9525DSK & 9525DSK-LG
Downstream Keyer & InstaLogo™

Instruction Manual

EVERTZ MICROSYSTEMS LTD.
5288 John Lucas Drive, Burlington, Ontario, Canada, L7L 5Z9
Phone: 905-335-3700
Fax: 905-335-3573

Internet: Tech Support: service@evertz.com
Sales: sales@evertz.com
Web Page: http://www.evertz.com

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REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	Preliminary Issue	Mar 99
2.0	Update for InstaLogo 2.0.2 and GPI Mods	Jun 99
3.0	Enhance GPI and Preset Descriptions	Sep 99
4.0	New Transition Effects, DCP Addendum, DSK front panel	Feb 00
5.0	Add GPI Examples and Level Pulse Descriptions IL Update	Aug 00
5.1	Updated rear panel drawings	Jan 02

INFORMATION TO USERS IN EUROPE

NOTE

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

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

INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

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

WARNING

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

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

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1. GETTING STARTED

1.1 OVERVIEW

The Evertz 9525 Downstream Keyer system incorporates the latest technology to provide an advanced fully digital keyer. The Evertz 9525 Downstream Keyer is ideal for bug keying, side by side comparison applications, etc. The system also features letter boxing, a safe area/safe title, wipes, fades and more. The Evertz 9525 Downstream Keyer consists of a one RU frame with front panel control, optional remote control panel, and GPI control for stored pre-sets. The 9525 provides storage and retrieval capabilities of several user setups and presets. InstaLogo™ is only shipped with the 9525DSK-LG model of the Downstream Keyer.

Features:

- A video bypass failure protection for on-air applications.
- Both Mix and additive keying modes provided.
- Auto-timing SDI key, fill, and background inputs (+/- 66us).
- GPI inputs for fade/transition control.
- Internal black generator for fade to black applications.
- Built-in letter box generator for non 4x3 aspect ratio cropping.
- Safe area/ safe title marker on preview channel.
- Control of key gain and offset, and key inversion are provided.
- 12 bit processing linear keying providing high quality results for both transparency and soft edges.
- Full control and status is provided from front panel display.
- User programmable presets are provided.
- On Screen Menu.
- Automation Support.
- Standard SDI preview output
- Optional 4x1 inputs for each of key & fill.
- Optional internal Logo Inserter.
- Optional remote panel chassis-desk top or rack mount.
- Optional secondary redundant power supply

1.2 GETTING HELP

The documentation included with your Downstream Keyer includes installation instructions, operating information for each hardware and software feature, troubleshooting information, and a Logo preparation guideline. You can also view the on-line help that is installed with InstaLogo™ for additional information.

InstaLogo™ on-line help is comprehensive and informative and will quickly get you to the right topic. When you are operating InstaLogo™ just press the **F1** key from anywhere you require help. You can also access the on-line Check-List by selecting **Help…Check List** from the **Help menu**. The help file is keyword indexed to allow you to easily search for topics of interest and also includes a Contents section for overview and general classification of the help topics.

If you require Technical support from the factory you can contact our technical support department by one of the following methods.

Email mailto:service@evertz.com
Fax **+1 (905) 335-3573** Phone **+1 (905) 335-3700**

In order to expedite answers to your inquiries, please include the version of **InstaLogo**™ you are using. It is available from the **Help/About InstaLogo**™ menu item. Please include a detailed description of the problem you are having, the model number of your unit, serial number and Build Number. The Build Number can be obtained from the "On Screen Menu" system. Press "Setup" then select "General" then select " Update Code". **InstaLogo**™ is a Downstream Keyer option and is only shipped with the 9525DSK-LG order.

You can also consult the FTP site (**http://www.evertz.com/ftp.html**) on our web page for the latest patches, upgrades and lists of Frequently Asked Questions.

A separate DCP manual is shipped with units ordered with the DCP option. DCP stands for Desktop Control Panel. Please refer to that document for button descriptions as it replaces section 2.4 of this manual.

1.3 FIRST TIME SETUP

1.3.1 Rear Panel Hook Up

4X1 Option Installed

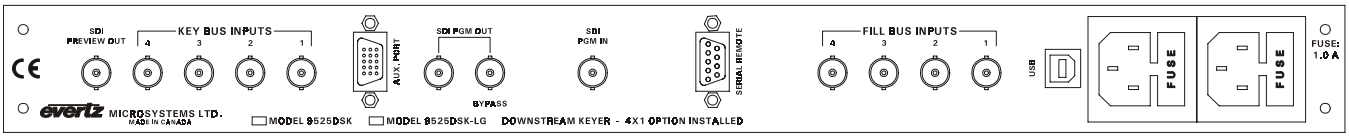

Figure 1-1: Rear Panel – 4 x 1 Option Installed

Connect the incoming video to the *SDI PGM IN,* input connector for serial component SMPTE 259M video. A video signal should be supplied prior to applying power to the box

Connect the main serial digital video output, *SDI PGM OUT* to the next device in the video path. There is one BNC connectors to output program video compatible with SMPTE 259M video. One output is wired as a bypass output.

The *BYPASS* output is the only output BNC that is wired to the bypass relay. This output will be connected to the program input in the event of a power failure or a bypass command as issued from the front panel button press. This is labeled as *BYPASS* on the rear panel.

The *SERIAL REMOTE* is an RS-232 serial interface used for updating firmware and loading logos in the 9525DSK-LG model. Connect this using a standard 9pin straight through serial cable, to the PC. This port is also used to interface with automation systems providing automatic control of the unit.

The 9525DSK has a universal power supply that operates on either 115 Volt / 60 Hz or 230 Volt / 50 Hz AC. The power supply auto switches between the voltages. A second redundant power supply purchase option operates in conjunction with the original power supply.

DSK non 4X1 Version

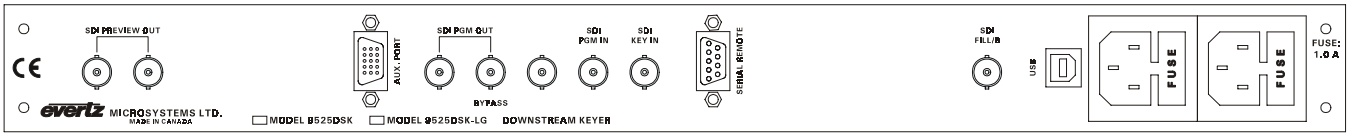

Figure 1-2: Rear Panel

1.3.2 Installing the Software (DSK-LG model only)

Insert the first disk or the CD into an appropriate drive on your PC. Select "Start"…"Run" and type "A:\setup" (note if you are using a drive other than "A" please substitute the appropriate letter) and press the "Enter" Key. Once the installation is complete, click on the "Start" button and then click "Programs". Select the “Evertz Products” program group and click on the "InstaLogo™ " icon.

You are presented with the InstaLogo™ Logo Preparation Screen.

You will need to connect a straight through serial (RS232) cable from the PC to the rear of the Logo Inserter. This cable should not exceed 50 feet and should be connected to the 9 pin Serial Remote port on the Logo Inserter.

Spend some time familiarizing yourself with the software layout. On-line help is available from within the InstaLogo™ program by pressing the "F1" key. Knowledge of the Windows Operating system is recommended.

Version 2.0.2 and later now supports Logo transfers via the USB port on a computer running Windows 98. Use the USB cable supplied with your DSK unit to transfer logos from the PC to the DSK at speeds of up to 12Megabits per second.

Version 2.7.0 and greater provides a remote control interface for the DSK units. This control works on the RS232 port and is available from the View Automation drop down menu. Pop Up help is available on all controls on the automation page. Contact your local Evertz rep for additional automation information.

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2. 9525DSK Hardware

2.1 Rear Panel Overview

4X1 Option Installed

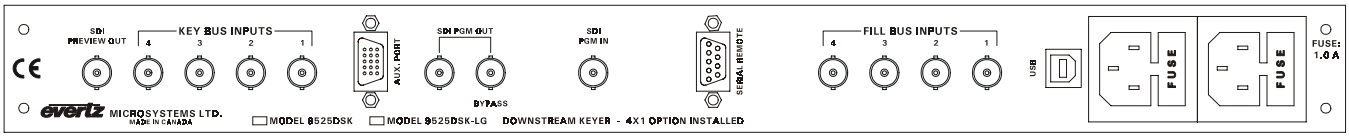

Figure 2-1: Rear Panel Overview – 4 x 1 Option Installed

- *SDI PREVIEW OUT,* output BNC connector for serial component SMPTE 259M (CCIR601) video. This is the preview output connector that should be connected to an appropriate monitor.

- *KEY BUS INPUTS*, These 4 BNC connectors allow you to supply 4 separate video feeds to the DSK that can be used as key signals for the supplied fill video. The combined key and fill will be keyed over the background video. There are four BNC connectors, who input separate program video compatible with SMPTE 259M (CCIR601) standard and the active key can be selected from the front panel.

- *AUX PORT* Connector is used to provide Preset selection commands to the DSK and connect a Remote panel or Desktop remote.

- *SDI PROGRAM OUT,* These two BNC connectors output SMPTE 259M (CCIR601) standard video. Connect the output from these connectors to the next video device in your output path. The right output BNC is labeled *BYPASS* and is wired internally to the optional bypass relay.

- *SDI PROGRAM IN,* This BNC connector is used to supply the upstream or background video to the DSK. SMPTE 259M (CCIR601) standard video required.

- *SERIAL REMOTE* is an RS-232 serial interface used for updating firmware, loading logos and controlling the unit through automation.

- *FILL BUS INPUTS*, These 4 BNC connectors allow you to supply 4 separate video feeds to the DSK. These connectors supply the B source video for side by side compares or the video can be used as the fill video depending on the operational mode of the DSK. These feeds can be used as the fill video and will be keyed over the background video using whatever video you selected from the *KEY BUS INPUTS*. Only one feed may be active at one time and the active input is selected from the front panel. SMPTE 259M (CCIR601) standard video required.

- *USB* port is for future communications with the PC or other Evertz devices. You can use the USB port to upload logos from a Win98 machine using InstaLogo.

- The 9525DSK has a universal power supply that operates on either 115 Volt / 60 Hz or 230 Volt / 50 Hz AC. The power supply auto switches between the voltages. A second redundant power supply is optional and operates in conjunction with the original power supply.

Standard DSK

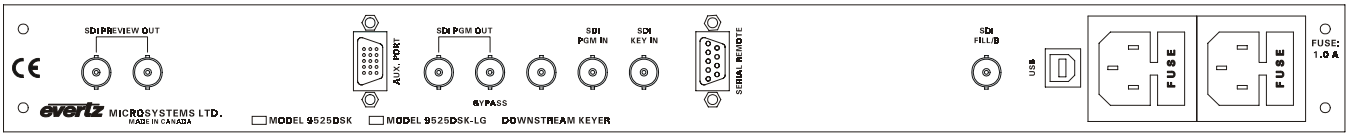

Figure 2-2: Rear Panel Overview

- *SDI PREVIEW OUT,* 2 output BNC connectors for serial component SMPTE 259M (CCIR601) video. These preview output connectors should be connected to appropriate monitors.

- *AUX PORT* Connector is used to provide Preset selection commands to the DSK and connect a Remote panel or Desktop remote.

- *SDI PROGRAM OUT,* These two BNC connectors output SMPTE 259M (CCIR601) standard video. Connect the output from these connectors to the next video device in your output path. If you purchased the Bypass option, the right output BNC is labeled *BYPASS* and is wired internally to the optional bypass relay.

- *SDI PROGRAM IN,* This BNC connector is used to supply the upstream or background video to the DSK. SMPTE 259M (CCIR601) standard video required.

- *SDI KEY IN*, This BNC connectors allow you to supply a separate video feeds to the DSK that can be used as key signal for the supplied fill video. The combined key and fill will be keyed over the background video. SMPTE 259M (CCIR601) standard video required.
-
- *SERIAL REMOTE* is an RS-232 serial interface used for updating firmware and loading logos.

- *SDI FILL/B*, This BNC connector supplies the B source video for side by side compares or the video can be used as the fill video depending on the operational mode of the DSK. This feed can be used as the fill video and will be keyed over the background video using the key video you provided from the *SDI KEY IN*. SMPTE 259M (CCIR601) standard video required.

- *USB* port is for future communications with the PC or other Evertz devices. You can use the USB port to upload logos from a Win98 machine using InstaLogo.

- The 9525DSK has a universal power supply that operates on either 115 Volt / 60 Hz or 230 Volt / 50 Hz AC. The power supply auto switches between the voltages. A second redundant power supply is optional and operates in conjunction with the original power supply.

2.2 GPI/O Circuitry and Operation 9525DSK

The following drawing is a simplified schematic illustrating the General Purpose Inputs. 9525DSK supports GPI input using the rear panel Aux port high density DB-15 connector. The following diagram illustrates the connection:

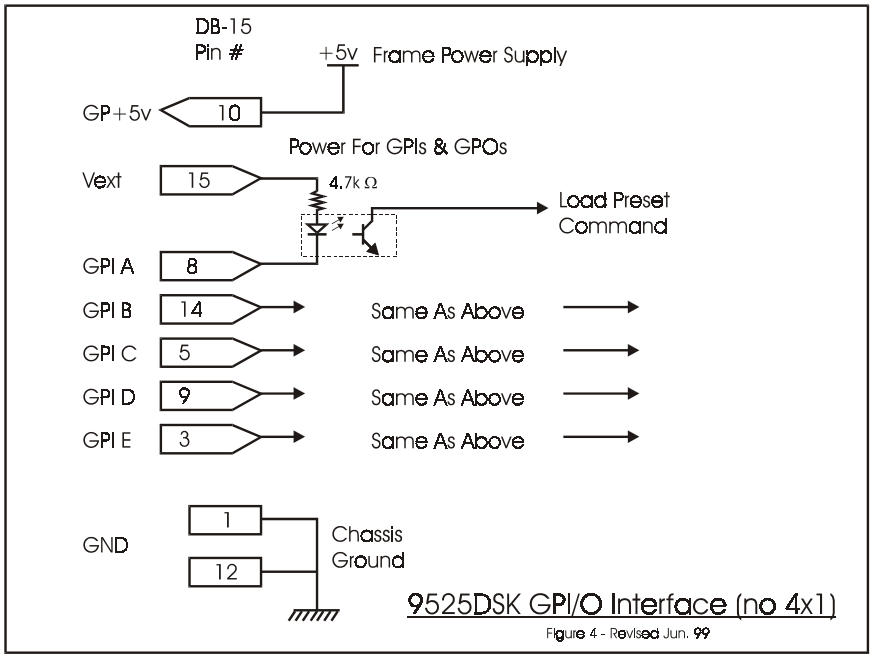

Figure 2-3: GPIO Schematic

All GPI inputs are level triggered. Lowering the GPI input to a potential below Vext will select the allocated preset definition. The 5 GPIs (A through E) are dedicated as preset load controls. When one of these GPI inputs are activated, the corresponding preset configuration is loaded. If multiple inputs are active both commands are ignored until a single input is recognized.

The GPI to preset map is programmable from the front panel of the 9525DSK. Please see the Front Panel Controls section for information on assigning GPIs to presets.

GPI A => Load assigned preset.
GPI B => Load assigned preset.
GPI C => Load assigned preset.
GPI D => Load assigned preset.
GPI E => Load assigned preset.

9525DSK "Aux I/O" Pin-Out definition table.

Pin #	Name	Description
1	GND	Chassis ground
2		
3	GPIE	General purpose input Load assigned preset
4		
5	GPIC	General purpose input Load assigned preset
6		
7		
8	GPIA	General purpose input Load assigned preset
9	GPID	General purpose input Load assigned preset
10	GP+5V	+5V from general purpose interface board
11		
12	GND	Chassis ground
13		
14	GPIB	General purpose input Load assigned preset
15	Vext	External voltage source for GPI's

The user can connect GP+5V supplied from the frame into the Vext pin powering up the external GPIO circuitry. In this configuration the user can activate GPIs simply by connecting the GPI input pins to Ground (see figure 2). This can be done with a button, switch, relay or an open collector transistor. Five volts is available to the user to be used for driving external circuitry. Care must be taken to not affect the power supply source in the frame. Please limit the load to 0.5W.

