the Audio Clip Repeat Count

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.
- Otherwise, enter into the *Audio Clip Repeats (0 to 100)* field, the appropriate number of time which you wish the audio to repeat.

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

The standard 7725DSK-LG is a 2 slot card contained within the 7700FR. The 7725DSK-LG is operated by a 1RU rack mount panel or desktop control panel. This chapter describes the operation of the 7725DSK-LG using the remote control panel. For information about controlling the 7725DSK-LG using the desktop control panel see section 6. For information about connecting the remote control panel to the 7725DSK-LG see section 2.4.

4.1. AN OVERVIEW OF KEY AND DISPLAY FUNCTIONS

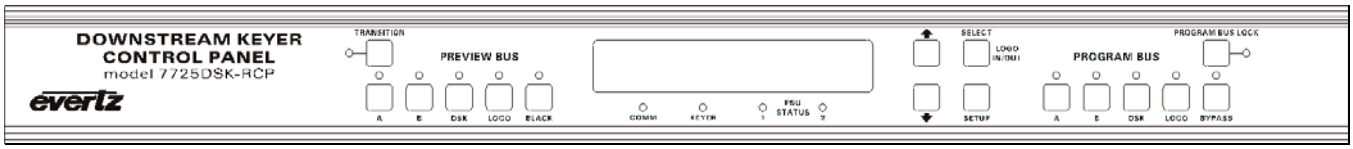


Figure 4-1: 7725DSK-LG – Front Remote Control Panel Layout

Figure 4-2: 7725DSK-LG – Back Remote Control Panel Layout

The remote control panel consists of a 16 digit alphanumeric display, 16 buttons and 16 LED status indicators.

The buttons are used to provide control of the 7725DSK-LG, 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 7725DSK-LG Downstream Keyer for your application.

4.1.1. Preview Bus Button Group

A: This button selects the video from the **PGM IN A** input for the preview video output bus.

B: This button selects the video from the **PGM IN B** input for the preview video output bus.

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** video input is mixed with the background video (**PGM IN A or B**) based on the key signal provided on the **KEY** video input, or it can be self-keyed, using user defined thresholds. See section 4.9 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 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 **A, 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.

4.1.2. Program Bus Button Group

A: This button selects the video from the **PGM IN A** input for the program video output bus.

B: This button selects the video from the **PGM IN B** input for the program video output bus.

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** video input is mixed with the background video (on the **PGM IN A or B**) based on the key signal provided on the **KEY** video input, or it can be self-keyed using user defined thresholds. See section 4.9 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.

BYPASS: This button controls the bypass relays. The LED indicates that the unit is in manual *Bypass* mode when it is On. When the unit is in *Bypass* mode, the program input video is directly connected to the **PGM IN A** video output. The unit will revert to *Bypass* mode in the event of a power loss also.

4.1.3. 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 4.10). 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.

PROGRAM 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 7725DSK-LG 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.

LOGO 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 **LOGO 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 **LOGO 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.

4.1.4. Setup Button Group

SETUP: This button is used to enter the *Setup* menu, which is used to configure the operating modes of the 7725DSK-LG. (See section 4.3 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.

4.1.5. Control Panel Status Indicators

4.1.5.1. Preview Bus Status Indicators

A: This LED indicates that the **PGM IN A** video input is selected as the source for the preview video bus.

B: This LED indicates that the **PGM IN 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.

4.1.5.2. Program Bus Status Indicators

A: This LED indicates that the **PGM IN A** video input is selected as the source for the program video bus.

B: This LED indicates that the **PGM IN 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.

BYPASS: This LED indicates that the unit is in manual *Bypass* mode when it is On.

4.1.5.3. 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 7725DSK-LG. Flashing ON approximately every 1.5 seconds indicates that the control panel is communicating with the main microprocessor in the unit. When the 7725DSK-LG is under automation control, or logos or other media files are being transferred to or from the unit using 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.

4.1.6. Electronics Unit Status Indicators

PSU STATUS 1, 2 These green LEDs indicate that the corresponding power to the 7725DSK-LG is functioning normally. **PSU STATUS 2** LED will be OFF all the time and is not applicable. These LEDs are the only ones present on the electronic units of the remote control versions.

4.1.7. 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 **LOGO IN/OUT** button. The display is also used to show the *Setup* menu items to configure the downstream keyer.

4.2. OVERVIEW OF FRONT REMOTE CONTROL PANEL OPERATION

4.2.1. 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 **LOGO 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 **LOGO 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.

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 7725DSK-LG. 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 4-3 provides an overview of the *Setup* menu system.

4.4. 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 options, 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 Timing
  - Update Code
  - Time Setup
  - Network Info
  - SNMP Trap Dest
  - AFD Trigger (HD Units Only)
  - Serial Control
  - COM D
  - COM E (net)
  - Genlock Status (HD Units Only)
  - Line 21 Protect (SD units only)
  - Unit Name
  - Up Down Timer
  - Automation Debug
  - M2100 Auto Debug
- **MANAGE FILES**
  - Media
  - File
  - To
  - 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
  - Program Bus Change
- **PRESET**
  - Recall Preset
  - Store Preset
  - Export Preset
  - Preset Source
  - GPI Setup
    - GPI
    - Cload Prest
    - Ctransition
    - Caction
    - Clogo
    - Oload Prest
    - Otransition
    - Oaction
    - Ologo
  - GPO Setup
    - GPO A
    - GPO B
    - GPO C
    - GPO D
- **TEMPERATURE**
  - Temp Source
  - Temp Format
  - Set Temperature
  - Temp Read Loss
- **EAS**
  - Type
  - Vert Pos'n
  - Font
  - Font Height
  - 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

Figure 4-3: Overview of the Setup Menu System

4.5. 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 4.6 to 4.14 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 is used to set up various items related to moving and managing logo files.
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.
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…

4.6. GENERAL CONFIGURATION ITEMS

The *GENERAL Setup* menu is used to set up various items related to the overall operation of the 7725DSK-LG such as Video Standard, Time settings, Network info, COM port settings and firmware versions. Table 4-1 shows the items available in the *GENERAL Setup* menu. Sections 4.6.1 to 4.6.13 provide detailed information about each of the sub-menus.

Select Standard	Sets the video standard
Reference Timing	Configures the reference timing of the device
Update Code	Displays product name, firmware version, and option to upgrade unit
Time Setup	Configures the real time clock and LTC timecode input
Network Info	Configures the Ethernet Network Address for FTP uploads
SNMP Trap Dest	Configures the IP address for SNMP Traps
AFD Trigger	Configures the handling of AFD triggers. Available on HD Units only.
Serial Control	Configures the function of the SERIAL CONTROL (COM C) Port
COM D	Configures the function of the COM D serial port
COM E (net)	Configures the function of the virtual serial port (COM E)
Genlock Status	Displays genlock status.
Line 21 Protect	Controls whether logos can be placed on Line 21 (SD Units Only)
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 4-1: Top Level of the General Setup Menu

4.6.1. Selecting the Video Standard

- *GENERAL*
  - *Select Standard*
    - *525i*
    - *16x9 525i*
    - 625i
    - 720p/50
    - 720p/59.94
    - 1080i/50
    - 1080i/59.94

The *Select 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. (SD Units)

Select 16x9 525i for operation with 16 x 9 aspect ratio 525i video conforming to SMPTE 125M. (SD Units)

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

Select *720p/50* for operation with 720p/50 video conforming to SMPTE 296M. (HD units only)

Select *720p/59.94* for operation with 720p/59.94 video conforming to SMPTE 296M. (HD units only)

Select *1080i/50* for operation with 1080i/50 video conforming to SMPTE 274M. (HD units only)

Select *1080i/59.94* for operation with 1080i/59.94 video conforming to SMPTE 274M. (HD units only)

Please note that if the user wants to set the video standard to 525i or 625i on an HD unit, load the latest SD 7725DSK-LG firmware onto the HD unit.