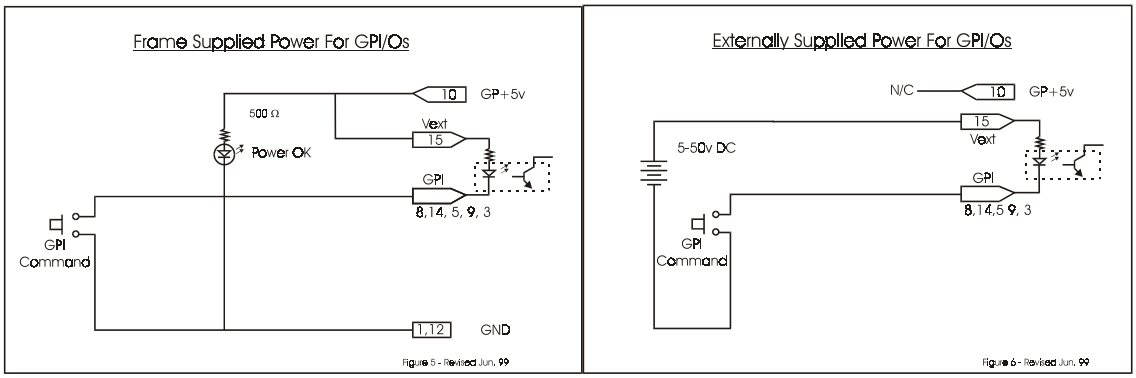

Figure 2-4: Connecting the GPI Inputs

Alternately, an external voltage source may be applied (see figure 3). The Vext voltage must be greater than the voltage supplied to GPI by at least 4v.

Warning: Do not connect GP+5V from one frame to another frames GP+5V.

2.3 GPI/O Circuitry and Operation 9525DSK with 4x1 option

The following drawing is a simplified schematic illustrating the General Purpose Inputs. 9525DSK supports GPI input using the rear panel Aux port high density DB-15 connector. The following diagram illustrates the connection:

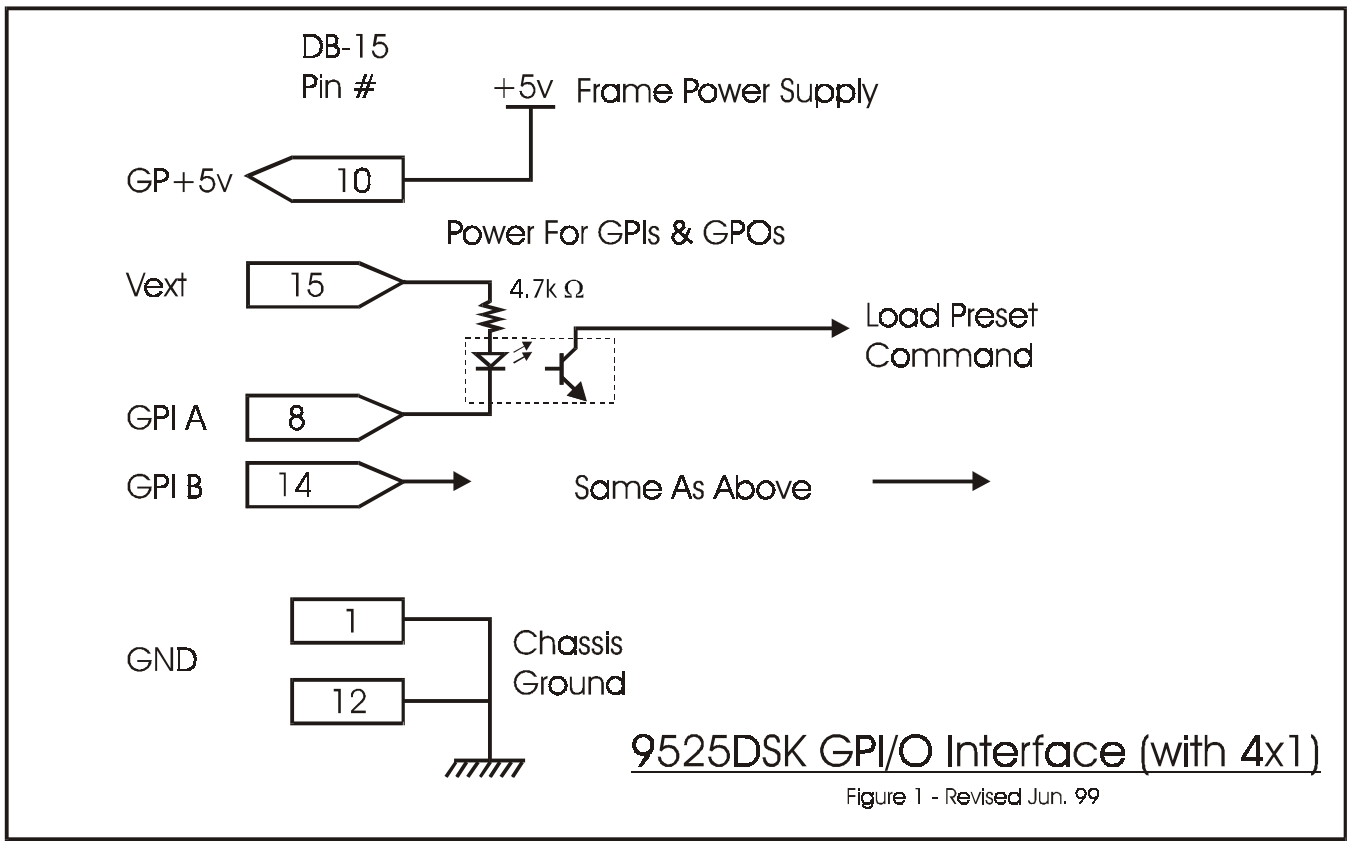

Figure 2-5: GPIO Schematic – 4 x 1 Option Installed

All GPI inputs are level triggered. Lowering the GPI input to a potential below Vext will select the allocated preset definition. The 2 GPIs (A through B) are dedicated as preset load controls. When one of these GPI inputs are activated, the corresponding preset configuration is loaded. If multiple inputs are active both commands are ignored until a single input is recognized.

The GPI to preset map is programmable from the front panel of the 9525DSK. Please see the Front Panel Controls section for information on assigning GPIs to presets.

GPI A => Load assigned preset.
GPI B => Load assigned preset.

9525DSK "Aux I/O" Pin-Out definition table.

Pin #	Name	Description
1	GND	Chassis ground
2		
3		
4		
5		
6		
7		
8	GPIA	General purpose input Load assigned preset
9		
10	GP+5V	+5V from general purpose interface board
11		
12	GND	Chassis ground
13		
14	GPIB	General purpose input Load assigned preset
15	Vext	External voltage source for GPI's

The user can connect GP+5V supplied from the frame into the Vext pin powering up the external GPIO circuitry. In this configuration the user can activate GPIs simply by connecting the GPI input pins to Ground (see figure 2). This can be done with a button, switch, relay or an open collector transistor. Five volts is available to the user to be used for driving external circuitry. Care must be taken to not affect the power supply source in the frame. Please limit the load to 0.5W.

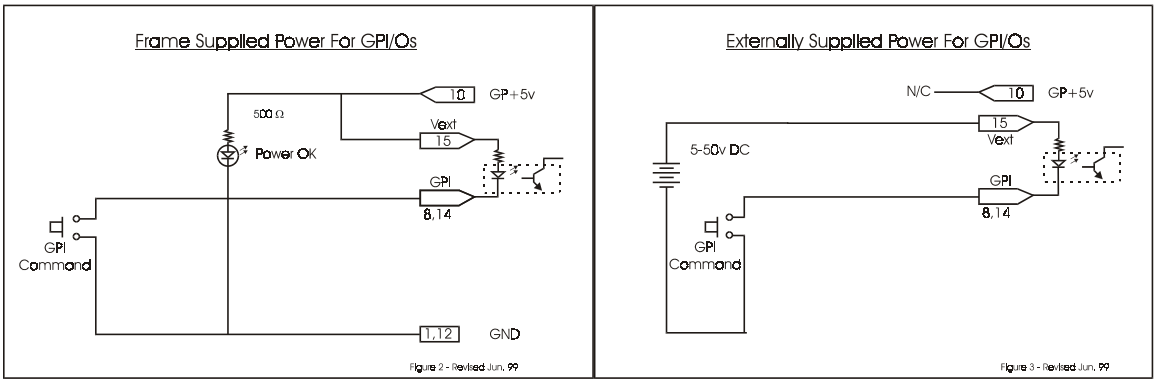

Figure 2-6: Connecting the GPI Inputs – 4 x 1 Option Installed

Alternately, an external voltage source may be applied (see figure 3). The Vext voltage must be greater than the voltage supplied to GPI by at least 4v.

Warning: Do not connect GP+5V from one frame to another frames GP+5V.

2.4 Front Panel Controls DSK-LG

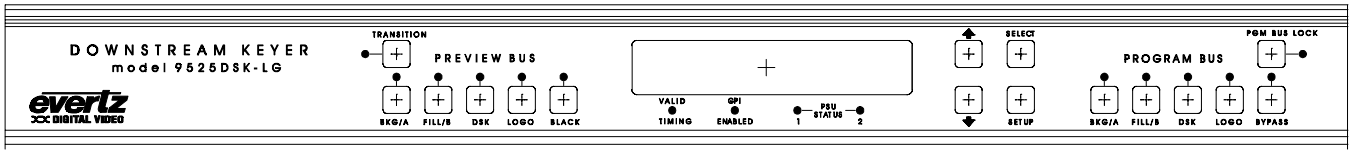

Figure 2-7: Front Panel Controls (DSK-LG)

TRANSITION

This button is used to transfer the PREVIEW BUS material to the PROGRAM BUS using the pre-configured transition type. For information on Transition Types refer to the "Transition" section of the "On Screen Menu" chapter. This is similar to the “Take” command on other products.

PREVIEW BUS

Items selected on the PREVIEW BUS consist of BKG/A, Fill/B, DSK, LOGO or MATTE and BLACK. Items selected in the PREVIEW BUS are automatically routed to the preview output BNCs on the rear panel.

The BKG/A, FILL/B and DSK buttons are mutually exclusive. This means that if you select one, the other items are automatically deselected. The BKG/A button selects the video source from the SDI PGM IN connector on the rear panel. If you have the 4X1 option with your DSK, you can set the source for the FILL/B and Key to one of the 4 fill and key inputs. Otherwise the source for the FILL/B is the SDI FILL/B connector and the Key is the SDI KEY IN on the rear panel. The DSK button displays the background video with the selected Fill video mixed, based on the selected Key video. As with the Fill source video, you can also set the Key source video using the On Screen Menus. For more information please refer to the "DSK" section of the "On Screen Menu" chapter.

Your unit will have a button labeled LOGO or MATTE depending on the model you ordered. The DSK-LG model includes the LOGO button. This button toggles the logo layer on or off. Please refer to the "LOGO" section of the "On Screen Menu" chapter for more information on configuring and using your logos.

The standard DSK unit uses the MATTE button. This is a Toggle for the user configurable MATTE. For more information please refer to the "MATTE" section of the "On Screen Menu" chapter. Note that the MATTE is enabled and disabled in both the PREVIEW and PROGRAM outputs.

The BLACK button selects the internal black generator. Selecting BLACK deselects all other buttons in the PREVIEW BUS button field including the Logo layer button on Logo enabled keyers.

ARROWS

The arrow keys are used to scroll through the setup menu to choose setup options and change setup option values.

SELECT

Select is similar to the “enter” key on a standard PC keyboard. The button is used to confirm operations, save settings, confirm choices etc.

SETUP

Press the setup button to enter the setup menu. Options will be displayed on the front panel as well as On Screen of the PREVIEW OUT. Use the arrow buttons to cycle through the available setup options. Press the select button to choose the currently displayed setup option; the current value for that setup option will be displayed. Use the arrow keys to change the value. Press the select button to save the change or the setup button to cancel the change or exit that setup option. Press the setup button again to exit the setup menu completely.

PROGRAM BUS

Items selected on the PROGRAM BUS consist of BKG/A, Fill/B, DSK and LOGO or MATTE. Items selected in the PROGRAM BUS are automatically routed to the program and Bypass output BNCs on the rear panel.
The BKG/A, FILL/B and DSK buttons are mutually exclusive. This means that if you select one, the other items are automatically deselected. The BKG/A button selects the video source from the SDI PGM IN connector on the rear panel. If you have the 4X1 option with your DSK, you can set the source for the FILL/B and Key to one of the 4 fill and key inputs. Otherwise the source for the FILL/B is the SDI FILL/B connector and the Key is the SDI KEY IN on the rear panel. The DSK button displays the background video with the selected Fill video mixed, based on the selected Key video. As with the Fill source video, you can also set the Key source video using the On Screen Menus. For more information please refer to the "DSK" section of the "On Screen Menu" chapter.

Your unit will have a button labeled LOGO or MATTE depending on the model you ordered. The DSK-LG model includes the LOGO button. This button toggles the logo layer on or off. Please refer to the "LOGO" section of the "On Screen Menu" chapter for more information on configuring and using your logos.
The standard DSK unit uses the MATTE button. This is a Toggle for the user configurable MATTE. For more information please refer to the "MATTE" section of the "On Screen Menu" chapter. Note that the MATTE is enabled and disabled in both the PREVIEW and PROGRAM outputs.

PGM BUS LOCK

This button toggles the lock status of the output video. Transitions will be enabled while the PROGRAM BUS is locked however button presses on the PROGRAM BUS will be ignored.

BYPASS

Pressing the bypass button will force the relay on the input of the I/O module to disengage. This will route the incoming video directly out through the relay bypass output connector. The LED above the Bypass button illuminates to indicate that the unit is in manual Bypass. Pressing the button once again energizes the relay allowing the input video to pass through the unit. The bypass relay will disengage if the frame loses power preserving the video output stream. Note: Only the bypass output connector is bypass relay protected, all other outputs will not function on a power loss.

2.5 Front Panel Indicators DSK-LG

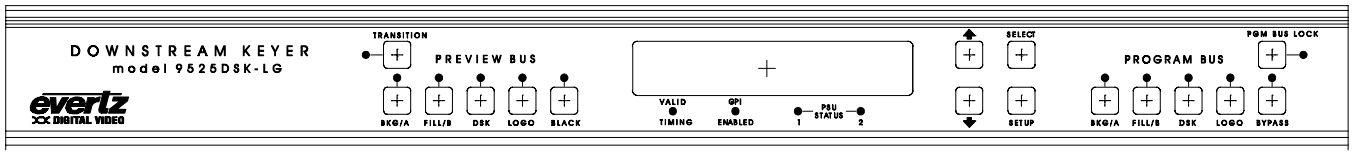

Figure 2-8: Front Panel Indicators (DSK-LG)

MAIN DISPLAY

This, sixteen character display is used to show menu items, setting values, mode selections etc.

TRANSITION

When illuminated, this LED indicates that a transition from the preview bus to the program bus is in progress.

PREVIEW BUS

BKG/A the preview output is set to SDI PGM IN
FILL/B the preview output is set to FILL/B
DSK the preview output is set to SDI PGM IN and FILL/B
LOGO the Logo layer is enabled (Logos may or may not be displayed)
BLACK the preview output is set to Black (Logos can not be displayed over black)

VALID TIMING

When illuminated, this LED indicates that the keyer circuitry is active. The keyer circuitry is active when one or more logos is being displayed and during any logo transitions.

GPI ENABLED

When illuminated, this LED indicates that the GPI functions are enabled. When disabled, control is via the front panel or optional remote panels only. GPI functions can be disabled through the setup menu. (feature not implemented)

PSU STATUS

When the LED is on it indicates that the associated power supply is plugged in and the 12V DC main is functioning.

PROGRAM BUS

BKG/A the program output is set to SDI PGM IN
FILL/B the program output is set to FILL/B
DSK the program output is set to SDI PGM IN and FILL/B
LOGO the Logo layer is enabled (Logos may or may not be displayed)

PGM BUS LOCK

Indicates that the panel is locked. In this state all front panel buttons are disabled except for the panel lock button.

BYPASS

Indicates that the unit is in bypass mode i.e. the program video is passing directly through the bypass relay to the bypass video output BNC

2.6 Front Panel Controls DSK

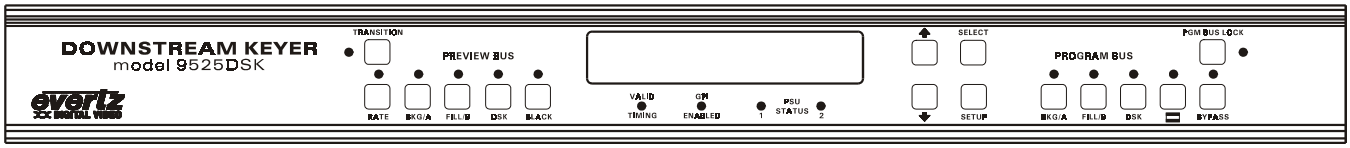

Figure 2-9: Front Panel Controls (DSK)

TRANSITION

This button is used to transfer the PREVIEW BUS material to the PROGRAM BUS using the pre-configured transition type. For information on Transition Types refer to the "Transition" section of the "On Screen Menu" chapter. This is similar to the “Take” function of other products.

RATE

This button gives the user quick access to the Rate setting for the Transition effect that will be applied. You can change the time that the transition will take for the settings from the Preview channel to be applied to the Program channel, referenced in Frame values. The default is 20 frames.

PREVIEW BUS

Items selected on the PREVIEW BUS consist of BKG/A, Fill/B, DSK, or BLACK. Items selected in the PREVIEW BUS are automatically routed to the preview output BNCs on the rear panel. The BKG/A, FILL/B and DSK buttons are mutually exclusive. This means that if you select one, the other items are automatically deselected. The BKG/A button selects the video source from the SDI PGM IN connector on the rear panel. If you have the 4X1 option with your DSK, you can set the source for the FILL/B and Key to one of the 4 fill and key inputs. Otherwise the source for the FILL/B is the SDI FILL/B connector and the Key is the SDI KEY IN on the rear panel. The DSK button displays the background video with the selected Fill video mixed, based on the selected Key video. As with the Fill source video, you can also set the Key source video using the On Screen Menus. For more information please refer to the "DSK" section of the "On Screen Menu" chapter.
The BLACK button selects the internal black generator. Selecting BLACK deselects all other buttons in the PREVIEW BUS button field.

ARROWS

The arrow keys are used to scroll through the setup menu to choose setup options and change setup option values.

SELECT

Select is similar to the “enter” key on a standard PC keyboard. The button is used to confirm operations, save settings, confirm choices etc.

SETUP

Press the setup button to enter the setup menu. Options will be displayed on the front panel as well as On Screen of the PREVIEW OUT. Use the arrow buttons to cycle through the available setup options. Press the select button to choose the currently displayed setup option; the current value for that setup option will be displayed. Use the arrow keys to change the value. Press the select button to save the change or the setup button to cancel the change or exit that setup option. Press the setup button again to exit the setup menu completely.

PROGRAM BUS

Items selected on the PROGRAM BUS consist of BKG/A, Fill/B, DSK and MATTE. Items selected in the PROGRAM BUS are automatically routed to the program and Bypass output BNCs on the rear panel.
The BKG/A, FILL/B and DSK buttons are mutually exclusive. This means that if you select one, the other items are automatically deselected. The BKG/A button selects the video source from the SDI PGM IN connector on the rear panel. If you have the 4X1 option with your DSK, you can set the source for the FILL/B and Key to one of the 4 fill and key inputs. Otherwise the source for the FILL/B is the SDI FILL/B connector and the Key is the SDI KEY IN on the rear panel. The DSK button displays the background video with the selected Fill video mixed, based on the selected Key video. As with the Fill source video, you can also set the Key source video using the On Screen Menus. For more information please refer to the "DSK" section of the "On Screen Menu" chapter.
The standard DSK unit uses the MATTE button. This is a Toggle for the user configurable MATTE. For more information please refer to the "MATTE" section of the "On Screen Menu" chapter. Note that the MATTE is enabled and disabled in both the PREVIEW and PROGRAM outputs.

PGM BUS LOCK

This button toggles the lock status of the output video and the front panel input. GPI triggers are still enabled. Transitions will be enabled while the PROGRAM BUS is locked however button presses on the PROGRAM BUS will be ignored.

BYPASS

Pressing the bypass button will force the relay on the input of the I/O module to disengage. This will route the incoming video directly out through the relay bypass output connector. The LED above the Bypass button illuminates to indicate that the unit is in manual Bypass. Pressing the button once again energizes the relay allowing the input video to pass through the unit. The bypass relay will disengage if the frame loses power preserving the video output stream. Note: Only the bypass output connector is bypass relay protected, all other outputs will not function on a power loss.

2.7 Front Panel Indicators DSK

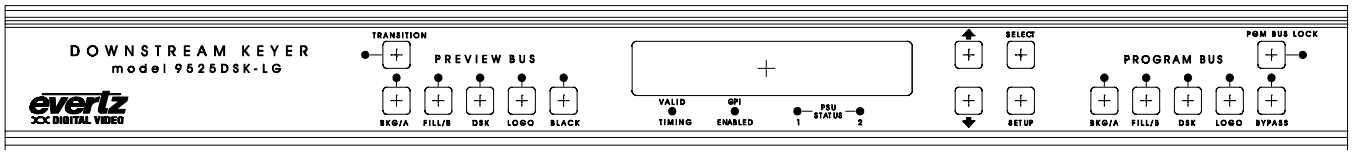

Figure 2-10: Front Panel Indicators (DSK)

MAIN DISPLAY

This, sixteen character display is used to show menu items, setting values, mode selections etc.

TRANSITION

When illuminated, this LED indicates that a transition from the preview bus to the program bus is in progress.

RATE

Indicates that the transition rate settings are being modified either through selecting the Rate button on the front panel, or selecting the Rate setting for the transitions from the on-screen menus.

PREVIEW BUS

BKG/A the preview output is set to SDI PGM IN
FILL/B the preview output is set to FILL/B
DSK the preview output is set to SDI PGM IN and FILL/B
BLACK the preview output is set to Black (Logos can not be displayed over black)

VALID TIMING

When illuminated, this LED indicates that the keyer circuitry is active. The keyer circuitry is active when one or more logos is being displayed and during any logo transitions.

GPI ENABLED

When illuminated, this LED indicates that the GPI functions are enabled. When disabled, control is via the front panel or optional remote panels only. GPI functions can be disabled through the setup menu (feature not implemented).

PSU STATUS

When the LED is on it indicates that the associated power supply is plugged in and the 12V DC main is functioning.

PROGRAM BUS

BKG/A the program output is set to SDI PGM IN
FILL/B the program output is set to FILL/B
DSK the program output is set to SDI PGM IN and FILL/B

Matte Enable indicates that the matte is currently On or Enabled.

PGM BUS LOCK

Indicates that the panel is locked. In this state all front panel buttons are disabled except for the panel lock button.

BYPASS

Indicates that the unit is in bypass mode i.e. the program video is passing directly through the bypass relay to the bypass video output BNC

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3. On Screen Menu

Use the SETUP button to access the On Screen Menu. You are presented with the following choices.

GENERAL
MATTE
DSK
LOGO (on DSK-LG units only)
TRANSITION
PRESET

Each of the above options are outlined in the following section with in depth descriptions of functionality.

3.1 General

Safe Area: Use this control to toggle the Safe Area markers on or off. The Safe Area markers are only viewable on the Preview Output.

Select Standard: Select the desired video standard by using the up down arrow keys to highlight the appropriate choice. The choices are;
525 4:3 13.5 (SMPTE 125M)
625 4:3 13.5 (EBU 3267)
525 16:9 13.5 (SMPTE 267M - 13.5)

Update Code: This control displays the current firmware version in the DSK. You can also put the DSK in receive mode when you need to upgrade the flash programmable chip inside the box.

File System: This control allows you to quickly delete logo files from within the DSK-LG.

3.2 Matte

The Matte is a black overlay that blacks out video and produces a letterbox effect for the output video. Use this control to set the aspect ratio of the video. The Matte starts at the end of the VBI.

Matte Enable: Toggles the Matte on or off.

Matte Aspect: Selects from a pre-stored aspect ratio configuration. Options available are:
1) 1.33
2) 1.67
3) 1.78
4) 1.85
5) 2.35

Matte Top: Sets the stop line for the top portion of the Matte.
Matte Bottom: Sets the start line for the bottom portion of the Matte.

3.3 DSK

Key Type: Input or Self. Select Input to use the Input Key from the Key Source or select Self to use the settings provided in the Threshold, Sharpness, and Filter settings that follow.

Key Gain: Range of values from 50% to 170%. This setting increase or decreases the entire range of color with respect to the key input. This will render the fill as more or less pronounced respectively.

Key Offset: Range of values from -4096 to +4095. This setting shifts the color values with respect to key input. This setting should not need to be changed in normal operation.

Key Threshold: Range from 01.0 Black to FE.F White. The Self Key is a hard key. All values from the key that fall above the Key Threshold will be keyed from Fill. All values from the key that fall below the Key Threshold will be keyed from Background.

Key Sharpness: Fast, Medium or Slow. This is the Level setting for the transition from background to fill. The faster the setting the sharper the transition. The slower the setting the more pronounced the blur at the transition point becomes.

Key Filter: None, Soft or Softer. The Key Filter is applied to soften the color transitions inside the Key Fill area. Mixing the Background and Fill signals could result in unwanted color overshoots. Use the Key Filter setting to soften the color transitions in the Key Fill area.

3.4 Logo (DSK-LG units only)

Once the Logo layer has been enabled in the hardware. All Logo changes will affect the program output. The DSK is capable of displaying multiple logos, however if the program Logo layer is enabled any change to any logo will be reflected in the program output.

Select Logo: Select a logo from the list provided. Use the arrows to scroll the list of installed logos. Press Setup to leave the menu with the displayed logo as active Press select to fade the logo in or out. Any displayed logos will have an "*" beside there name. Selecting a logo will render it active for the application of the following attributes. Please select a logo prior to changing any of the following settings.

Horizontal: – the horizontal position of the current logo can be adjusted via this option. The position is referenced to the left most edge of the logo. The range for this option varies depending on video standard selected.

Vertical: – the vertical position of the current logo can be adjusted via this option. The position is referenced to the top edge of the logo. The range for this option varies depending on video standard selected.

Fade In Time: – this is the rate at which a logo will fade in. The range for this option is 3 to 600 frames. Note: 1 frame is equal to approximately 33us.

Hold Time: – this is the number of frames a logo will be displayed for before automatically being faded out. The range is 0 to 600 frames. Note: 1 frame is equal to approximately 33us. A value of zero will

keep the logo on indefinitely. Note: Only values of 1 through 600 will cause the logo to fade out automatically.

Fade Out Time: – this is the rate at which a logo will fade out. The range for this option is 3 to 600 frames. Note: 1 frame is equal to approximately 33us.

Transparency: – this is the transparency setting for the logo. The range for this option is 0 to 100 units where 100 equals 100% transparent and the logo is keyed but you can't see it and 0 equals 0% transparent and is displayed as formatted with InstaLogo.

Delete Logo: Select the appropriate logo from the list using the arrow keys and press select again to delete the desired logo.

3.5 Transition

Transition Type: Select the type on transition you would like applied when the Transition button is pressed. Options are Cut, Fade, Wipe Left to Right, Wipe Right to Left, Wipe Top to Bottom, Wipe Bottom to Top, Wipe Top Right to Bottom Left, Wipe Bottom Left to Top Right, Wipe Top Left to Bottom Right or Wipe Bottom Right to Top Left. (item orders may vary). Transition effects only appear of the program output. Transitions on the Preview Output are always Cut type performed at the end of the transition to program.

Transition Time: Set the time for the transition to take affect. The setting is referenced in frames.

Swap Mode: Toggle Yes/No setting for whether the program and preview channels are swapped after a transition command is issued.

3.6 Preset

Presets are pre-defined setups for such things as Matte settings, Safe Area/Title display, Transition settings and Key/Fill input. The parameters for the settings are stored based on the status of the program bus. Therefore if you would like to set a preset that has a mask aspect of 2.35 and Logos enabled, you must first set the mask and turn on the Logo layer for the program bus. Then store the preset at the required address. All Recalled presets are recalled to the Preview Bus and will not show on the program bus until the Transition button is pushed, or a GPI trigger invokes the transition.

Recall Preset: Select from 1 to 10 to reload previously saved settings.

Store Preset: Select from 1 to 10 to save the current settings (Whatever the units program bus is configured for will be saved).

The latest firmware version 1.6_build 45 or later now supports 2 types of GPI triggers. The "Mode" setting in each GPI can be set to either Level or Pulse. Level is the traditional setting for the GPI triggers, where the On Closure event happens when the GPI drives the input pin low to ground. The On Separation event occurs when the GPI releases the level to the +5 setting again.
The new Pulse mode toggles the On Closure and On Separation events whenever the pin signal is driven low. For example, drive the pin to ground and release the pin will invoke the On

Closure event, then drive the pin to ground again and release the pin to invoke the on Separation event.

GPIs can be configured to trigger 2 events, On Closure and On Separation. Use the Up/Down arrow to move the cursor to the desired GPI (A&B for DSK with 4x1 option, A,B,C,D&E for DSK without 4x1 option), and press the Select button to configured the desired GPI.
The On Closure event can be used to load a Preset, perform a transition, and/or fade in 1 or 2 Logos. The On Separation event for the same GPI can be used to load a Preset, perform a transition, and/or fade out 1 or 2 Logos. The menu system can be traversed using the Up/Down arrow to select the desired menu item and the Select button to jump to programmable options for that item. Use the Up/Down arrows to scroll the available options and press the Select key to accept your selection. When you are done press the Setup button to exit the configuration mode and press the Select button again to save the changes and exit the Preset setup page. Please note you can configure the GPI to load a Logo, but if the Logo layer is not on, the logo will not appear on screen even though the "*" status indicator shows that the logo is keyed. Ensure the logo layer for the appropriate bus is activated by loading a preset configured with the logo layer activated, or push the button for logo layer on the appropriate preview or program bus.

GPI A: All DSK units.

GPI B: All DSK units.

GPI C: DSK units without the 4x1 option only.

GPI D: DSK units without the 4x1 option only.

GPI E: DSK units without the 4x1 option only.

Miscellaneous:
The key and fill signals are treated as one with respect to the DSK with the 4X1 option installed. To select a different source combination for the DSK you must hold down the DSK button on the Preview Bus side of the front panel and use the Up and Down arrow keys to scroll through the four available Key/Fill combinations identified as "Source 1, Source 2, etc.). You can also change the Key/Fill combination assignment for the Fill/B button in a similar fashion. Hold down the Fill/B key and use the Up Down buttons to select the appropriate Key/Fill combination.

Note that you can only change the Key/Fill source video settings when the Program Bus is displaying background video. You can not change Key/Fill output while it's displayed on the Program Bus.

4. InstaLogo Software

4.1 Welcome to InstaLogo™

InstaLogo™ is the PC portion of the Evertz Logo Inserter package. This software only ships with the LG version of the 9525DSK. The software is used to Import graphic files created from professional graphics programs and transfers them to the Logo Inserter. The software is a utility for converting existing files from RGB to the YCbCr format used in the video domain. The original creation of these files must be done with other software. Once the files are created you can import and convert the files for use with your Evertz Logo Inserter. Please see (Primer on Creating Logos) for more information on the logo creation process.

Here are some guidelines for preparing a logo file to install into the Evertz 9525DSK Logo Inserter:

1. Best results are achieved when you supply both the fill and the key as two separate files. Make sure that the H/V sizes of both files are the same. Make sure that the position of both the fill and the key within the file, is the same.

2. Please draw the logo on a black background.

3. Try to keep the logo under 160 lines by 256 pixels.

4. Anti-alias all edges within the logo. Try to not anti-alias the outer edges (where the keying will take place).

5. Keep all lines thicker than 2 pixels wide, 2 lines high. The line will flicker and/or have funny edge artifacts if they are too thin.