4.6.2. Setting the Video Output Timing With Respect To Reference

- *GENERAL*
  - *Reference Timing*
    - *Type*
      - *In Video*
      - *In Genlock*

This menu item allows the user to set the reference type. The downstream keyer can be referenced by the input video or by the source applied to the **REF IN** BNC.

The *H and V 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
Reference Timing
H: 0 to max samples

This menu item allows you to set the horizontal timing of the output video with respect to the genlock reference input. Setting this control to 0 keeps the output video in time with the genlock reference.

Increasing the value will delay the output video in one-sample increments. In order to advance the horizontal timing of the output video with respect to the genlock video, set the control to the maximum number of samples per line for the output video standard minus the number of samples that you wish to advance the output video. (E.g. for 1080i/59.94 output video the total number of samples per line is 2200, so to advance the output video 5 samples set the value to 2195.)

GENERAL
Reference Timing
V: 0 to max lines

This menu item allows you to set the vertical timing of the output video with respect to the genlock reference input. Setting this control to 0 keeps the output video in time with the genlock reference.

Increasing the value will delay the output video in one-line increments. In order to advance the vertical timing of the output video with respect to the genlock video, set the control to the maximum number of samples per line for the output video standard minus the number of samples that you wish to advance the output video. (E.g. for 1080i/59.94 output video the total number of samples per line is 2200, so to advance the output video 5 samples set the value to 2195.)

4.6.3. Firmware Version and Evoking an Upgrade

GENERAL
Update Code
7725DSK-LG x.xx build xxx boot 1.01 yes-upgrade now no-don't 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.)

4.6.4. Configuring the Real Time Clock

The 7725DSK-LG 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 7725DSK-LG 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 7725DSK-LG 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.

4.6.4.1. 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.

4.6.4.2. 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.

4.6.4.3. 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 7725DSK-LG. 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 7725DSK-LG, the LTC time will overwrite the Real Time clock that has been entered.

4.6.4.4. 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 4.6.4.5) 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.

4.6.4.5. 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 7725DSK-LG 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 7725DSK-LG 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 4.6.4.6

4.6.4.6. 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.

4.6.4.7. 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.

4.6.4.8. 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.

4.6.4.9. 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.

4.6.4.10. 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.

4.6.4.11. 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.*

4.6.5. Setting Up the Network Addresses

The *Network Info* sub-menus of the *General* Setup menu are used to configure the 7725DSK-LG 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.

4.6.5.1. Setting Up the IP Address

GENERAL
Network Info
A 196.168.1.1

This menu item sets the unique IP address of the 7725DSK-LG within the network. 192.168.1.XXX is an example of an IP address in a private (internal) network. If connecting multiple 7725DSK-LGs, take care not to use the same IP address for each.

4.6.5.2. 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 7725DSK-LG. This parameter is usually set to 255.255.255.0 for a private network.

4.6.5.3. 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 7725DSK-LG and running the network application software (i.e. Overture™). In a private network, this gateway could be identified as 192.168.1.YYY.

4.6.5.4. Displaying the Ethernet Hardware Address

GENERAL
Network Info
0:2:C5:00:4F:7E

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

4.6.6. Displaying SNMP Trap Destination

GENERAL
SNMP Trap Dest
+ 0 .0. 0. 0

This menu item allows the user to configure an IP address for the trap destinations to be used in an SNMP agent.

4.6.7. Displaying AFD Logo Trigger

GENERAL
AFD Trigger
AFD code: off *AFD code:xxxx*

This parameter allows the user to detect a particular AFD code in the HD VANC. The codes are based on SMTPE 2016.

This feature is only available on HD units.

GENERAL
AFD Trigger
L:

This allows the user to specify the line from which AFD is decoded.

This feature is only available on HD units.

GENERAL
AFD Trigger
Mode: <u>DSK</u> *Mode: Logo*

This parameter allows the user to select what action will be taken when a trigger is received.

When set to *DSK* mode the downstream keyer will be turned on.

When set to *Logo* mode the logo that is specified will be turned on when a trigger is received.

This feature is only available on HD units.

4.6.8. Setting the Serial Protocol for COM Ports D and E

The three serial ports (COM D and COM E) the breakout cable for the 7725DSK-LG are used for various functions. The SERIAL CONTROL (COM C) port and COM D ports are programmable and can be used for a variety of functions. The menu items for COM B, COM C, and COM D are the same. For simplicity, only one of these menu items will be shown in the manual.

Please note that COM A and COM B ports are read only and are not configurable.

- *GENERAL*
  - *COM D*
    - *None*
    - *EAS CG*
    - *Temperature*
    - *Automation*
    - *M2100_AUTO*
    - *XY_AUTO*
    - *Xenon Router*
    - *Ten XL*

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 the EAS option (+EAS) is enabled and the EAS decoder is connected to the appropriate port.

Select *Temperature* when you have the optional temperature probe connected to the port. See section 2.9 for more information about connecting the temperature probe. The temperature is displayed using a preformatted Temperature logo, which is created using Overture™ software. See the Overture™ manual on creating the Temperature logo.

There are three settings that are used when the 7725DSK-LG is under automation control. See your automation vendor for information about the protocols that are supported.

Select *Automation* when you want to control the 7725DSK-LG using the Evertz automation protocol. This is the setting you should use when you are controlling the 7725DSK-LG from the Evertz MetaCast 2 software.

Select *M2100-AUTO* when you want to control the 7725DSK-LG using the Grass Valley M2100 7725DSK-LG automation protocol.

Select *XY-AUTO* when you want to control the 7725DSK-LG using the xy logo inserter automation protocol. Note that only logo functions of the 7725DSK-LG can be controlled using the xy automation protocol.

Select *Xenon Router* when you want to control the 7725DSK-LG while using the Xenon Router.

Select the *Ten XL Control* when you want to control the 7725DSK-LG using a router. The *Ten XL Control* can only be selected on COM D port, which is the router control port.

4.6.9. Setting the Genlock Status

- *GENERAL*
  - *Genlock Status*
    - *Ref is unlocked*
    - *Ref is locked*

This menu item displays the status of the keyer in regards to genlock. The status will indicate whether the keyer is locked to reference or not.

4.6.10. 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.

This feature is available on SD Units only.

4.6.11. Setting the Unit Name

GENERAL
Unit Name
EVZx

This menu item allows the user to set the keyer unit name required when the 7725DSK-LG 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.

4.6.12. 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.

4.6.13. 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.

4.7. FILE MANAGEMENT CONFIGURATION ITEMS

The 7725DSK-LG comes standard with a 1GB re-moveable compact flash memory for storing logos and other media files. The *MANAGE FILES Setup* menu is used to set up various items related to the moving logo files between these different media drives. Table 4-2 shows the items available in the *MANAGE FILES Setup* menu. Sections 4.7.1 to 4.7.5 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
Delete	Deletes the media File from the Source media
Format	Erases the Destination media

Table 4-2: Top Level of the Manage Files Setup Menu

4.7.1. 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.

4.7.2. 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.

4.7.3. 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.

4.7.4. 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 (i.e. the logo is being keyed), the delete function will fail.

4.7.5. 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.

4.8. MATTE CONFIGURATION ITEMS

The 7725DSK-LG 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 4-3 shows the items available in the *MATTE Setup* menu. Sections 4.8.1 to 4.8.3 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 4-3: Top Level of the Matte Setup Menu

4.8.1. Turning the Matte On and Off

MATTE
- *Matte On/Off*
  - *Matte: Enable*
  - *Matte: Disable*

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.

4.8.2. Setting the Matte Aspect Ratio

MATTE
- *Aspect (user)*
  - *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 7725DSK-LG 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 4.8.3.)

*Please note that aspect 1.33 is only available on SD Units.

4.8.3. 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 4.11). 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.

4.9. DOWNSTREAM KEYER CONFIGURATION ITEMS

The 7725DSK-LG 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 4-4 shows the items available in the *DSK Setup* menu. Sections 4.9.1 to 4.9.5 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 4-4: Top Level of the DSK Setup Menu

4.9.1. Setting the Downstream Key Type

DSK
Key Type
Type: input *Type: 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** and **FILL** video inputs of the 7725DSK-LG respectively.

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

4.9.2. 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).

4.9.3. 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.

4.9.4. 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** 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.

4.9.5. 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.

4.10. TRANSITION CONFIGURATION ITEMS

The 7725DSK-LG 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 4-5 shows the items available in the *TRANSITION Setup* menu. Sections 4.10.1 to 4.10.5 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
Program Bus Change	Sets the transition type of a hot cut on the program bus

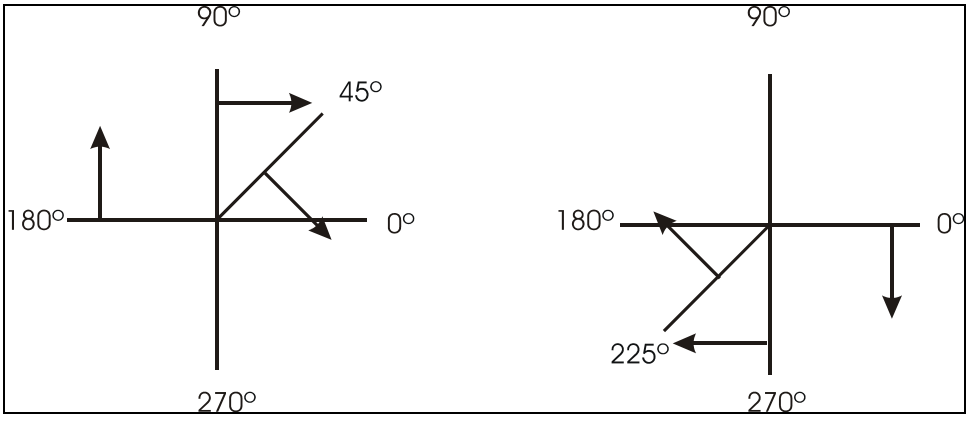
Table 4-5: Top Level of the Transition Setup Menu

4.10.1. Setting the Transition Type

TRANSITION
- *Transition Type*
  - *Type: Fade*
  - *Type: Cut*
  - *Type: Fade-Cut*
  - *Type: Fade-Fade*
  - *Type: Cut-Fade*
  - *Type: Diamond Ou*
  - *Type: Diamond In*
  - *Type: Circle Out*
  - *Type: Cirlce In*
  - *Type: Box Out*
  - *Type: Box In*
  - *Type: TB Split*
  - *Type: LR Split*
  - *Type: TB Curtain*
  - *Type: LR Curtain*
  - *Type: TR Box*
  - *Type: TL Box*
  - *Type: BR Box*
  - *Type: BL Box*
  - *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.



4.10.2. Setting the Transition Rate

TRANSITION
Transition Rate
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.

4.10.3. 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.

4.10.4. 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.

4.10.5. Setting Program Bus Change

TRANSITION
Program Bus Change
Switch: Clean
Switch: Hard

This menu describes the action when the user makes a “Hot cut” on the program bus. For instance, rather than selecting the next source on the Preset bus and then executing a transition, the next source will out directly onto the Program bus.

When set to *Clean*, the audio and video transition will be a clean, smooth action.

When set to *Hard*, the audio and video transition will be a hard, abrupt action.

4.11. PRESET CONFIGURATION ITEMS

The 7725DSK-LG 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, and 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 4-6 shows the items available in the *PRESET Setup* menu. Sections 4.11.1 to 4.11.6 provide detailed information about each of the sub-menus.

After upgrading the 7725DSK-LG 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.

GPI Setup	Configures the actions triggered by the GPI inputs
GPO Setup	Configures the actions of the GPO outputs
Store Preset	Stores the Program Bus settings to 1 of the 10 user presets
Recall Preset	Recalls 1 of the 10 user presets to the Preview Bus
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

Table 4-6: Top Level of the Preset Setup Menu

4.11.1. Configuring the GPI Inputs

The 7725DSK-LG 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 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 5.1.5 for more information on GPI scripting.

4.11.1.1. 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 load, transition to make and logo to display when the selected GPI input is closed and opened using the other menu items in the *GPI SETUP* menu branch.

4.11.1.2. Configuring the GPI Actions

There are 4 menu items that configure the actions when the selected GPI closes (*CTransition, CLoad, CAction,* and *CLogo)*. There are also 4 menu items that configure the actions when the selected GPI opens (*OTransition, OLoad, OAction*, and *OLogo)*. 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 4.11.1.1.

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 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 CAction
A CAction: NONE
A CAction: CUE
A CAction: IN
A CAction: OUT
A CAction: TOGGLE
A CAction:DUCK IN
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 IN* to begin a 'Duck Audio Insert'.

Select *DUCK OUT* to end a 'Duck Audio Insert'.

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 voice-over, but the disadvantage is that the current state of the voice-over 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.

4.11.2. Configuring the GPO Outputs

The 7725DSK-LG 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.

- *PRESET*
  - *GPO Setup*
    - *GPO A*
      - *GPO A: none*
      - *GPO A: Bypass*
      - *GPO A: Trans.*
      - *GPO A: Vid C Inv*
      - *GPO A: Vid C Val*
      - *GPO A: Vid B Inv*
      - *GPO A: Vid B Val*
      - *GPO A: Vid A Inv*
      - *GPO A: Vid A Val*
      - *GPO A: Voice Ove*
      - *GPO A: Logo+Medi*
      - *GPO A: Media Sta*
      - *GPO A: Logo Stat*
      - *GPO A: DSK Statu*
      - *GPO A: Prog B*
      - *GPO A: Prog A*
      - *GPO A: Prog BLK*

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 *Bypass* to enable the bypass.

Select *Trans.* To enable the transitions.

Select *Vid* A- C *Val* to indicate that the signal is present.

Select *Vid A - C Inv* to indicate that the signal is not present.

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

Select *Logo+Medi* to make the GPO low when the media layer is turned on and a logo is being keyed on the Program bus.

Select *Media Sta* to make the GPO low when the media layer is turned on for the Program bus.

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 **PGM IN B**.

Select *Prog A* to activate the output when the program output bus input is **PGM IN A**.

4.11.3. 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.

4.11.4. 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.

4.11.5. 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 8.3.2.1, and then use the Text capture function of your terminal program to save the ASCII text.

4.11.6. 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.

4.12. TEMPERATURE CONFIGURATION ITEMS

The 7725DSK-LG 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 Source	Configures the source of the temperature
Temperature Format	Configures the format of the temperature
Set Temperature	Sets the static temperature
Temp Read Loss	Configures the behaviour on the loss of the temperature source

4.12.1. Setting the Temperature Source

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 2.9 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 5.1.3 for more information on configuring the 7725DSK-LG to acquire METAR data.

4.12.2. Setting the Temperature Format

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 7725DSK-LG will automatically convert the value to degrees Celsius so that the correct value is displayed in the logo.

4.12.3. Setting the Static Temperature

Temperature
Set Temperature
Degree: 22 *-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.

4.12.4. Temperature Read Loss

Temperature
Temp Read Loss
Show: Blank *Show: Last Valid*

This menu item is used to set the behaviour when the temperature source is lost.

Selecting *Blank* will display nothing.

Selecting *Last Valid* will display the last valid temperature.