6. Format the logo into a 24 bit per pixel GBR bitmap image.

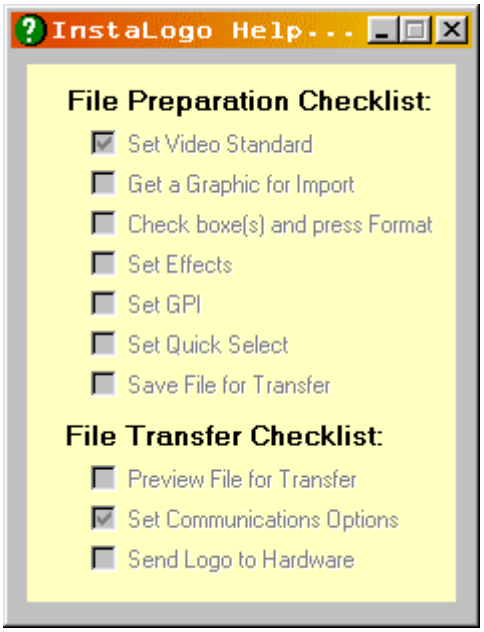
7. Supported files are UNCOMPRESSED: .BMP, .TGA, and .TIFF formats.

8. We are field one dominant and start on a Y/C co-located sample. This means that the first pixel of the first line will be in the first field and the first pixel will be a Y,Cr,Cb co-located sample.

See (Logo Preparation) for more information on Preparing Logos
See (Primer on Creating Logos) for more information on Designing Logos
See (File Utilities) for more information on Transferring Logos to the 9525DSK

4.2 Step by Step Logos

InstaLogo™ includes an online checklist. To view the Checklist, select "Help" from the drop down menus and select "Check List". The steps outlined on the checklist are automatically checked as the steps are completed. For easy Logos follow the checklist from top to bottom. Pop Up help is available on most controls, simply pause your mouse over the control in question and an informative balloon will appear.



Checklist Items:

File Preparation Checklist: (see **File Preparation** for more information)

Set Video Standard
Get a Graphic for Import (required)
Check boxe(s) and press Format (required)
Set Effects (optional)
Set GPI (optional)
Set Quick Select (optional)
Save File for Transfer (required)

File Transfer Checklist (see **File Utilities** for more information**)**

Preview File for Transfer (required)
Set Communications Options (default: turbo, Com 1 or USB if enabled)
Send Logo to Hardware (required)

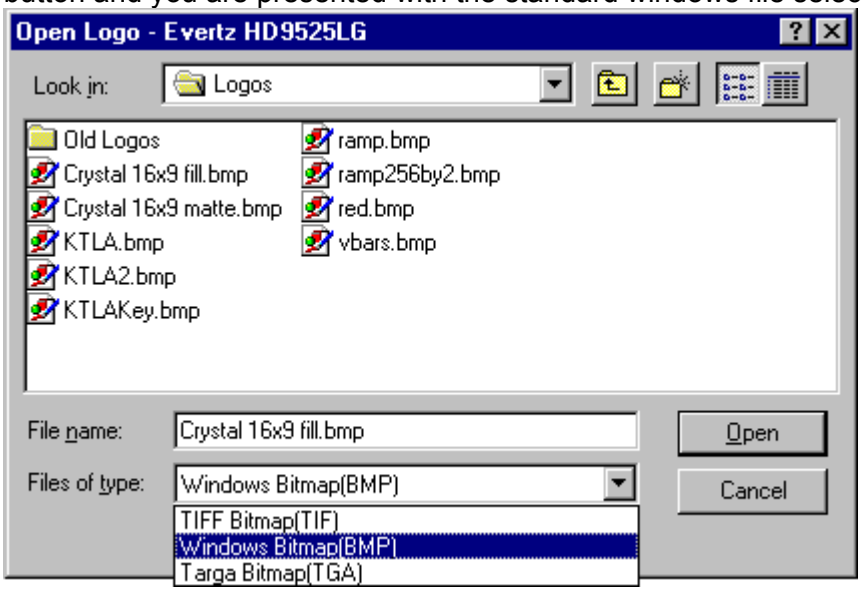
4.3 Logo Preparation

The Logo Preparation page is used for importing graphics files and preparing them for conversion to the Inserter hardware format.

Buttons:

Get Logo: 

Getting a logo is the starting point for the InstaLogo™ program. Click this button and you are presented with the standard windows file selection box.



Simply select your logo file and the software will start the import process. After the Logo file is imported, InstaLogo™ will prompt you to load the associated Key file and again present the standard windows file selection box. When the import process is done you will see your Logo and associated Key displayed in the Logo Preview Section.

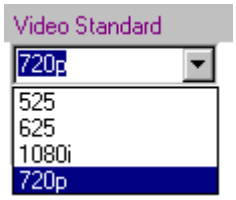
Format Logo: 

Once you have imported and placed your Logo you will need to format it. The process of formatting scales the amount of data to match the amount of data the Logo Inserter is expecting. The original color information and the positioning of the Logo are unaffected by the Format function. If a key file is not supplied then one will be created for you at this time. Please tick any boxes that contain logo data that you would like to include with your Logo. The screen is sectioned into rectangular blocks that allow for maximum optimization of the logo inserter hardware, simply click on an associated check box in the blocks that contain your logo data.

Save Logo: 

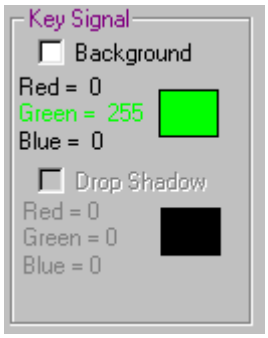
After formatting save your file in the EVL file format. This is the native file format used by the InstaLogo™ software and Logo Inserter hardware. Please note the location of the saved file, as this information is required when sending logos to the Logo Inserter.

Sections:



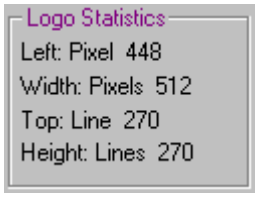
Video Standard: This Drop down menu is used to select the video standard for file creation, changes to this selection change the interface parameters for the Logo Preparation page.

Tools: Toggles the controls on or off for the Logo Preview section.



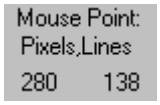
Key Signal: When a Key file is provided the Background is disabled. When no key file is provided see (Logo Control Menu) for more information.

Fine Positioning: Use the arrow buttons to position your Logo within the Logo Preview area. The “SS” Single Step toggle checkbox is used to lock the logo movement to one sample or line per button click. The “Zoom” checkbox is a feature for the 1080i/p mode. This toggles the preview area between a 1:1 view mode and a 4:1 view mode allowing you to view the entire HD display area. You may only position your logo prior to formatting. You may also click and drag your logo for placement.



Logo Statistics: Information includes the position of the top left pixel of the imported logo graphic as well as the height and width of the imported graphic.

Logo Preview: This area of the screen is the active work area, use it to place and work on imported graphics as well as view the results of your selections. The height and width of the preview is a 1:1 ratio in normal view mode and 4:1 in “Zoom” mode (1080i/p only) of the selected video format. Therefore a video format of 1080i results in the scaled preview area of 1920 pixels by 1080 lines.



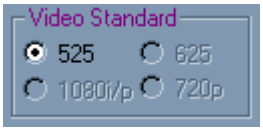
Mouse Co-Ordinates: Pixel positions of the mouse are updated in relation to the object the mouse is passing over and referenced from the top left corner of the object (either background or Logo).

4.4 SLATE PREPARATION

The Slate Preparation Tab is used to create slate type data for video insertion. This area was developed to allow you to quickly create, save and insert text data without the need of creating graphic files in other graphics programs. The graphic file format does not lend itself well to the manipulation of text based data. If you have the need to insert a window of text in HD or SD, the text must first be converted to bitmap type data before it can be inserted into the video bitstream. This conversion process significantly reduces your ability to manage the text data. With the Slate Preparation Tab you can insert numerous (32000 Max) separate boxes of text. Set and save the text attributes of the boxes independently. Recall the text boxes at any time and change the text data. This is an ideal low cost solution for generating HD slates for Telecine transfers. Since slate files tend to be rather large, we recommend that you use the USB functions for transferring the slate information to the Logo Inserter.

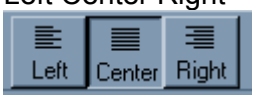
Changes on this page will be applied to the currently selected Text box. The six grab boxes displayed around the text box indicate the currently selected text box. To select a text box, point to it with the mouse and left click once. This will allow you to edit the text contents as well as change any perimeters with respect to this box. To enter a new text box, simply point to the Slate Preview Area and left click on it with the mouse, then start typing.

Video Standard



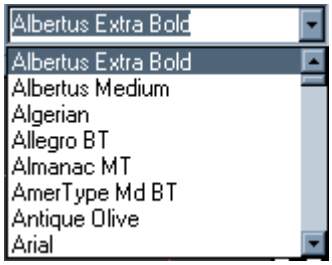
The video standard can be changed from the Global Video Standard drop down list box contained on the Logo Preparation Tab. The video standard indicator simply displays the standard currently selected.

Left Center Right



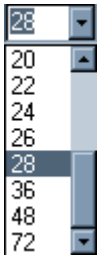
These buttons are used to align the text within a text box. Each text box can contain its own alignments. The depressed button (center button in this example) indicates the currently selected alignment. This means that all text contained within the current text box will be center aligned. As new lines of text are entered into the text box, InstaLogo will automatically align it correctly. To change the alignment simple click on a text box to select it and then click on the appropriate alignment button.

Fonts



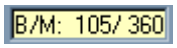
As with alignments, each text box can contain different font styles. The drop down selection box contains a list of all the fonts available on your PC. You can have one font set for each text box.

Point Size



As with alignments, each text box can contain different point sizes. The drop down selection box contains a list of all the allowable point sizes. You can have one point size set for each text box.

Position Info

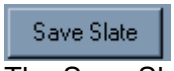


The yellow box at the top of the screen give the information about the position of the text box. Move the mouse pointer over top of one of the Grab Handles, and the position info box appears at the top of the screen. B=Bottom, T=Top, L=Left, R=Right and M=Middle. You can use this information to correctly align multiple text boxes from top to bottom or left to right. Example B/M: 105/360 means the bottom of the box is on line 105 and middle of the box is 360 samples from the left.

Get Slate

The Get Slate button presents you with the standard windows open file dialog box. This allows you to change subdirectories and select a previously saved slate file.

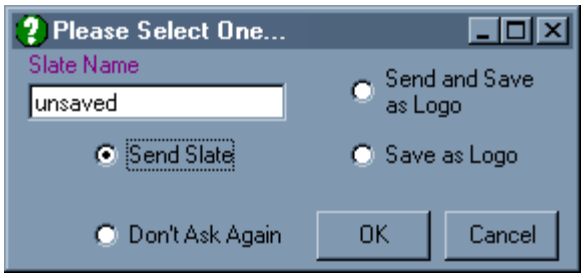
Save Slate



The Save Slate button allows you to save the text boxes and configuration information in their text based format. This would be similar to an MS Word type file format. The can be retrieved and edited at a latter date. EVS is the file extension associated with Slate files and they are not Logo files.

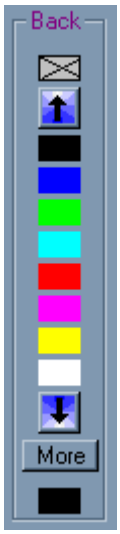
Send Slate

Select this button to convert the text data to the bitmap format required for video insertion. You are presented with the following message box.



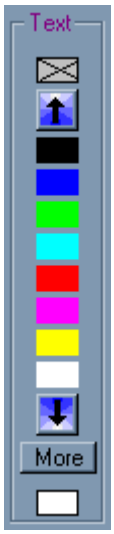
Type the name that you want to appear on the front panel display screen, into the Slate Name text box (default is unsaved). Choose the option you want by left clicking on one of the following items; Send Slate will format the slate to bitmap and transfer the slate to the Logo Inserter, Send and Save as Logo will prompt you for a file location and then format the slate for bitmap and send the resulting file to the Logo Inserter as well as store a copy on the PC harddrive, Save as Logo will store a copy of the bitmap on the PC harddrive only and Don't Ask Again will flag InstaLogo to use the same option that you selected last time automatically and not bother to ask you again. You can override this choice by un-ticking the Save Slate Prompt option on the Tools drop down menu. Once you have made your choice, click OK to continue, or Cancel to go back.

Back Color



This option refers to the background color of the text box. You can choose one of the colors provided on the scrolling color bars, click the More button to manually enter a specific color or choose colors not on the color scroll bars, or use the  to set the background to transparent. Each text box can have its own background color. The color box below the More button displays the currently active color. Use the Up and Down arrows to access additional colors. Pausing the mouse over a color will cause a Pop-Up box to appear with the RGB values of the underlying color box.

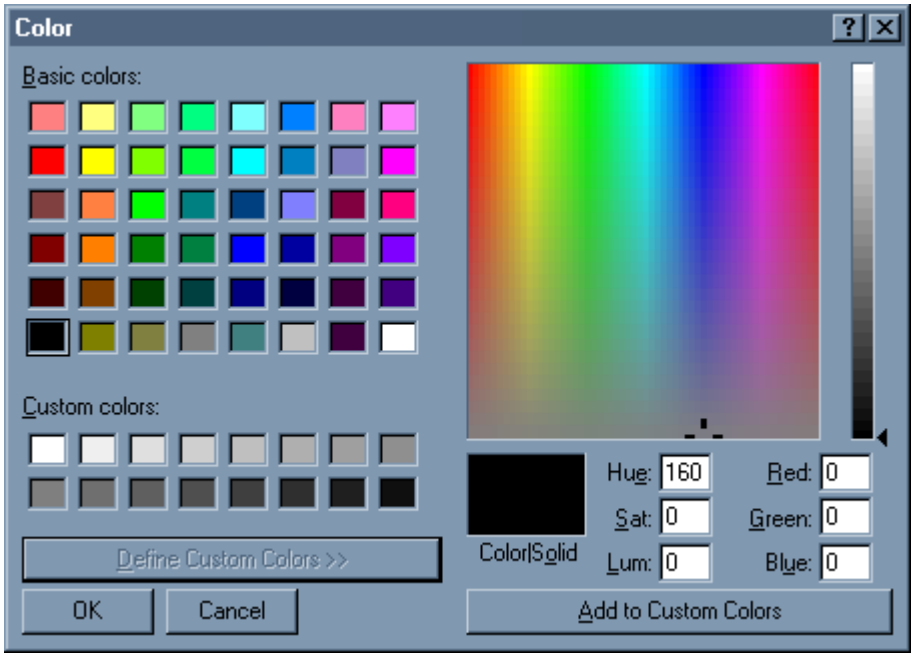
Text Color



This option refers to the foreground or text color of the text box. You can choose one of the colors provided on the scrolling color bars, click the More button to manually enter a specific color or choose colors not on the color scroll bars, or use the  to set the foreground to transparent. Each text box can have its own foreground color. The color box below the More button displays the currently active color. Use the Up and Down arrows to access additional colors. Pausing the mouse over a color will cause a Pop-Up box to appear with the RGB values of the underlying color box.

More

The More button allows you mix your own specific colors for Text boxes. This may apply to foreground or background colors. Once you click the button you are presented with the following color utility.

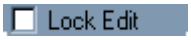


You may select from one of the Basic colors by clicking on the displayed color and clicking OK, or you can mix your own color on the right hand side and Add it to the Custom Colors. Custom colors are only stored when InstaLogo is running. If you close down InstaLogo custom colors are destroyed. Click Cancel to exit this option without selecting a new color, or click OK to apply the selected color.

Lock Position

This check box will lock the currently select text box against accidentally being moved. This is handy if you need to enter text data that will be edited, but you don't want to inadvertently change the position. An unchecked box means the currently selected text box is not locked against position movements. Note that Locked boxes will not display Grab Handles.

Lock Edit



Similar to the Lock position when enabled the lock edit will allow the text box to be moved around the screen, but text and attribute changes will be ignored. Click on the box to enable and disable this function.

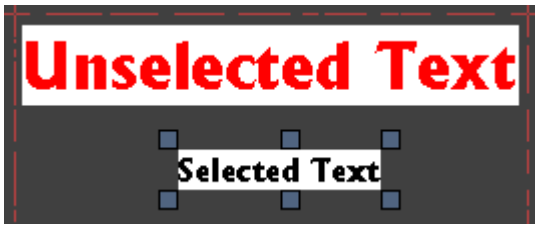
Delete

The delete button will delete the currently selected text box. This function can't be undone. A text box locked with the lock edit box can not be deleted, first uncheck the lock edit box and then delete the text box.