4.13. EAS CONFIGURATION ITEMS (+E OPTIONED UNITS ONLY)

When the EAS option (+E) is added to the 7725DSK-LG, it has the ability to key Emergency Alert messages received from a DASDEC, Sage or TFT EAS Decoder over the program video and to insert the emergency audio over the program audio. EAS alerts can be initiated through TCP/IP using the DVS/168 protocol from a Trilithic or Dasdec device. Text (crawl) messages and audio can be relayed and inserted into the audio and AES. With DVS/168 audio is copied as a .wav file to the unit and played as a clip. Configure the clip settings in the audio setup, section 4.14.9, to duck the background audio as desired. No analog audio input is required.

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 4-7 shows the items available in the *EAS Setup* menu. Sections 4.13.1 to 4.13.6 provide detailed information about each of the sub-menus.

Type	Selects how the EAS Crawl will transition onto the video
Vert Pos'n	Sets the vertical position of the EAS crawl
Font	Sets the font used to display the EAS crawl
Font Height	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 4-7: Top Level of the EAS Setup Menu

4.13.1. Setting the EAS Display Type

EAS *Type* *Ramp On* *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.

4.13.2. Setting the Vertical Position of EAS Crawl Display

EAS *Vert Pos'n* *20* *20 to 248*	This menu item is used to set the vertical position of the EAS scrolling text message. The *Vert Pos'n* value is the video line where the top of the scrolling message will be placed. The range for placement is from 21 to 379 as set by the FCC rules. When you first enter this menu branch the selected current position will be shown. To change the vertical position press the **SELECT** button. The display will show `vert pos'n=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 `vert pos'n:xx` indicating that this is the new display position.

4.13.3. Setting the Font used for the EAS Crawl Display

EAS
Font
Font Name

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 the from the available true type fonts that have been loaded using the Overture™ software. When you press the **SELECT** button the display will show `font:fontname` indicating that this is the new display font.

4.13.4. Setting the Font Size for the EAS Crawl Display

EAS
Font Height
10 *10 to 200*

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.

4.13.5. Setting the Crawl Rate for the EAS Crawl Display

EAS
Rate
16.0 *1.0 to 60.0 seconds*

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

The default is 16.0 seconds. The parameter is adjusted in 0.1 second increments.

4.13.6. 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:255G: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 like:

```
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 show a value similar to:

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

4.14. MEDIA CONFIGURATION ITEMS

The *MEDIA Setup* menu controls all the parameters for individual logos and audio clips. Table 4-8 shows the items available in the *MEDIA Setup* menu. Sections 4.14.1 to 4.14.3 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 **LOGO 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

Table 4-8: Top Level of the Media Setup Menu

4.14.1. 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.

4.14.2. 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.

4.14.3. 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.

4.14.4. 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.

4.14.5. 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.*

4.14.6. 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*.

4.14.7. 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.

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

When the Crawl (+CLH) option is added to the 7725DSK-LG, 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 Overture™ software. The crawl is rendered by Overture™ into a logo (EVL) file and sent to the 7725DSK-LG. See the Overture™ 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 4.14.8.1 to 4.14.8.7 provide detailed information about each of the sub-menus.

4.14.8.1. 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.

4.14.8.2. 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.

4.14.8.3. 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.

4.14.8.4. 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.

4.14.8.5. 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 Overture™ software. When you press the **SELECT** button the display will show `font:fontname`, indicating that this is the new the display font.

4.14.8.6. 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.

4.14.8.7. 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.

4.14.9. Audio Clip Configuration Items

The 7725DSK-LG has the ability to insert audio clips into the program audio path.

Please note that the 7725DSK-LG does not currently support playlists, and therefore the audio clips can only be played by themselves.

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.

4.14.9.1. 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.

4.14.9.2. Audio Clip Configuration

MEDIA
CL config:
CL config: HTML

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

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5. HTML AUDIO SETUP PAGE

5.1. HTML SETUP PAGE

The Audio Setup for the 7725DSK-LG 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 7725DSK-LG in the address bar. . The following sections provide a description of the features available on the HTML Setup page.

5.1.1. Main Index Page

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, METAR Server Setup and Reboot should be displayed in the window.

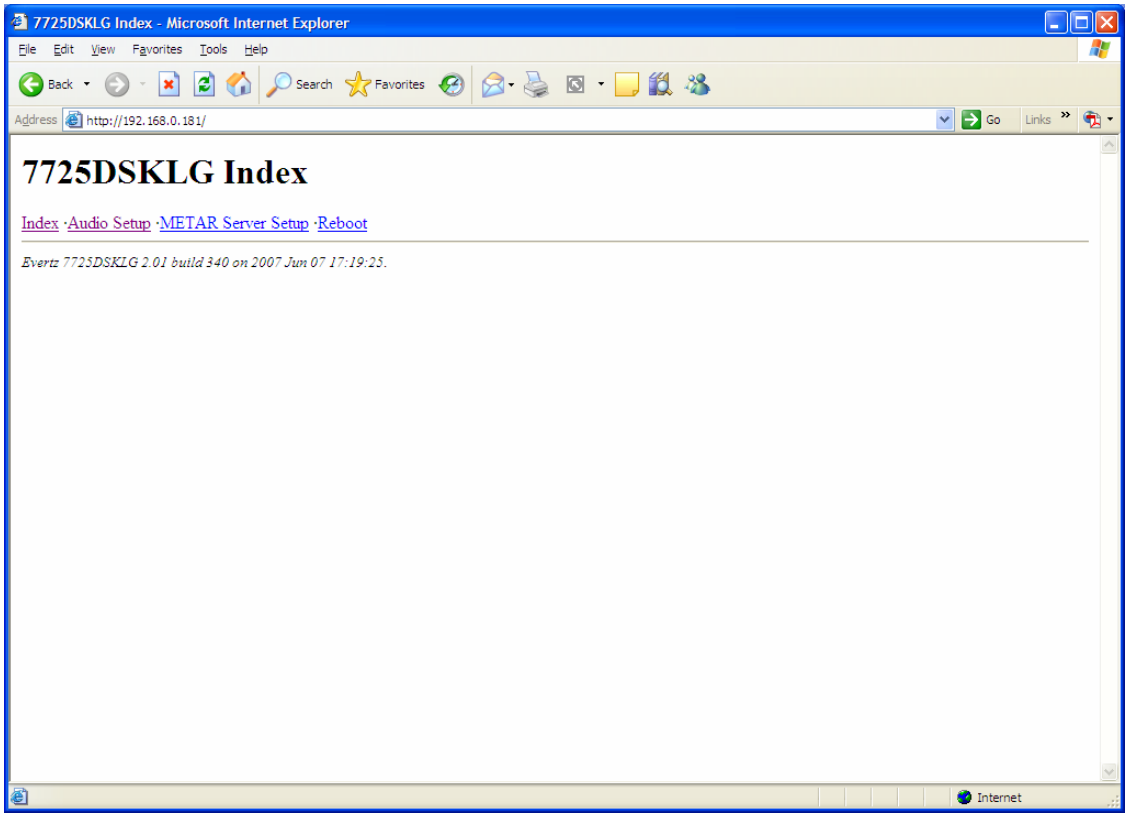

Figure 5-1: Main Index Page

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

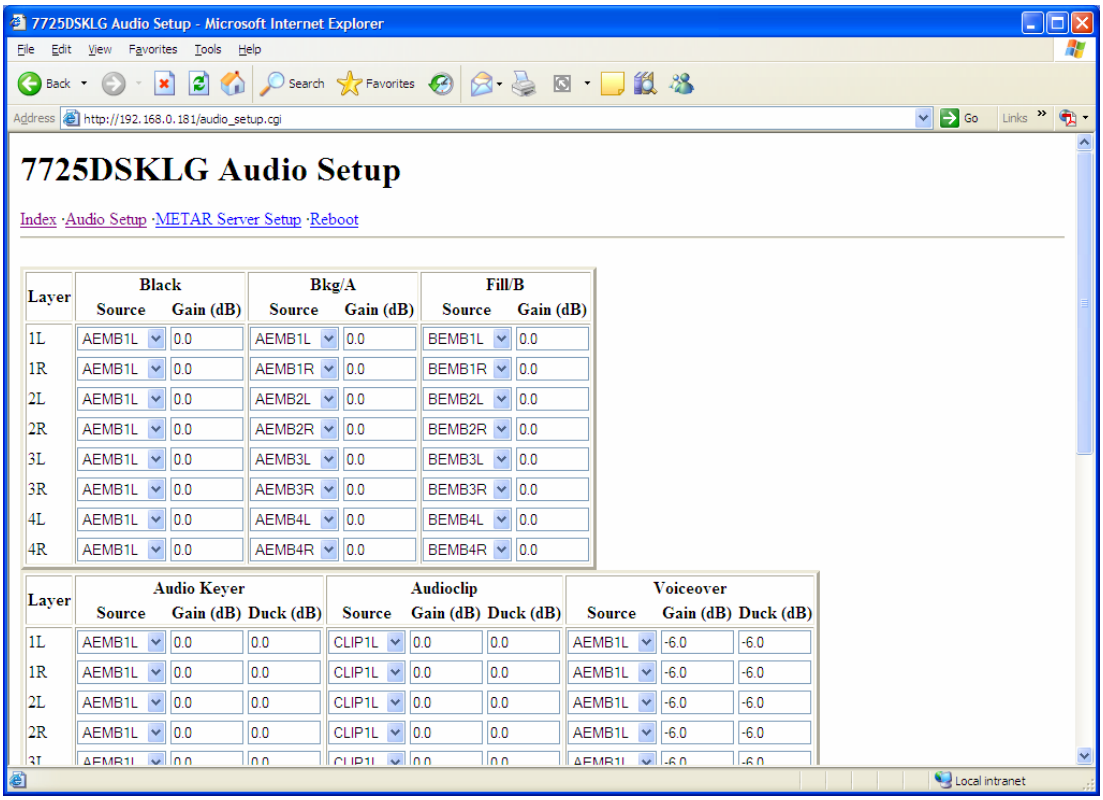

Figure 5-2: HTML Audio Setup Page

LAYER: This represents the output audio channel for the embedded audio out.

BLACK: This column configures the audio that is used when the 7725DSK-LG is outputting black. The black function is only accessible via automation commands.

INPUT: This column configures the audio that is used when the 7725DSK-LG is passing the video, which is connected to the INPUT BNC connector. The 7725DSK-LG has 2 video inputs that can be used for extracting embedded audio. They are marked as **PGM IN A** and **PGM IN B** on the rear panel. The 7725DSK-LG 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. EAS over TCP messages are played according to the audio clip settings, since the audio is transferred to the keyer as a wav file and played as a normal audio clip.

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

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
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.

5.1.2. Wav File Playout

Wav files must either be 48KHz 16bit Stereo uncompressed audio, or 8KHz 8 bit Mono 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).

5.1.3. METAR Setup Page

METAR is widely used in the aviation industry to obtain meteorological data from airports. The 7725DSK-LG can extract the temperature from the data and use it for temperature logos. Use of this feature requires a connection to the Internet.

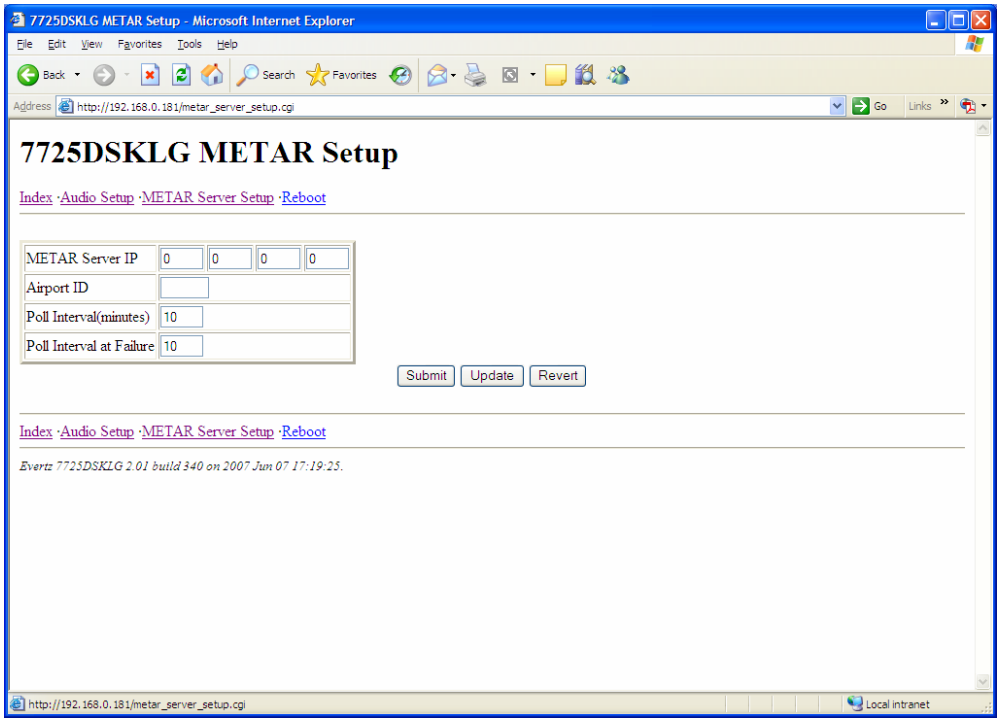

Figure 5-3: Metar Setup Page

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 7725DSK-LG 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 7725DSK-LG is to wait before trying to retrieve the temperature from the METAR server after a failed attempt.

5.1.4. Reboot Page

The reboot page allows the user to reboot the 7725DSK-LG remotely. After the Reboot button is selected, the unit will reboot. The user will have to refresh the HTML page after the unit has completed its reboot.

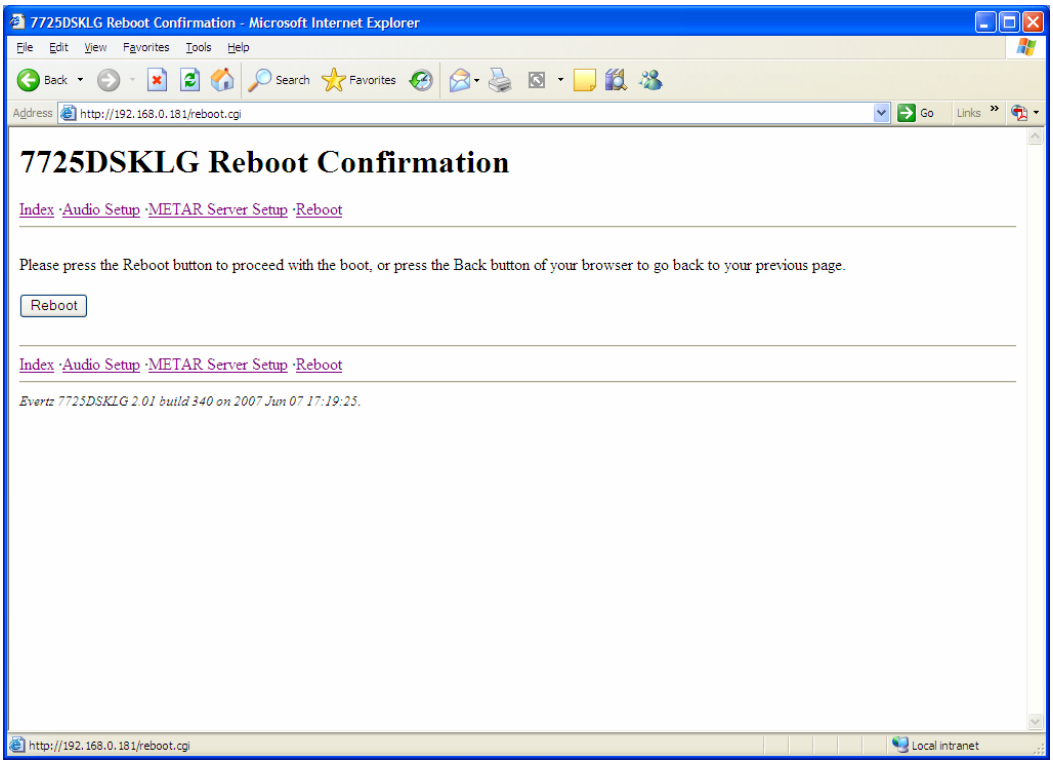

Figure 5-4: HTML Reboot Page

5.1.5. GPI Scripting

GPI script files are text-based files that can be programmed and sent to your unit by 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.

i.e. 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.

i.e. # this file describes the complete state of the keyer

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

i.e. 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 = "AEMB1L" 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 = "AEMB1L" gain = 0 router = "1" }
object channel ("2R") {
source = "Silence" gain = 0 router = "none" }
object channel ("4L") {
source = "AEMB4L" 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.

5.1.5.1. 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.

5.1.5.2. 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 }
}
```