New Slate

The new slate button will delete all text box windows and reset all the InstaLogo Slate preparation values to their default values. Please save slate data prior to clicking the New Slate Button, as there is no prompt for unsaved data.

Text Box



Text boxes are unique entities with individual properties. Lock items, color values, contents, font, point size, alignment and positioning are all unique to each text box. The above example shows how these boxes can co-exist within one slate and how you can identify the current text box (selected text with grab handles). To create a new text box just left click in the Slate Preview Area and start typing.

4.5 ANIMATION PREPARATION

Animations are the most complex portion of InstaLogo. The idea behind an animated logo is very straightforward, display a series of graphic files in rapid succession thereby simulating movement. This is the same concept as TV. The Animation Preparation Tab is designed to allow you to create an animated logo that the 9525LG can insert into the active video picture. With that said there are some guidelines that must be followed in order to accomplish this goal. First all graphics used in the animation must be .BMP files of the 24bit variety. If you will be supplying key files the H and V values must be the same as the fill files and they must also be 24bit .BMP files. All graphic images in the animation must have the same H and V values. Since an animation is just a series of graphics displayed in succession all the graphics are subject to the same design specifications as the static logos, as such you should review and be familiar with creating static logos, before you attempt to create an animated logo. Please review the Logo Preparation section of this manual as well as the Primer on Creating Quality Logos located at the end of this manual before proceeding. Animated logos are not supported on the DSK products or the HD Logo Inserters, however information about the animation functions are provided for consistance with the software shipped with those products. For 62 5 clients, create the animation in 525 mode, it will run correctly when the 9525LG is running in 625.

4.5.1 Overview

The Animation Preparation Tab is designed to allow you create animated logos. You do this by telling InstaLogo what graphic files you have, what order you would like them displayed, how long you want each image to appear and at what transparency level you want the graphics inserted. All the rest are just tools to help you reach these goals.

4.5.2 What graphic files you have!

To load graphic files into the animation you must click on the Load Logo button. This will display a standard windows file selection box and allow you to choose the file(s) to load as Logos. Use the shift click or Ctrl click methods to select multiple files and load them all simultaneously. You must first load one Logo before you can load any key files. The Logo file is the file used to compare H and V values for any key load events. Once you have selected all the files click the OK button and InstaLogo will load them into the Logo File Name drop down box. The first logo selected will be allocated to the current frame (more on this later).

We load the animation graphics first so that we can allocate the graphic files as a resource. The Evertz animation files consist of a playlist of frames and segments. This is the order of the playout of the graphic files. In order to reduce the size of the animation file, it makes sense to only load the graphic files once, and then point to them as required. The frames and segments are the pointers and the Load logo and key functions are the graphic images. This allows us to re-use graphic resources as many times as we like, without significantly increasing the size of the animation file.

4.5.3 How Big Can the Animation Be?

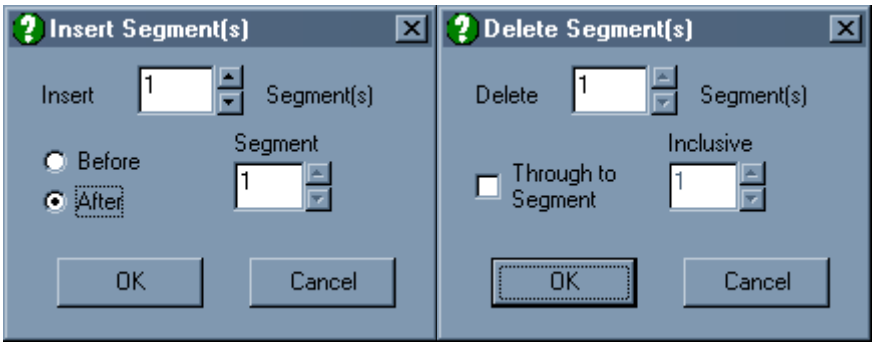
Animations are calculated based on a Tile system. The logo inserter has approximately 127 tiles that it may use for animation. 1 tile is 64 lines high by 256 wide. You may make frames of the following size combinations.
1x1 or 64 lines by 256 samples Total unique graphic Key/Fill combinations = 127
2x1 or 128 lines by 256 samples Total unique graphic Key/Fill combinations =63
3x1 or 192 lines by 256 samples Total unique graphic Key/Fill combinations =42
4x1 or 256 lines by 256 samples Total unique graphic Key/Fill combinations =31
1x2 or 64 lines by 512 samples Total unique graphic Key/Fill combinations =63
2x2 or 128 lines by 512 samples Total unique graphic Key/Fill combinations =31
1x3 or 64 lines by 768 samples Total unique graphic Key/Fill combinations =42
*Lines and Samples = Pixels in the computer graphic world, Lines are height and Samples are width.

4.5.4 What order you would like them displayed!

Ordering of the animation is what makes a good animation appear smooth. The more frames in a transition the smoother the transition will appear this of course is at odds with the space limitations in the Logo Inserter. So we must sacrifice something. Size for content is usually the case, you may have a larger number of smaller graphics or a smaller number of larger graphics, above is a basic guideline of the storage capabilities of the Logo Inserter, please keep these in mind when designing graphics for animations.

All animations are made up of segments and frames. An animation must have at least one segment and at least 1 frame (of course this would be a static logo and wouldn't make much sense as an animation). You may use the Insert and Remove Frame and Segment buttons to add and remove frames and ranges of frames and segments as required.

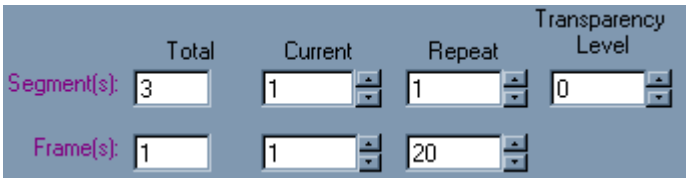
You may have a maximum of 32 segments in 1 animation and each of those 32 segments can have up to 256 frame counts.



Inserting and deleting frames and segments function the same way. You choose the number of items you want to insert, choose before or after to insert the items before or after the item identified in the box to the right. This allows you to quickly insert a range of items at the desired location. Similarly you may delete a range of items by specifying the start point in the Delete box and then ticking the Through to box and indicating the last item to delete in the inclusive box.

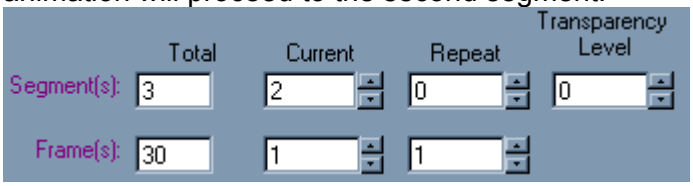
Figuring out what segments are required and how many frames should be in each segment is kind of an art form and may take some experimentation on your part, but here are some general guidelines to help you along. You could make an animation that consists of say 30 unique graphic images and allocate them to 30 frames in 1 segment. This would be a valid animation. A more interesting animation would have 3 segments, 1 segment for the loading of the animation, 1 segment for the playout of the animation, and 1 segment for the fade out sequence of the animation. All 3 of these segments will use the same 30 graphic images, but the transparency levels will change over time to give the animation an overall cleaner appearance.

4.5.5 Frame and Segment Controls

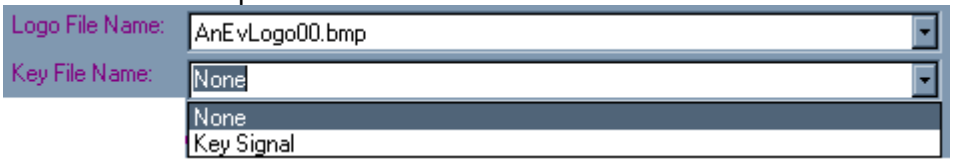


The top line of controls are the Segment controls. Here you see that the animation consists of 3 segments in total. The first segment is the current segment, it will be repeated once and will cause the Logo inserter to bring the animation from 100% transparent to 0% transparent in 1 rendering of the segment. This is an important point; the Logo Inserter will change the transparency of the logo from one segment to the next in one iteration of the segment loop. So even if the segment is set to repeat twice the change in transparency will occur in the first pass of the segment. All animations start and finish at the 100% transparent level.

The second line of controls are the Frame controls. Here you see that this segment contains just 1 frame, it is the current frame and it will be repeated 20 times. This means the animation will appear to pause on the first frame of the sequence as the frame is faded in over 20 video frames, then the animation will proceed to the second segment.

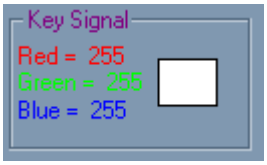


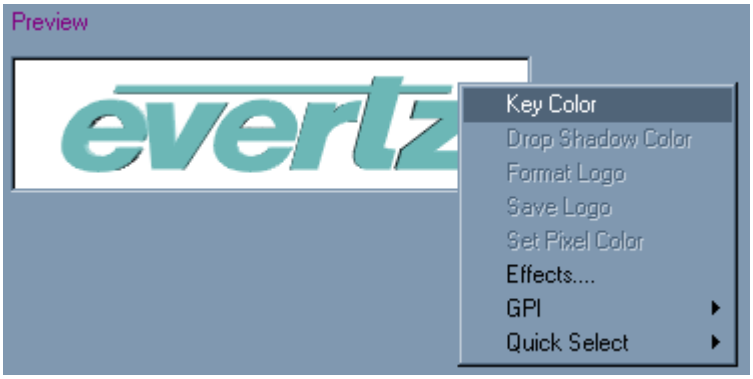
Click the up arrow beside the Current Segment to set the current segment to the second segment. You will see that InstaLogo loads the frame values, repeat settings and Transparency settings for the second segment of the animation. This segment has 30 frames, the current frame is frame 1 with a frame repeat count of 1. The segment repeat count of 0 indicates to the Logo Inserter that the animation should continue to play this segment over and over until the Fade Out button is pressed. You can step through each frame of this segment by clicking on the up and down arrows beside the Current Frame box. As you change the current frame the current frame number will change and the associated frame repeat value will change as well. The combination of frames and frame repeat counts can't exceed 256 for any given segment. You will also notice that the information in the Logo and Key File Name areas are updated to reflect the values associated with the frames.



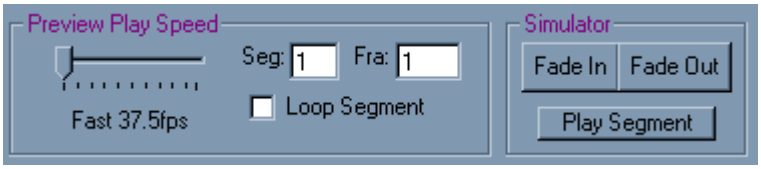
This is how you associate the Fill and Key file resources you loaded into the animation earlier. Clicking on the down arrow to the right of the Logo or Key file name will show the list of all the file resources available in the animation. You can change the allocated frame resource by pointing to a new file name

in the list and clicking on it. New frames added with the Insert frame button will have no resources allocated. You must use the up down arrows beside the current frame box to step through each frame of the segment and allocate the correct resource to the correct frame of the segment. Do the same with the Key file resources. The value “None” in the Key File Name means the entire graphic will be used in the animation, The value “Key Signal” means the color associated with this graphic will be used as a transparent color for the Logo file. As with the Logo Preparation screen the top left pixel is used to establish the default Key Signal color for this value. You can change the Key Signal color value by right clicking on the appropriate color in the Preview area and selecting Key Signal from the Pop Up menu that appears.





4.5.6 Preview Play Speed and Simulator Controls



The preview Play Speed and Simulator controls are used to troubleshoot your animation and give you a feel for how the animation will perform when it’s loaded into the Logo Inserter. The speed setting is for playback on the PC and has nothing to do with the Logos timing. You control the timing of the animation by setting the repeat counts for the frames themselves. Each frame of animation will be inserted into 1 video frame or 2 video fields. If you are running NTSC 30fps then 30 frames of animation will be played out in 1 second on the video. The windows operating system is famous for pausing during playback of animation sequences, you can see evidence of this with AVI files, streaming video and Quick Time moves. Most of these PC video sources use compressed graphics and low frame rates, animated .GIF files can run as slowly as 8 frames per second. As such the speed settings allow you to adjust the playback rate of the animation on the PC for troubleshooting. You can slow the animation right down and view the frame by frame playback and look for frames that don’t have graphic resources associated, or are in the wrong order, or don’t fit as well as you would like. The Seg and Fra boxes display the values that are currently being displayed in the preview area and also help you track down any problems within the animation. Click on the Loop Segment box will allow you to loop through a Segment over and over until you un-tick the check box. This allows you to troubleshoot one segment at a time without having to run through the entire animation. Use the Play Segment button to play out the current segment and use the Fade In and Fade Out buttons to simulate how the animation will perform in the Logo Inserter. An animation will fade in with the first segment and play all the frames within that segment, then proceed to the second segment and play all the frames in that segment etc, until it either encounters a segment with a repeat count of “0”, or plays all the segments of the animation. If the animation has a segment with the repeat count of “0” it will continue to play that segment over and over again until the Fade Out button is pressed. Once the Fade Out button is

pressed the animation will continue to the next segment after it finishes the current segment. It will then continue to play out the remaining segments until it reaches the end of the animation.

4.5.7 Buttons

4.5.7.1 New Playlist

The new playlist button will clear the animation settings. This will unload all graphics resources from the Logo and Key file name areas as well as clear the animation back to 1 segment with 1 frame. The repeat counts will be reset as well as the transparency setting.

4.5.7.2 Load Playlist

The load playlist button will load a previously saved animation playlist. The animation playlists have a file extension of .EVA and can be stored anywhere on you PC or connected computer. The associated Graphics resources are stored as pointers to the files on the harddrive or network, as such if you want to move an animation to a new PC, you must recreated the path structure for the graphics resources in order to load the animation correctly. This also means that a change to the underlying graphic resource will be reflected in the animation without having to reload the resource. The example Playlist “AevLogo” was installed when you installed InstaLogo. It and all the graphics resource files are saved in the “C:\program files\instalogo\samples\animated\sd\aevlogo” subdirectory. If you chose the default installation these files are automatically installed on the harddrive and you may use the load playlist button to open the AevLogo.EVA file located here. If you chose to install InstaLogo into another location or harddrive, you must first create the path and then copy the files into the appropriate subdirectory before loading the animation file.

4.5.7.3 Save PlayList

The save playlist button will save all the animation values to the PC or Network hard drive. The graphic resources are stored as pointers to their locations on the hard drive and not as graphics within the animation file. This allows for smaller files that can be moved on standard floppy disks, but it also means that you must recreate the graphics file path structure when moving animation files from 1 PC to another. The GPI and Quick Select settings are also saved with the .EVA file created when saving animation playlists.

4.5.7.4 Save Animation

The save animation button will display the standard windows file save box. This allows you to choose the location to store the EVL file that InstaLogo will create. All logo files must be converted to the Ycbcr file format required for video insertion. This can take some time with large animation files. InstaLogo will create an internal list of all Fill/Key combinations used as well as figure out the total tile requirements for the animation. If the animation is to large for the logo inserter you will be notified with a message box and the save animation process will be aborted. Once the animation EVL is created InstaLogo will

prompt you to send the animation to a Logo Inserter. Click yes to send or Cancel to go back to InstaLogo. Once the animation EVL is created you can send this EVL to any logo inserter that Evertz manufactures. We recommend using the USB connection option for transfering EVL files of this size.

4.5.8 File Size

127 tile animation 12 MB. Transfer Time 9600 buad (Snail) 5 hours, 57,600 baud (Turbo) 45 minutes, USB 12Mb/s (OverDrive) 4 minutes.

4.5.9 Other

You can use the GPI and Quick Select settings from the Logo Control drop down menu to assign the animation to these input sources just like static logos.