5.1.5.3. 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-LG. 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-LG. Use Cue in the LGA units, however, there is a known bug in that cued audio clips playout on the program output.

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

The 7725DSK-LG also supports 1RU desktop remote control panel. This chapter describes the operation of the 7725DSK-LG using the desktop remote control panel. For information about connecting the desktop remote control panel to the 7725DSK-LG see section 2.4.

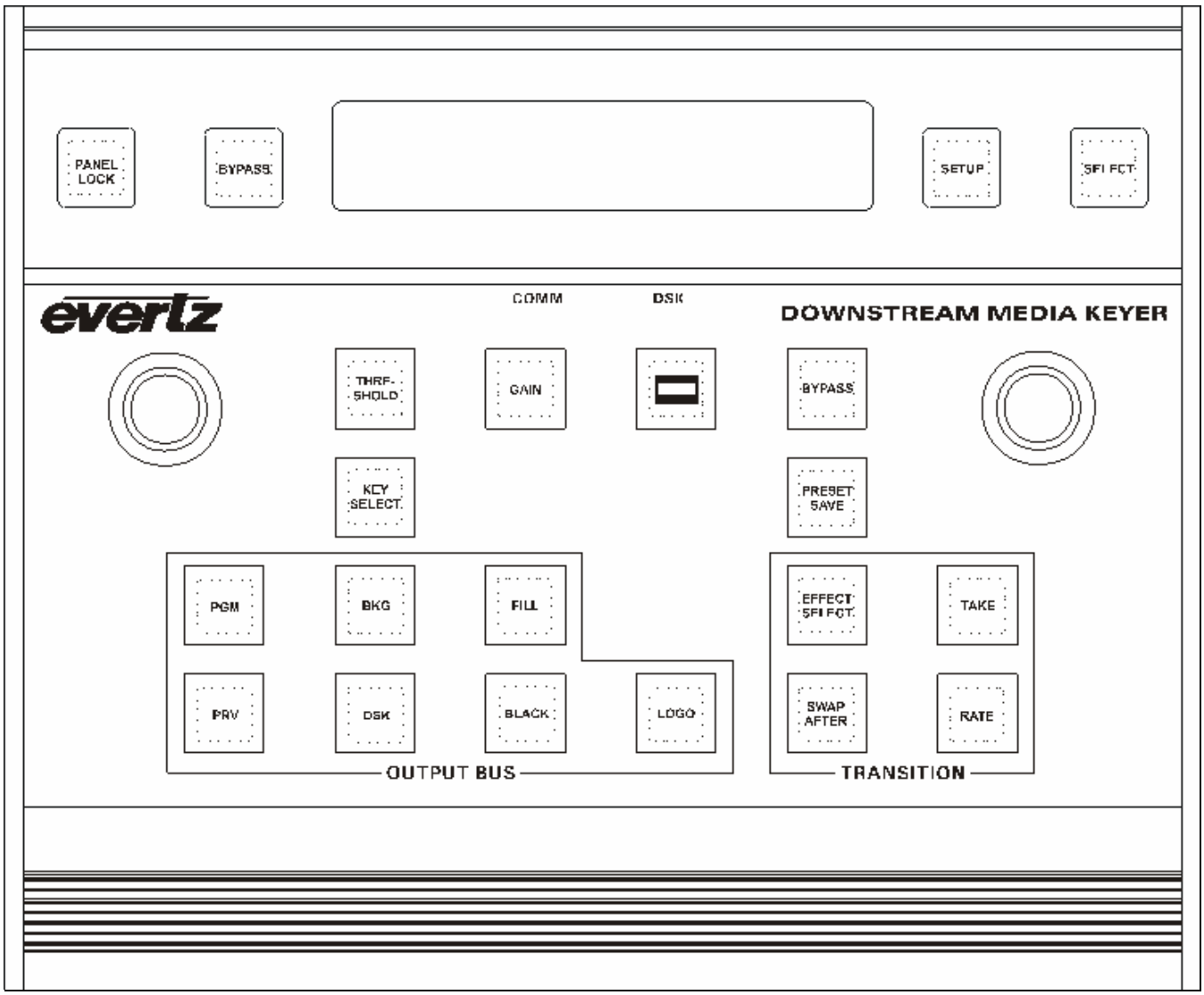

Figure 6-1: 7725DSK-LG – Desktop Control Panel Layout

6.1. 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 7725DSK-LG, to switch the various input sources, and to navigate the front panel *Setup* menu system, a quick and simple method of configuring the 7725DSK-LG Downstream Keyer for your application. See sections 4.3 to 4.14 for information on configuring the 7725DSK-LG using the *Setup* menu system.

6.1.1. 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 **PGM IN A** input, as well as selecting the audio source. If the button LED is flashing then the **PGM IN A** video and associated audio is being output on the Preview Bus. If the button LED is ON solid then the **PGM IN 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.

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** video input is mixed with the background video (on the **PGM IN A or B**) based on the key signal provided on the **KEY** video input, or it can be self-keyed, using user defined thresholds. See section 4.9 for information about setting up the *DSK MODE* and other settings.

FILL: This button selects the video from the **PGM IN B** input, as well as selecting the audio source. If the button LED is flashing then the **PGM IN 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.

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.

6.1.2. Transition Button Group

EFFECT SELECT: This button provides immediate access to the *Transition Type* menu item of the *TRANSITION* menu. See section 4.10.1 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.

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 4.10). Transitions can also be triggered using GPI, or automation control (see section 4.11.5). 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.

SWAP AFTER: This button provides immediate access to the *Transition Swap* menu item of the *TRANSITION* menu. See section 4.10.3 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.

RATE: This button provides immediate access to the *Transition Rate* menu item of the *TRANSITION* menu. See section 4.10.2 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.

6.1.3. Function Button Group

KEY SELECT: This button provides immediate access to the *Key Type* menu item of the *DSK* menu. See section 4.9.1 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.

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 4.9.4 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.

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 4.9.2 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.

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 4.11.4 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.

BYPASS: This button is used to operate the bypass relays in the 7725DSK-LG. When the bypass relays are in Bypass mode, the **PGM IN A** video input will be directly connected to the **PGM OUT**. The **PREV OUT** 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 7725DSK-LG. The bypass relays will also operate in bypass mode if the 7725DSK-LG 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 4.8 for more information on the *MATTE* menu which is used to configure the aspect ratio of the matte.