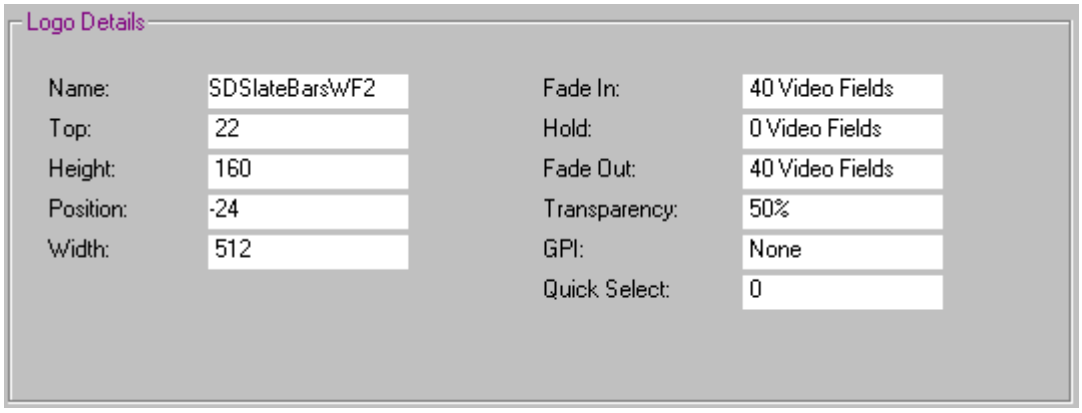
You can display static logos as well as animated logos simultaneously by first cueing or fading in all the static logos before running the animation. Once the animation is running you are locked out of cueing new logos, and old logos won't be removed until the animation is finished. For example you could bring in a violence rating bug at the top left of the screen using the Cue button to prep it for insertion, then you could cue the animation to the middle of the screen, and fade in the station bug in the bottom right of the screen. Now Play the animation by selecting it using the up down arrows on the front panel of the Logo Inserter and pressing the Fade In button. Next use the Up Down buttons to select the violence bug you cued up earlier and press the fade in button. This will fade the violence bug in while the animation is playing, now fade out the violence bug using the fade out button and you will notice that the violence bug is still cued on the preview output, but it is removed from the program output. This means you could recall the violence bug by pressing the fade in button again, or remove the violence bug entirely by selecting the animation logo with the up down buttons on the front panel and pressing the Fade Out button. This will remove the animation from the program output, then remove the animation and the violence bug from the preview output, but the station bug will still be present.

4.6 File Utilities

The file utilities Tab is used to select previously saved EVL files for transfer to the Evertz 9525DSK Logo Inserter. The workspace provides you with a quick view of the important Logo details as well as a double check on the positioning, GPI and Quick Select attributes of the Logo prior to transferring the Logo to the Logo Inserter.

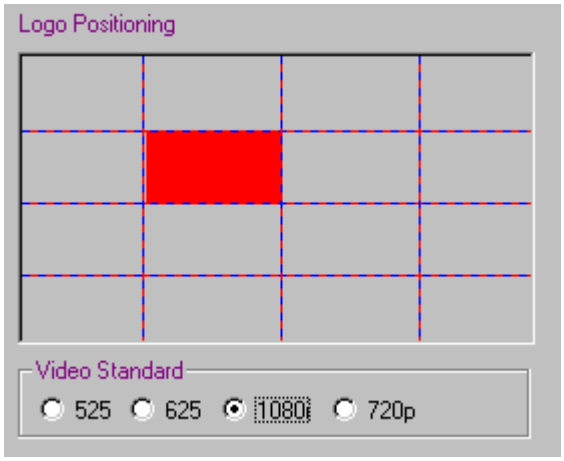
Logo Details:

Display area for the associated Logo details. Ensure that the values in the selected Logo file will not overwrite any Logos in the Logo Inserter before you send the new Logo.

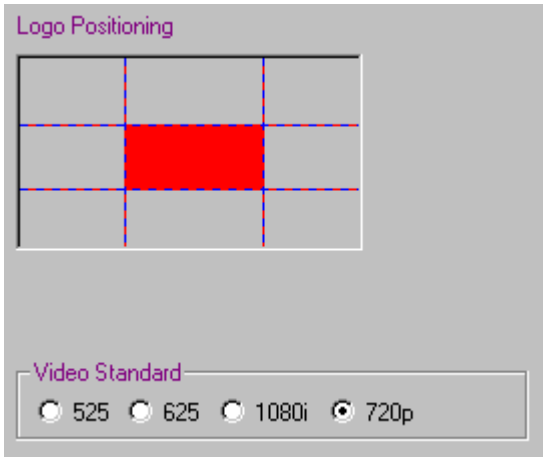


- **Name:** Name of file as saved on the computer file system. This is also the name that the 9525DSK will use on the internal file system. If you would like to change the name ensure that the EVL file extension is maintained.
- **Top:** Top position in scan-lines that the Logo will start to display at.
- **Height:** Number of scan-lines that make up the logo graphic.
- **Position:** The pixel start point for the logo graphic as referenced from the left side of the display area.
- **Width:** The width of the logo graphic measured in pixels.
- **Fade In:** The number of video fields to transition the Logo from off to on.
- **Hold:** The number of video fields to maintain the Logo in the on position.
- **Fade Out:** The number of video fields to transition the Logo from on to off.
- **Transparency:** The maximum intensity percentage (or transparency) to Key the Logo at.
- **GPI:** GPI trigger allocated to the Logo (HD9525LG only).
- **Quick Select:** Front Panel quick select button allocated to the Logo.

Logo Preview: Graphical representation of the size and placement of the Logo with respect to the Video Screen.



(1080i Sample)



(720p Sample)

Buttons:

Preview Select: 

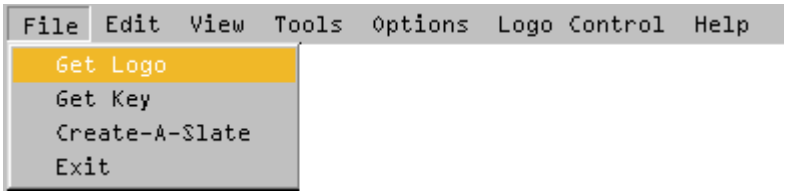
Opens the standard window file selection box and allows you to choose a previously saved EVL file. Once the file is loaded the "Send to Logo Inserter" button will be enabled.

Send to Logo Inserter: 

Initiates the download process that sends the EVL logo file to the Evertz Logo Inserter. The transfer speed is set by the "Speed" settings on the "Options" menu (see Options Menu).

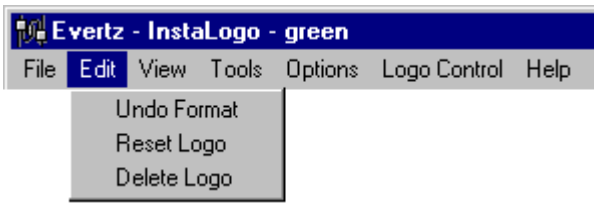
4.7 Menus

4.7.1 File Menu



Get Logo: Opens the standard windows file selection box and allows you to import a logo file created with a professional graphics program.
Get Key: Opens the standard windows file selection box and allows you to import a key file. A Logo file must be loaded first.
Create-A-Slate: New Feature for designing Logo based slates (see Create-A-Slate for more information).
Exit: Exits the InstaLogo™ software. Please save your Logo before exiting

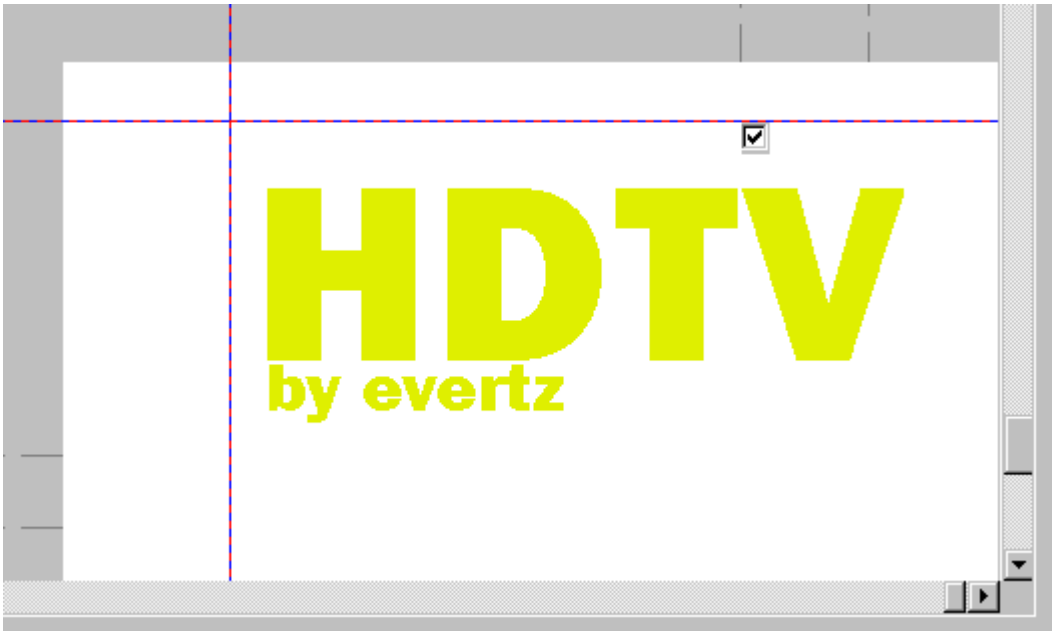
4.7.2 Edit Menu



Undo Format: Reverses the effect of a format function. Use this if you are not happy with the placement of your logo or you forget to include a section of the logo when formatting. The formatting of the logo will be reversed and the original logo will be restored to the screen.
Reset Logo: This function moves the active logo from wherever it is to the top left corner of the Logo Preview area and moves the scroll bars to view the top left corner as well.
Delete Logo: Deletes the Logo from the preview window. If a logo is loaded and a new logo is retrieved, the first logo is automatically deleted from the InstaLogo™ software program. Files are not deleted from the hard drive. To delete files from the hard drive use a file manipulation program such as Windows Explorer™.

4.7.3 View Menu

Unformatted and Selected:



This is an example of an imported graphic. This file has been placed, however the Logo is larger than the allowable limits and must be formatted to the proper size. To format a graphic you must first select the portion of the graphic that you want to use as your logo. You do this by clicking on the checkbox located at the top center of each grid. Please check mark all the sections that you want. You must also tell the software that the white color is the background and should be transparent when it gets converted to a logo. Right Click on a white portion of the Logo to open the Logo Control menu or select it from the drop down menus at the top of the screen. Select "Key Color" from the menu options and the Key Signal area will be updated to reflect your color selection. Click on the Format Logo button and InstaLogo™ will create your key and fill files as well as adjust the size of the graphic.

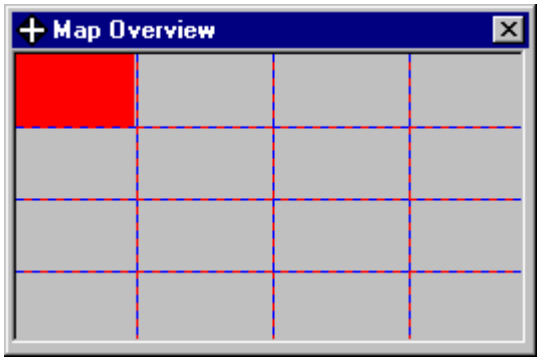
Note: Logo positioning can be adjusted from the front panel of the Inserter.

Key Only: Changes the display of the Logo Preview area to the Key data of the logo only. This will result in a grayscale image displayed on the screen. Illustrated as follows

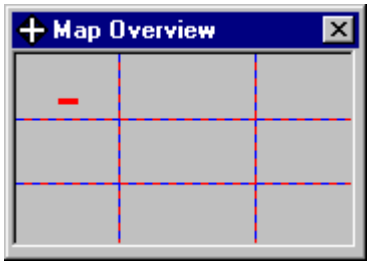
Fill Only: Changes the display of the Logo Preview area to the fill data of the logo only. This will result in a full color image as it was created in your professional graphics program (Differences between the original graphic and the newly created fill graphic will result if a key file was not supplied). Illustrated as follows.

Key Fill: Changes the display of the Logo Preview area to a mix of the fill and key data. This will result in a full color image displayed on the screen mixed with the black background. Illustrated as follows.

Map Overview: Displays a scaled overview of the HD active picture area. Also displayed on the map is your logo as well as the grid lines.

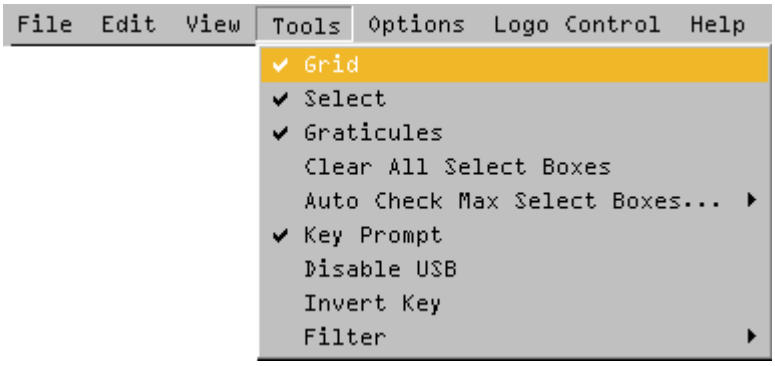


1080i



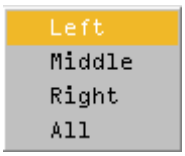
720p

4.7.4 Tools Menu

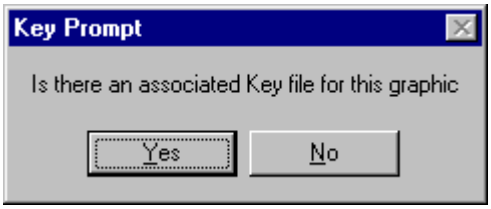


Note: A check mark beside a menu item means the item is active, on, or enabled.

Grid: Turns on or off the Grid squares in the logo preview area.
Select: Turns the selection boxes on or off in the logo preview area.
Graticules: Turns on or off the display of the graticules in the logo preview area.
Clear All Select Boxes: Turns off all select check boxes in the Preview Logo area.
Auto Check Max Select Boxes….: Allows you to quickly select logical areas of the Preview Logo screen for formatting into the logo for transfer the options are as follows:



	Video Standard			
	525	625	720p	1080i/p
Left-	Left most column	Left most column	Left most column	Left 2 columns
Middle-	Middle column	Middle column	Middle column	Middle 2 columns
Right-	Right most column	Right most column	Right most column	Right 2 columns
All-	All columns	All columns	Not Applicable	Not Applicable

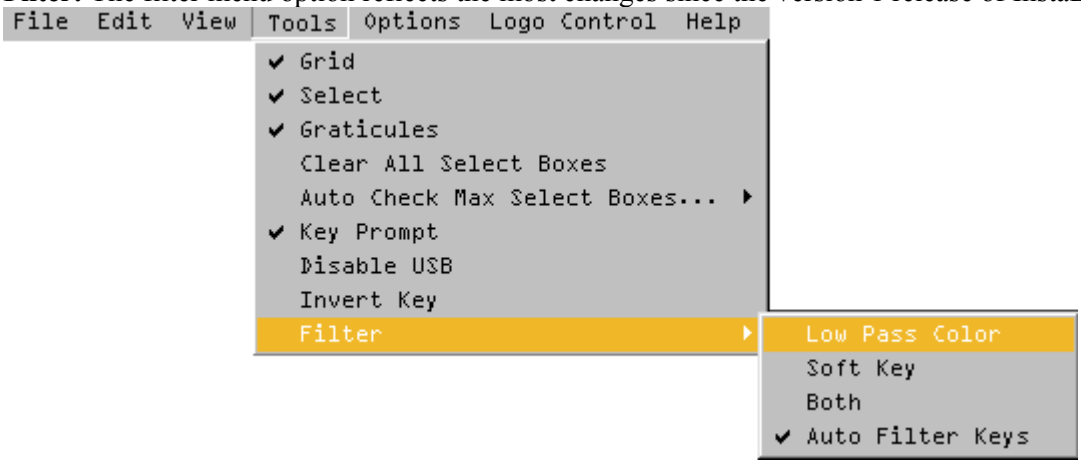
Key Prompt: 

Turns on or off the "Prompt for Key file" that occurs when a logo is retrieved from the hard drive.

Disable USB: This menu item will only be enabled (not grayed out) if the system is running Windows 98 and the PC is connected to the DSK unit via the USB cable provided. You must also have the most current firmware in the DSK unit as well as this version of InstaLogo. This menu item is a toggle button to enable or disable the USB transfer capabilities. It is not recommended that you change this setting.

Invert Key: Inverts the associated Key data. Use this function if the Key file supplied was created with the fill area black and the background white.

Filter: The filter menu option reflects the most changes since the version 1 release of InstaLogo.



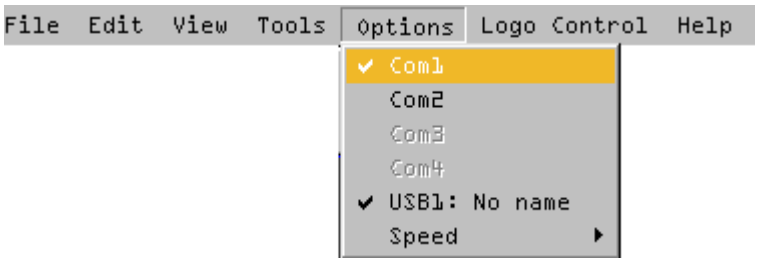
Low Pass Color: This multi-pass filter may be applied to any imported graphic file. The filter analyzes the color values for every pixel in the image and smoothes the color transitions from one pixel to the next. If you have a multi-color graphic file, you should apply this filter to ensure color transitions stay within the allowable limits. This filter may be applied as many times as you like, however the fine details in the graphic will diminish with each successive pass of the filter.

Soft Key: This one-pass filter smoothes the transition points from Background to Fill. If you have selected a Key Signal Color for your graphic and you want to create a transparent type Logo, you should apply this filter to the Key. InstaLogo will automatically apply this filter where appropriate as long as the Auto Filter Keys is enabled. If you supply a separate key file along with you Logo fill, you may still have to apply this filter. Refer to the Primer on Creation Quality Logos at the end of this manual.

Both: This option applies both the Low Pass Color filter and the Soft Key filter.

Auto Filter Keys: This toggle switch enables or disables the application of the soft key filter. If you disable the filter you will experience hard transition points from background to fill and the logo will appear to crawl around the edges. InstaLogo remembers the state of this button even if you close the program. It is recommended that you don't change this setting.

4.7.5 Options Menu



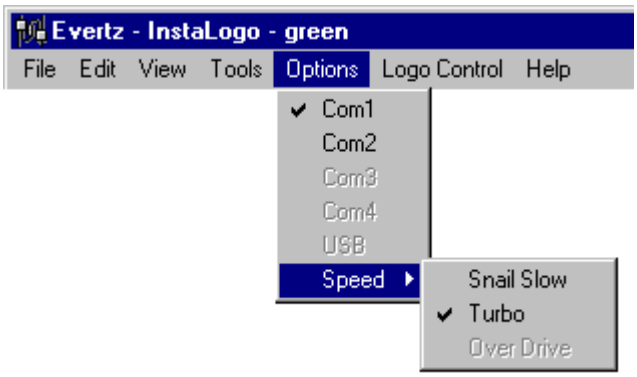
InstaLogo™ automatically detects the communications ports installed in the PC when the program starts (to a maximum of 4). If the menu for the port is "Grayed Out" it means that there is a device already using the port or the port is not installed in the PC. Please select the

appropriate port prior to downloading logos to the Logo Inserter. It is possible for a port to be tied up when InstaLogo™ starts and then be released after, however InstaLogo™ only checks the port status when the program starts, so you will be required to restart the software in order to make the newly freed port available.

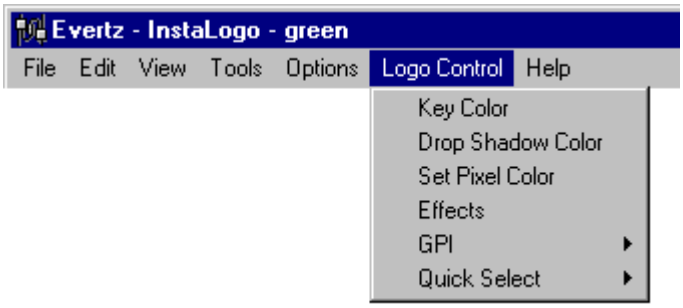
A standard 9 pin straight through serial (RS232) cable is required (see Rear Panel Hook Up).

Com1: (Default setting)
Com2:
Com3:
Com4:
USB: (Default setting if using Windows98 and current firmware)

Speed:



Snail Slow: Download speed of approximately 9600 bps
Turbo: Download speed of approximately 57,600 bps (Default setting)
Over Drive: Download speed of approximately 12 Mbps (Default USB)



The Logo Control Menu is used to control the aspects of the format function and effects related to the Logo display.

Note: after loading a Logo you can "Right Click" on the Logo to gain quick access to the Logo Control Menu.

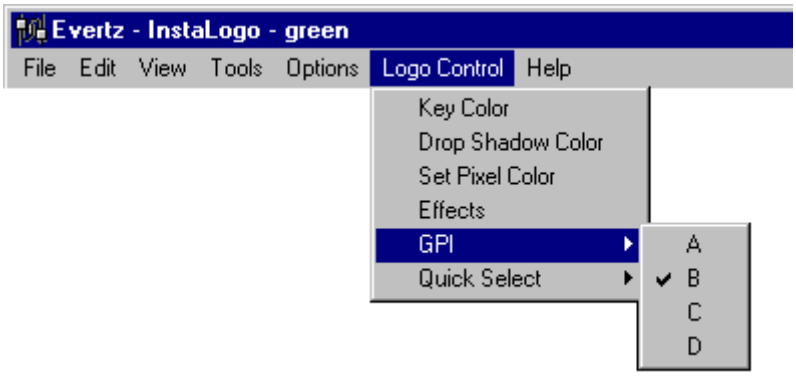
Key Color: Select Key Color to set the background color for the format function. The easiest way to do this is to point to the desired background color with the mouse and "Right Click" on the Logo, then select the Key Color option. Ensure that the Key Color only appears at places that you want full transparency with respect to the video. If your background color appears anywhere in the Logo Graphic it will also be considered as background and dropped out of the Logo. If you supply a Key file you do not have to select the Key Color.

Drop Shadow Color: Disabled in version 2.0.2 of InstaLogo. If you require a Drop Shadow effect with your Logo, please create a separate key file with your graphics package and import both the key and fill files separately. Refer to the Primer on creating quality logos at the end of this document for more information.

Set Pixel Color: Set Pixel Color is used to modify your imported Logo Graphic. If there is a pixel that is not the right color you may select a color using Key Color and then set the Target pixel to the Key Color using this option. This function is meant only for minor pixel fixes, and any major fixes should be done in your professional graphics program that you originally created the Logo file with. Temporarily disabled in version 2.0.2. For now fix the color problem in your graphics program and re-import the Logo file.

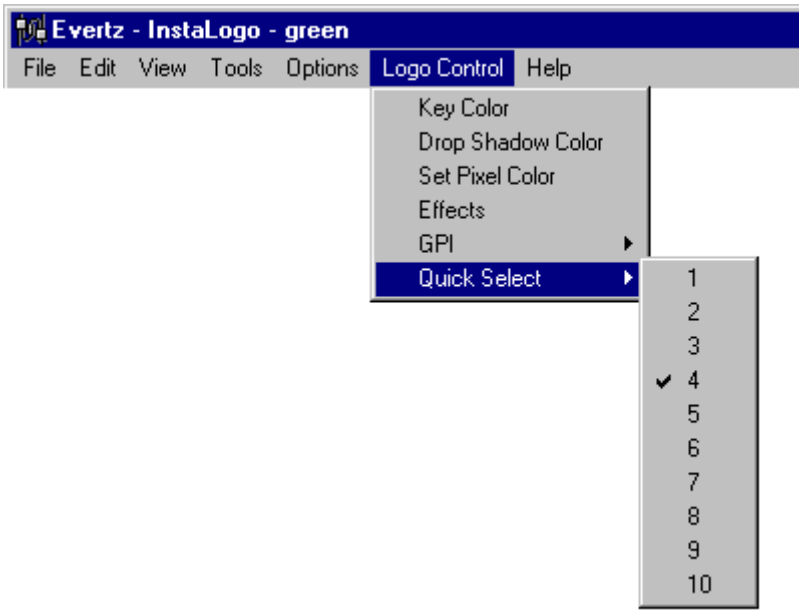
Effects: Selecting Effects allows you to control the display aspects of the Logo after the Logo is downloaded to the Logo Inserter. See (Miscellaneous Effects) for more information.

GPI:



This fly out menu allows you to select the GPI trigger (see Rear Panel Hook Up) for the Logo. If you download a Logo to the Inserter with a GPI that is already allocated to an existing Logo, the original GPI will be replaced by the newly downloaded Logo. The original Logo will remain in the Logo Inserter however it will not have a GPI assignment. Valid options are A, B, C, D. and None. The GPI can be reallocated from the front panel of the Logo Inserter. (Option only valid for HD9525LG) For GPI assignments for the DSK-LG please review the On-screen menu section of this document.

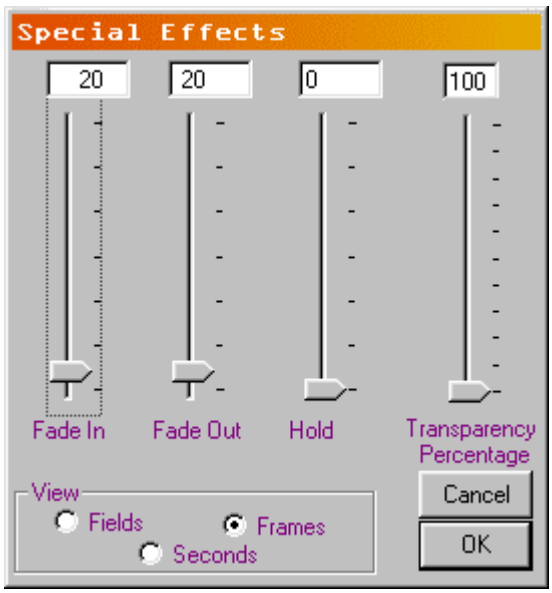
Quick Select:



This fly out menu allows you to associate a Logo with a Quick Select button (see Front Panel Controls) on the front panel of the Logo Inserter. Valid Options are 1 through 10. If a Logo is already assigned to the particular Quick Select button, the newly downloaded Logo will replace the originally defined Quick Select. The original Logo will still remain in the Logo Inserter however it will not have a Quick Select assignment. Quick Selects can be re-assigned from the front panel setup mode of the Logo Inserter. (Option only valid for the HD9525LG product or models equipped with Quick Select keys)

4.8 Miscellaneous

4.8.1 Effects



Fade In: This setting controls the length of time it takes for a Logo to display on the video screen. A setting of zero will make the Logo "pop" on the screen, and a longer setting will make the Logo fade in more slowly.

Fade Out: This setting controls the length of time it takes for a Logo to dissolve from the video screen. A setting of zero will make the Logo "pop" off the screen, and a longer setting will make the Logo appear to slowly fade away.

Hold: This setting controls the length of time the Logo is displayed on the video screen. A setting of zero will hold the Logo on until the Fade Out button is pushed or a GPI goes inactive.

Transparency: This setting controls the maximum Transparency level of the Logo Graphic. A setting of 100% means the Logo is fully keyed over the background video.

View: The view settings change the text display boxes at the top of the three Special Effects control bars. They apply to Fade In, Fade Out, and Hold. The valid settings are as follows.

Field: maximum of 600.
Frames: maximum of 300.
Seconds: maximum of 10.

Buttons:

OK: Accepts the Special Effects settings and closes the window.
Cancel: Discards all changes made and closes the Special Effects window.

4.8.2 Status Bar

The Status bar is located at the bottom of the application and is only visible when the application is maximized. The information displayed is intended for troubleshooting and user verification only.

The Status bar has three sections. The first section shows the Com port, Baud rate, and Settings for the communications port. These settings are changed during the download process depending on the speed settings selected from the Options dropdown. The status bar will not reflect these changes.

The second and third sections contain a visual reference as well as a textual description of the status of particular functions in the program. Please refer to the following table for a description of the status bar items.

Green: Status OK or process complete.
Yellow: Status processing.
Red: Status busy, do not interrupt.

Message	Color
"Data Converted"	Green
"File Transfer Enabled"	Green
"Formatting Logo"	Red
"Getting Key"	Red
"Getting Key Signal Data"	Yellow
"Getting Logo"	Red
"Getting Logo Pixel Data"	Yellow
"Interlacing Pixel Data"	Yellow
"Key Retrieved"	Green
"Logo Data Created"	Green
"Logo Data Pack Sent"	Yellow
"Logo Reformatted"	Green
"Logo Retrieved"	Green
"Logo Sent"	Green
"Selection Not Correct"	Yellow
"Writing Logo Data"	Red

4.8.3 Error Messages

MsgBox "Logo File " & Filename & " Transferred." The file was sent to the Logo Inserter Successfully.

MsgBox "Hardware Memory Error, Please delete older logo's before sending new one's. Error 01." There are too many files in the Logo Inserter to load another one. Please delete one before sending a new one (see delete in the index).

MsgBox "Error writing " & Filename & " to flash. Error 02." There was an error writing the Logo data to the Logo Inserter file system try sending the Logo again, if the problem persists please contact Evertz Customer Service.

MsgBox "Error Closing " & Filename & " Error 03." There was an error writing the Logo data to the File system of the Logo Inserter. Delete an older file and try sending the Logo again, if the problem persists please contact Evertz Customer Service.

MsgBox "Error in communications, Retransmission failed. Retry transfer at slower speed, or fade out Logos" The maximum retransmission level was exceeded. This could be due to a bad cable a corrupt Com port or a hardware problem with the Logo Inserter. Fade the Logos out to free up Inserter processor time or change the transmission speed to a slower level. See Speed in the Index for more information.

MsgBox "Problem with communications Protocol Reset detected." Communications between the Logo Inserter and the PC were interrupted. Try transferring the Logo again at a slower speed. If the problem persists Please contact Evertz Customer Service.

MsgBox "Unknown Device, Check Communications" InstaLogo™ can't understand the data from the device connected to the Comm port. Verify that the Logo Inserter is connected to the same port specified in the Options drop down menu. See Options in the Index for more information. Also verify that the cabling is correct.

MsgBox "Error establishing communications, Please check connections" InstaLogo™ can't understand the data from the device connected to the Comm port. Verify that the Logo Inserter is connected to the same port specified in the Options drop down menu. See Options in the Index for more information. Also verify that the cabling is correct, and that the Logo Inserter is powered on.

MsgBox "Not a Valid …, or File Corrupt" The file you attempted to open may have a valid file extension but does not contain valid data or the file data is corrupt. Obtain a new file and try again, or convert your data to one of the other supported file types.

MsgBox "Key File must be the same width as Fill File." Associated files must be of the same size and type. All key and fill files must be 24bit and have the same file sizes.

MsgBox "Key File must be the same height as Fill File." Associated files must be of the same size and type. All key and fill files must be 24bit and have the same file sizes.

MsgBox "Only Uncompressed … files are supported at this time, Please contact Evertz for an upgrade. " Some compression algorithms lose data. Please use uncompressed files only.

MsgBox "Import failed, error reading file" There was a problem reading the file. Please try again or obtain a new copy of the file.

MsgBox "Please select a section of the Logo to Format" You must select a section of the graphic before you attempt to format the graphic. Click on the check box(s) in the section(s) you wish to format.

MsgBox "Please Get a Logo to Format" You must load a Logo before you can format it. Please refer to the Primer on Creating Logos included with this document.

MsgBox "Improper selection, Selection must be 1 or 2 boxes wide only" Your current version of the Hardware supports keying of Logo that are 1024 pixels wide at most. This means you may only select 2 box widths in the 720p or 1080i modes.

MsgBox "Please Format Logo to ensure size compliance before Save Function." You must format your Logo prior to saving the Logo in the YCbCr format. Please refer to the Primer on Creating Logos included with this document.

MsgBox "Standard not supported" The current version of the software does not support the selected standard. Please select a different standard.

MsgBox "Current com port selection is not valid" The com port specified on the options menu is invalid. Please check your com port and restart InstaLogo™.

MsgBox "Key already loaded, Please get a new Logo" You may only associate one Key file with one Fill file. If you would like to associate a new key file, reload your original Fill file.

MsgBox "Port not functioning, please try another port" The select port is not responding, Please choose another port from the Options menu.

MsgBox "File Extension not Recognized" You have selected a file with an unrecognized file extension, Please see file formats in the Index for more information.