6.1.4. Shaft Encoder Knobs

SHAFT ENCODER: When the 7725DSK-LG 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 4.2)

When the 7725DSK-LG 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.

6.1.5. Setup Button Group

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.

SETUP: This button is used to enter the *Setup* menu, which is used to configure the operating modes of the downstream keyer. (See section 4.2 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.

6.1.6. Control Panel Status Indicators

The illuminated buttons show operational status of the 7725DSK-LG 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 7725DSK-LG. 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 7725DSK-LG is under automation control, or logos or other media files are being transferred to or from the unit using the 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.

6.2. OVERVIEW OF DESKTOP CONTROL PANEL OPERATION

6.2.1. 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 6.1.1). 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.

6.3. 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 7725DSK-LG. 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.

6.3.1. 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 4.5 to 4.14.

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7. TECHNICAL DESCRIPTION

7.1. SPECIFICATIONS

7.1.1. Serial Digital Video Input

Standard:	270Mb/sec SMPTE 259M-C, 525 or 625 line component 1.5Gb/sec SMPTE 292M (7725DSKLG-HD only)
Number of Inputs:	2 Background, 1 Fill, 1 Key
Connector:	BNC per IEC 61169-8 Annex A
Equalization:	Automatic 300m @ 270 Mb/s, 100m @ 1.5Gb/s with Belden 1694 or equivalent cable
Return Loss:	> 15dB up to 1.5Gb/s

7.1.2. Serial Digital Video Outputs

Standard:	Same as input
Number of Outputs:	2 Program, 1 Preview
Connectors:	BNC per IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	750ps nominal
Overshoot:	<10% of amplitude
Wide Band Jitter:	0.2 UI

7.1.3. Video Reference

Type:	NTSC or PAL Colour Black 1 V p-p
Connectors:	BNC per IEC 60169-8 Amendment 2
Termination:	75Ω

7.1.4. LTC Reader (on breakout cable)

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

7.1.5. Control (on breakout cable)

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

COM D Port: 9 pin female "D", RS-232/422 8 bits, no parity, baud rate depends on protocol

Selectable Protocol: Automation, temperature probe interface

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

7.1.6. 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

7.1.7. Electrical

Voltage: +12VDC
Power: 22W
EMI/RFI: Complies with FCC Part 15 Class A, EU EMC Directive

7.1.8. Physical

Number of Slots: 2

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Figures

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8. UPGRADING THE FIRMWARE

8.1. OVERVIEW

The firmware in the 7725DSK-LG 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 Overture™ software applications. The Overture™ based upgrade is the recommended method.

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).
- Overture™ application (recommended).
- New firmware supplied by Evertz.
- Available Ethernet port
- Available serial port

After upgrading the 7725DSK-LG 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.

8.2. FIRMWARE UPGRADE VIA OVERTURE APPLICATION (RECOMMENDED PROCEDURE)

When updating firmware through Overture, Overture and the 7725DSK-LG communicate with each other through Ethernet. Using Overture to upgrade the firmware is the recommended procedure as it is a simple 1-Step Upgrade mechanism. Before you upgrade your unit, ensure that you are running Overture Suite 2. Please refer to the Overture Suite 2 manual for Overture installation and operation instructions.

If you are running Overture Version 1 then your upgrade will not work as it does not support the 1-step upgrade process.

1. When opening Overture 2, the Media Manager will have the device information listed in the *Configuration* View. If the device has not been added in Overture, right mouse click the *Devices* option in the Network panel. Select the *New Device…* option from the menu. Once the *New Device* window appears, enter a device name and the IP address, then select *OK*.

2. Select the newly created 7725DSK-LG device in the Network list and Right-click the mouse button.

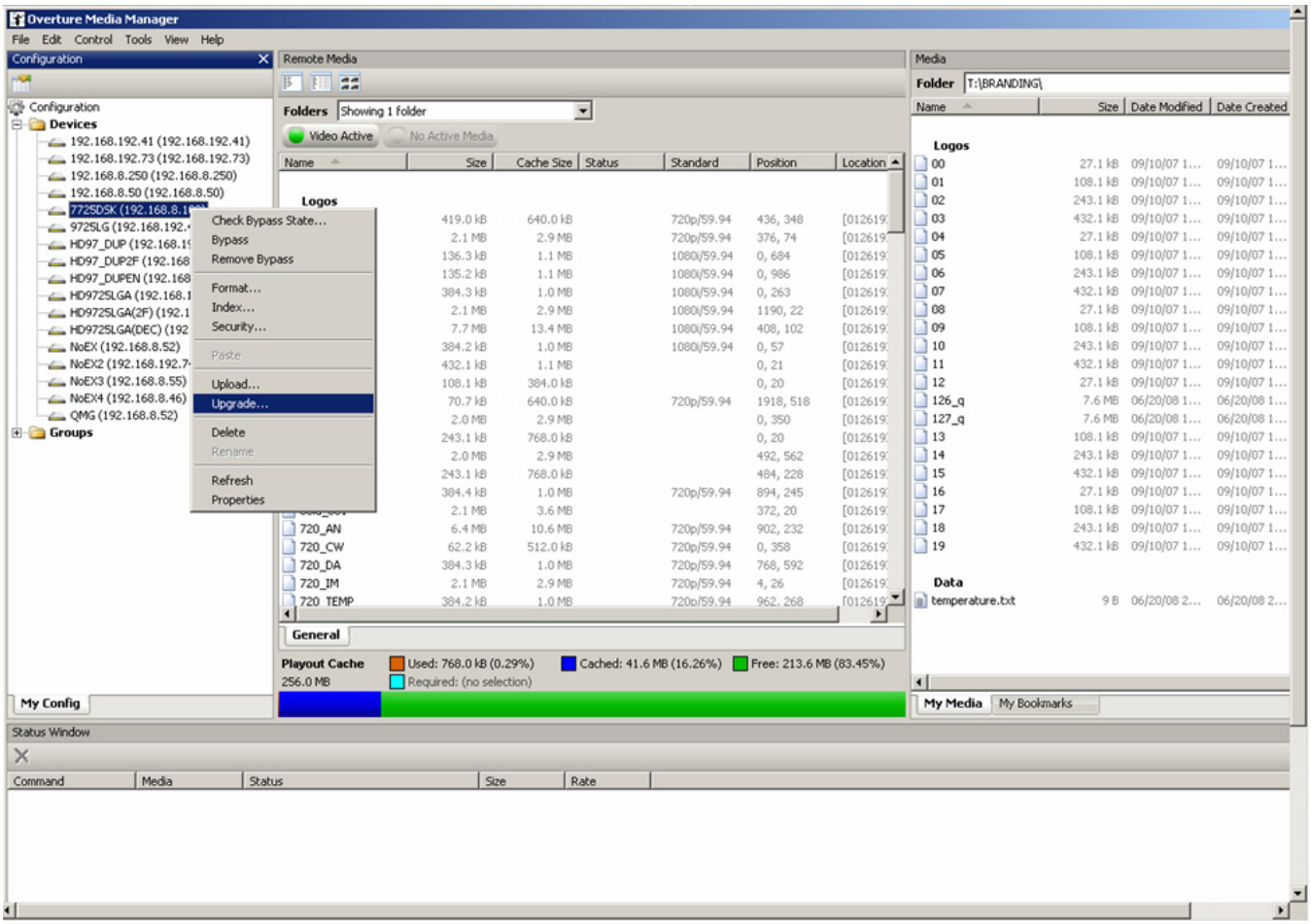

Figure 8-1: Upgrading via Overture

3. To upgrade the firmware, the user must select the **Upgrade…** button at the bottom of the drop down menu.

4. An upgrade window will appear. The user will then select the location of the BIN file required for the firmware upgrade. The bin file required will be “hd7725dsklg_xxxx.bin” for running HD and “sd7725dsklg_xxxx.bin” for running SD.