MsgBox "Only Evertz Logo Files may be transferred at this time. Please ensure the file has an .evl extension." Please ensure that the file extension of the saved Logo files is .EVL all other file extensions will be ignored.

If you receive any errors referring to “DIB” try using a PC with a PCI or AGP video card. Version 2.0.2 of InstaLogo uses Raster Operations for image manipulation. The ROP functions are included in the Windows API and will function on all versions of Windows, however these functions rely on the underlying hardware. If your video card is not capable of a given function it will attempt the function anyway or return a “DIB” error to InstaLogo. Please contact Evertz technical support if you have any further questions. Windows98 is required for creating Transparent Logos with InstaLogo.

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5. Logo Design Primer

5.1 Primer on Creating Logos

Thank you for choosing the Evertz Logo Inserter as a method of displaying logos and other graphical information in standard/high definition video. The Evertz Logo Inserter hardware does the keying and displaying of the logo, but it is you (or your art department) that is responsible for composing the artwork. Unfortunately, what the artist sees as they are composing the image is not necessarily what the final product will look like when it is keyed into and displayed on video. This chapter introduces the user to some basic principles associated with keying graphical information on video. It will also give some guidelines when preparing logos to get the best quality possible.

The Evertz InstaLogo™ software takes your artwork, will format it, and will send it to the Logo Inserter hardware. This paper will describe the images (and key images) that you are to deliver to the InstaLogo™ software. If you are already familiar with image drawing and preparation for use on video, please review the summary at the end of this chapter.

5.2 Introduction

To take an image and insert it into video two things are needed. One is the image or artwork to be displayed, which we will call the "fill", and the other is a funny looking black and white image that is used to tell the hardware where to display the image and where to display the background or video signal. This latter image is called a "key". Where the key is black, the video signal will be visible. Where it is white, the fill will be visible. Grey areas will display a "mixed" value that is partially the background video and partially the logo image depending on the brightness of the key's gray.

5.3 Types of Keys

The InstaLogo™ software can take an image and extract a key signal out of the image based on a color that you select as the background color. This is called "chroma keying" because the color that you select will be the used to create the key. The software takes an image and a color that you select and will create a key that is either black (in areas where the image matches your selected color) or white (otherwise). The resulting key is a black and white image with hard edges between the background/foreground. This is called a "hard key" because of the resulting hard edge between fill and background. The InstaLogo™ software will "soften" the edges so as to not violate any video bandwidth restrictions (more on this later).

This "self key" technique may work fine for simple, few color images, but if the background has subtle changes or it bleeds into the foreground image, the edge between the background and fill will be jagged and will not always follow the contour of the fill.

For better results the user can supply a key image that is created at the same time as the artwork with the keying effect in mind. Copying the fill image and converting the foreground area to a gray level that is proportional to the desired mix value creates a key. Softening (sloping) the edges of the key will in turn control the "hardness" of the background/fill transition. The key file must have the following characteristics:

1. It must be the same H and V size as the fill.
2. The image in the key file must have the same H and V location as the image in the fill file.
3. The file formats must be the same.
4. The key file must be black and white only. This means that Red, Green and Blue must have the same numbers, everywhere in the file.

5.4 Translucency and Drop Shadows

Many times it is desirable to have the whole logo or an area of the logo translucent. This means that both the fill and background are visible in a mixed proportion (i.e. 60% fill and 40% background). For instance, a drop shadow around an object consists of a background mixed with a color (usually dark gray). Don't worry about getting the overall transparency correct when you design the artwork. The overall transparency of the logo can be adjusted in three places: in the original key image, in the InstaLogo™ software and in the Evertz Logo Inserter hardware. You will, however, achieve the best results when the original key has the proper scaling, particularly when there are various regions of differing translucency.

If you are drawing separate key and fill, you can create translucent regions by placing gray over the desired areas. Remember that bright gray will include more fill than background and dark gray will include more background.

If your artwork does not have an associated key file, in the InstaLogo™ software, you can select a color to use as a match color (chroma key). All areas of the logo with this color will have a translucent/drop shadow effect. Of course it is up to the artist to ensure that the drop shadow color only exists in the areas where a translucent effect is desired. Otherwise you will get holes in the fill in areas that are not intended. If you want more than one degree of translucency in the same logo, you must use separate key and fill files. For these reasons, it is recommended to always use separate key and fill files.

5.5 File Formats

Modern graphics and images can come in a wide variety of file formats. What is the best for this application? First of all, images are only as good as their source. A highly compressed JPEG image, or a 4 bpp (4 bits or 16 colors per pixel) will not have the same quality as a full color (24 bpp) image. The most accurate (to the final representation when being displayed in video) format is a RGB image (as compared to CMYK or a lossy compressed format).

The InstaLogo™ can handle Tiff, TGA, and BMP files formats. All files must be saved with 24bit color values. These were picked to guide the user to use file formats that give the best results. Try to keep the original artwork in a format as close to these as possible.

5.6 Sharp Edges and Skinny Lines

The final product, when combined with the video, has certain limitations that are not present when the artwork was created with today's modern graphics software. Although sharp edges (or fast color changes) and small skinny lines can be created and displayed on a computer monitor, they may not look as good after being put on video and displayed on a regular TV monitor. The artifacts will be flickering on horizontal lines, banding on vertical edges or a combination on diagonal edges. This is due to limitations that exist in video that are different from the computer world (this is beyond the scope of this help file). For example, if you draw a simple image using Windows Paint™ the result will have illegal edges as described. If you use higher-end drawing

packages, they will have an option to turn on that will automatically smooth edges between the different areas of the drawing (this may be called "Anti-Aliasing" or "Feathering"). To make sure that the image has properly shaped edges, zoom way in on a sharp edge. Make sure that there are at least 2 pixels (horizontally and vertically) of transition between the two areas.

The above also puts a limit on the smallest size that an object can take. A small 1 pixel wide line can not be properly reproduced. Make sure that all lines are at least 2 pixels wide and that their edges are also shaped.

5.7 How Big Do I Draw the Logo

One of the first questions asked when designing a logo is "how big?" should it be and "how do I draw it so that it is the size that I intend it to be when loaded into the Logo Inserter hardware and displayed on a monitor". To figure this out, you need to know how big the total picture is and how big the logo is that you intend the insert. For example, high definition video picture area is about 1000 lines high and 2000 pixels wide. If you want to insert a logo that is 1/32 the size of the picture, then you should draw an image that is 1000/32=32 lines high and 2000/32=63 pixels wide. Configure your drawing package to give you a drawing area of this size before you start.

Warning: Drawing images bigger or smaller and then re-scaling will not give as good a result as drawing them at the proper 1:1 scaled size. The mathematical process of squeezing/expanding may create unacceptable results, particularly on edges.

The Logo Inserter hardware has minimum image memory sizes. If you stay within one memory block size, you will maximize the number of logos that you can hold in the hardware. The minimum size is 512 pixels wide by 270 pixels high for the 1080i version of the Logo Inserter.

5.8 How Do I Position the Logo

Try to position the logo as close to the actual insertion point as you can at the time that you import your artwork. You can use the InstaLogo™ software to roughly position the logo on the screen and once you download the logo into the hardware, you can fine-tune the position using the front panel controls.

5.9 Edges Between the Fill and Background

There are a couple of artifacts that can occur on the edge between a logo and the background that are not obvious at first but if you know about them you can draw the image knowing how to avoid them.

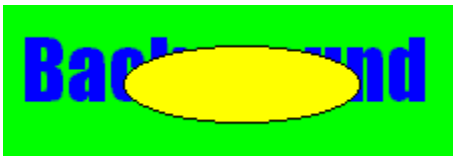
The best way to illustrate is with illustrations!

If we have a background like this:

a fill like this:

and a key like this:

we get the fill over the background with a black boarder outlining the fill like this:

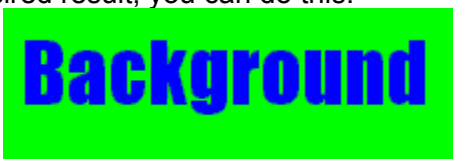


This happens because the fill image has a transition from the fill color to black and it overlaps the key that also has a transition (from the fill to the background). A small portion of the black around the fill shape sneaks through at the transition edge. This may or may not be a desirable effect.

A word of warning about using this technique to create a boarder; if the fill has a shaped but sharp edge and the key has a shaped but sharp edge, the resulting image will have an overly sharp edge and edge ringing artifacts as described earlier may occur! This is due to the fact that the key ends up shaping the already shaped edge creating an even faster edge.

If the above does not produce the desired result, you can do this:

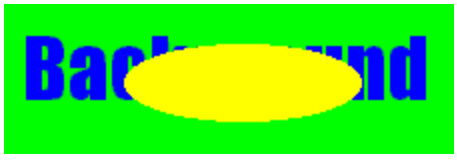
Take a background like this:



a key like this:

a fill that is bigger than the key, like this:

/e get the fill without the black boarder like this:



We can use this approach because the key ends up providing the proper edge shape to the fill.

If you are not providing a key file, it is hard to get rid of an edge effect. A technique for doing this is to surround the fill with a color that is just slightly different, but unique, from the image. Rather than having black, or some contrasting color peeking around the image, you will get a subtle color difference that will not be visible.

5.10 Summary: Primer for Creating Logos

Here is a summary of some of the guidelines presented here for preparing a logo file to install into the Evertz family of Logo Inserters:

1. Best results are achieved when you supply both the fill and the key as two separate files.
2. Make sure that the H/V sizes of both the fill and key files are the same.
3. Make sure that the position of both the fill and the key within the file, is the same.
4. Make sure that the key file only contains luminance values (i.e. R=G=B).
5. Please draw the logo on a background that is close to, but distinct from, the edge of the logo.
6. Draw logos 1:1 (i.e. do not resize after drawing).
7. Try to keep the logo under the size of one block of memory. This will save memory space in the Logo Inserter hardware (512 pixels wide by 270 pixels high).Anti-alias all edges within the logo. Try to not anti-alias the outer edges (where the keying will take place). This will create a logo without a black boarder.
8. Keep all lines thicker than 2 pixels wide, 2 lines high. The line will flicker and/or have funny edge artifacts if they are too thin.
9. Format the logo and key into a 24 bit per pixel RGB bitmap image.
10. We are field one dominant and start on a Y/C co-located sample. This means that the first pixel of the first line will be in the first field and the first pixel will be a Y,Cr,Cb co-located sample.

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6. Firmware Update Procedure

6.1 Requirements:

- PC with available communications port. The communication speed requirement is relatively high 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) or (DB25 female to DB9 male). At least five wires are required (shown in bold italic with an *); see chart below.

DB9 female	DB9 male	Description
1	1	
2*	***2****	***RX***
3*	***3****	***TX***
4	4	
5*	***5****	***Ground***
6	6	
7*	***7****	***RTS***
8*	***8****	***CTS***
9	9	

- Terminal program such as Hyper Terminal, Telix, Procomm etc.
- New firmware supplied by Evertz.

Note:
1. Firmware downloaded from the FTP section on the Evertz web page (www.evertz.com) it is stored in compressed form in a zip file. If the file extension is "*.exe" you must first run the self extracting zip file to extract the "*.bin" located within. If the file extension is "*.zip" you must use PKUNZIP or WINZIP to extract the "*.bin" located within.
2. There is a backup copy of the firmware for the HD9525LG on the InstaLogo installation CD-ROM in the "Firmware" directory; the file is called (#v#_###.bin).

6.2 Update Procedure:

6.2.1 Part I – Terminal program setup

1. Power-down the Evertz frame.

2. Connect the "straight-thru" serial cable from the PCs' RS-232 communications port to the RS-232 communications port on the back of the Evertz frame.

3. Start the terminal program.

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

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

5. Power-up the Evertz frame.

6.2.2 Part II – Invoke upload mode via the front panel

Note: If you cannot invoke the upload mode via the front panel outlined in Part II then follow the steps in Part III.

- Press the *SETUP* button once.
- Press the *down arrow* until the main display reads *General*.
- Press the *SELECT* button once.
- Press the *down arrow* until the main display reads *Update code*.
- Press the *SELECT* button once.
- The *main display* should now show the message **Select = Upgrade**.
- Press the *SELECT* button to confirm the *Upgrade* operation, press *Setup* to cancel.
- Skip to step 14.

6.2.3 Part III – Invoke upload mode via the terminal program

6. A banner with the boot code version information should appear in the terminal window.

For example:

```
EVERTZ 9000DP MONITOR 1.0 BETA Aug 20 1998 16:25:33
COPYRIGHT 1997, 1998 EVERTZ MICROSYSTEMS LTD.
9000DP COLD BOOT> |
```

7. The following is a list of possible reason for failed communications:

- Defective RS-232 “straight-thru” serial extension cable.
- Wrong communications port selected in the terminal program.
- Improper port settings in the terminal program. Refer to step 4 for settings.
- Evertz frame is off.

8. The cursor to the right of the word “**BOOT>**” should be spinning.

9. While the cursor is spinning press the <**CTRL**> and <**X**> keys, this should stop the cursor from spinning. If the Evertz frame continues to boot-up simply cycle the power on the Evertz frame and repeat this step.

10. Hit the <**ENTER**> key once.

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

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

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

    For example:

```
BOOT> upgrade
UPLOAD FLASH MAIN
ARE YOU SURE YOU WANT TO UPLOAD FLASH? [Y/N] Y

UPLOAD FILE FOR $08000 NOW, CONTROL-X TO CANCEL
```

6.2.4 Part IV – Uploading the new firmware

14. Upload the "***.bin**" file supplied using the **X-Modem** transfer protocol.

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

```
UPLOAD OKAY
BOOT>
```

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

- If you get the message "transfer cancelled by remote" you must restart the terminal program and load the bin file using the method outlined in *Part III – Invoke upload mode via the terminal program*.
- The supplied "***.bin**" file is corrupt.
- Wrong file specified to be uploaded.
- The PCs' RS-232 communications port can't handle a port speed of **57600**.
- Noise induced into the RS-232 "straight-thru" serial extension cable.
- To ensure proper communications use step 9 to break out of the boot up sequence and type the word ***help***. You should get back some text. This confirms that you are sending data, receiving data and are locked to 57600.

17. Power-down the Evertz frame.

18. Power-up the Evertz frame.

19. You can now close the terminal program and disconnect the RS-232 serial cable.

The update procedure is now completed.

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7. DCP or RCP Addendum

7.1 9525DSK-LG "Aux I/O" with Remote Control Panel Option

Pin #	Name	Description
1	GND	Chassis ground
2	TX- *	RS-422 pin (output from frame)
3	GPIE	General purpose input (No 4x1 option installed)
4	N.C.	
5	GPIC	General purpose input (No 4x1 option installed)
6	RX- *	RS-422 pin (input from panel)
7	TX+ *	RS-422 pin (output from frame)
8	GPIA	General purpose input
9	GPID	General purpose input (No 4x1 option installed)
10	GP+5V	+5V from general purpose interface board
11	RX+ *	RS-422 pin (input from panel)
12	GND	Chassis ground
13	N.C.	
14	GPIB	General purpose input
15	Vext	External voltage source for GPI's

You have been supplied with a 6-foot cable to connect your Remote Front Panel option to your DSK unit. The "Y" cables 15 pin male connector, plugs into the back of the main unit body. The 9-pin female marked with the "Remote RS422" plugs into the back of the Desktop or Rack-Mount remote. The remaining connector has all of the pins required for the GPI connections. To move the Remote Panel to another location you will need to create a straight through 9 pin male to female cable of the desired length. You may also use a straight through 15-pin male to female cable and insert it between the Main unit body and the "Y" cable provided. Please note that the remote cable should not exceed 1000 feet. The proceeding cable pin-out table shows you the proper pin connections for creating the cable. The DB-9 connector on the back of the Remote Panel is connected to the DB-15 "Aux I/O" port on the DSK. Also note that the "Aux I/O" port is used for the GPI triggers for the DSK presets. Refer to the GPI section of the manual for configuration information regarding the GPI inputs.

* Pins only used for Remote Panel Hookup and are not required for the GPI portion of the "Y" cable.

7.2 DB-15 Male to DB-9 Female Cable Definition

Pin #	DB-15 Male	DB-9 Female	Pin #
1	GND	GND	4,6,1,9
2	TX-	RX-	2
6	RX-	TX-	8
7	TX+	RX+	7
11	RX+	TX+	3

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