5. Click the “Open” button to start the firmware upgrade. In the console menu of Overture it will indicate the status of the firmware file being uploaded. When the upgrade process finishes, the unit will re-boot automatically.

6. Since the upgrade was performed using Overture Suite 2, the 7725DSK-LG will reboot automatically.

8.3. FIRMWARE UPGRADE VIA TERMINAL PROGRAM

Upgrading the firmware using the terminal program is a two step process.

8.3.1. Step 1: Transferring the File to the CF

The user must transfer a file called "firmware_7725DSKLG" onto the Compact Flash (CF). The user can transfer this file in one of two ways.

8.3.1.1. Method 1: Using Overture 2

The user can transfer the “firmware_7725DSKLG" file using Overture 2.

1. Navigate to the Compact Flash on the selected device to display the items located on the CF.

2. Navigate to the appropriate folder in the *Media* pane which contains the "firmware_7725DSKLG" file.

3. To transfer the file to the compact flash, highlight the file from the *Media* pane and drag it into the *Remote Media* window.

Note: When “firmware_7725DSKLG” file is transferred it will not be visible in the Remote Media pane of Overture, this is made intentionally to prevent the file from being deleted.

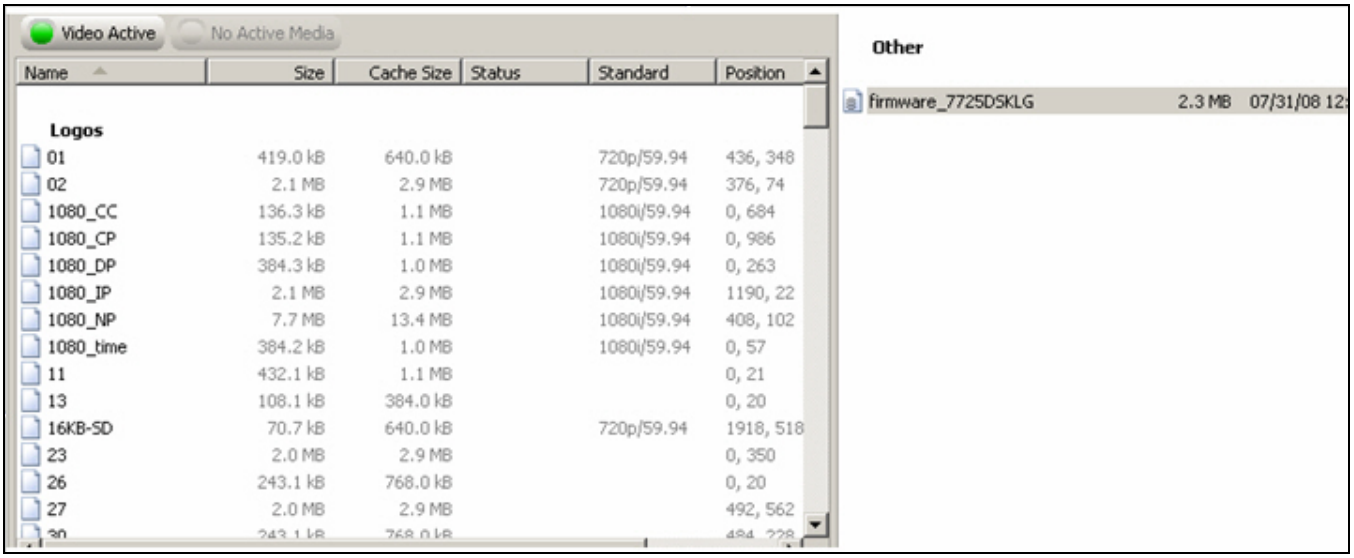

Figure 8-2: Transferring File in Overture

8.3.1.2. Method 2: Copy Using a CF Reader

The user can transfer the "firmware_7725DSKLG" to the CF using a CF reader.

1. To transfer this file, remove the CF card from the 7725DSK and insert it into a CF reader. Once in the CF reader, copy the "firmware_7725DSKLG" file.

2. Once the “firmware_7725DSKLG” file resides on the CF, place the CF back in the 7725DSK-LG unit. The user can then proceed to step 2 (section 8.3.2).

8.3.2. Step 2: Serial Upgrade Procedure

8.3.2.1. Terminal Program Setup

1. In order to upgrade your unit serially, you will be required to download the hd7725dsklg_2v01_xxx.bin file (zipped file) from the Evertz website, which contains the following items:

    - boot2.bin
    - The firmware file is “firmware_7725DSKLG

    The “firmware_7725DSKLG” file is put onto the CF, and boot2.bin is applied using the "upgrade" command in the serial prompt.

2. When you are updating the keyer unit firmware, connect the rainbow cable (Evertz part # WA-S76) to the four pin connector on the front of the 7725DSK-LG module. Connect the other end of the rainbow cable to the serial connector.

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

4. Start the terminal program.

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

Baud	**57600**
Parity	**None**
Data bits	**8**
Stop bits	**2**
Flow Control	**None**

5. Power up the unit.

8.3.2.2. 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.

6. Move the upgrade jumper into UPGRADE mode. Re-insert the card.

7. Power up the unit. After the unit powers up, user should hit CTRLX 5 times and 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. The user should now type in the word *upgrade*. Please refer to Figure 8-3.

   For example:

```
EVERTZ 7700FC BOOT MONITOR
MON8240 1.1 BUILD 9
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD. ALL RIGHTS RESERVED
UPGRADE JUMPER PRESENT
UPLOAD MAIN PROGRAM
```

```
EVERTZ 7700FC BOOT MONITOR.
MON8240 1.1 BUILD 9.
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD.  ALL RIGHTS RESERVED.
UPGRADE JUMPER PRESENT
UPLOAD MAIN PROGRAM
§↑↑B↑B0↑↑B↑B0↑
UPLOAD CANCELLED
ENTERING COMMAND LOOP
>
>
> upgrade
UPLOAD MAIN PROGRAM
§§§§§
```

Figure 8-3: 7700FC Boot Monitor

8.3.2.3. Uploading the New Firmware

8. You should now see a prompt asking you to upload the file. Please refer to Figure 8-3.

9. Upload the “boot2.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.

10. After “boot2.bin” fishes loading a confirmation messages such as UPLOAD OKAY should appear and at this stage user should type in the word *boot*.

```
UPLOAD MAIN PROGRAM
§§§§
UPLOAD OKAY
> boot
```

11. After the user types in the word *boot*, the message displayed in Figure 8-4 will be displayed. The message is referring to the “firmware_7725DSKLG" file that was transferred previously in step 1. This is a confirmation message. The user should press *enter* in order to continue loading the file.

```
********************************************************************************
******
This is the second stage boot loader:
Upgrade jumper is present:
To upload the keyer firmware file: "firmware_7725DSKLG" to the CF, use Overture.

To see the command menu, press Enter
********************************************************************************
******
```

Figure 8-4: Second Stage Boot Loader

12. Once the user presses *enter*, the following menu shown in Figure 8-5 will appear.

```
 ------------------------------------------------
|                  Main Menu                     |
|                ( v2.01 b149)                   |
 ------------------------------------------------
(1) Network Configuration
(2) boot full firmware

(X) Exit
```

Figure 8-5: Main Menu

13. The user should type in the number 2 to initiate the unit to boot fully. The upgrade process will be completed and the unit will fully boot.

14. 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.

15. 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.

8.3.2.4. Completing the Upgrade

14. Remove the upgrade jumper and power cycle the card or frame. The unit should now reboot.

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

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