



INSTALLATION AND OPERATOR'S MANUAL



Model PS-2001

PresentationPRO – Audio and Video Seamless Switcher

Manual #26-0006901-00 / Revision E

RECORD OF CHANGES

REV #	DATE	ECO #	DESCRIPTION	Approved By
A	9/18/01	744	Release to Production	David Joyce
B	9/26/01	750	Miscellaneous changes	David Joyce
C	10/31/01	767	Miscellaneous changes	David Joyce
D	5/9/02	851	Logo limitations, Improved Quick Start Guide, Miscellaneous small changes	Andreas Yerocostas
E	6/20/02	817	Added handshaking, freeze image, freeze mode and TRM remote command.	David Joyce

Manual # 26-0006901-00

Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals.

A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Terms In This Manual

WARNING

Highlights an operating procedure, practice, condition, statement, etc., which, if not strictly observed, could result in injury to or death of personnel.

NOTE *Highlights an essential operating procedure, condition or statement.*

CAUTION



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

AVERTISSEMENT!



Le point d'exclamation dans un triangle équilatéral signale à alerter l'utilisateur qu'il y a des instructions d'opération et d'entretien très importantes dans la littérature qui accompagne l'appareil

VORSICHT



ein Ausrufungszeichen innerhalb eines gleichwinkligen Dreiecks dient dazu, den Benutzer auf wichtige Bedienungs- und Wartungsanweisungen in der Dem Great beiliegenden Literatur aufmerksam zu machen.

WARNING

The rear panel ON/OFF switch does not disconnect the unit from input AC power. To facilitate disconnection of AC power, the power cord must be connected to an accessible outlet near the unit. Building Branch Circuit Protection: For 115 V use 20 A, for 230 V use 8 A.

WARNING

When the PresentationPRO is used in the 230-volt mode, a UL listed line cord rated for 250 volts at 15 amps must be used and must conform to IEC-227 and IEC-245 standards. This cord will be fitted with a tandem prong-type plug.

Terms As Marked on Equipment

CAUTION

Highlights an operating procedure, practice, condition, statement, etc., which, if not strictly observed, could result in injury to or death of personnel.

CAUTION



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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NOTE *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 the users own expense.*

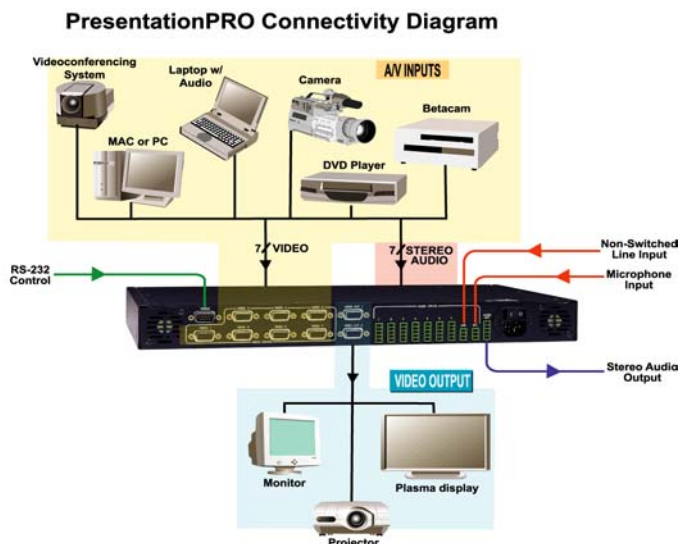


Illustration of Typical PresentationPRO™ Setup

Step 1: Connect PresentationPRO™ to Output Devices

Connect Video Out 1 video output to your projector and the audio output to a set of amplified speakers. Note that the second video output (Video Out 2) may be connected to a local display monitor if the projection screen is not easily viewed by the operator.

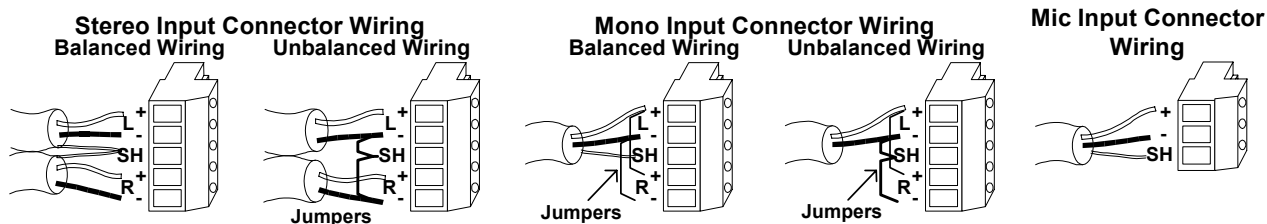
Step 2: Connect Input Sources to PresentationPRO™

PresentationPRO™ has seven universal video inputs that accept composite (NTSC & PAL), S-video, component, and computer video sources. Connect each type of video input source to PresentationPRO™ as indicated in the following table:

Input Connections

Format – RGB (Typical Devices: Computers)		Format – YUV or Y Pr Pb (Betacam) (Typical Devices: DVD Player or Betacam Deck)	
Source to PresentationPRO™		Source to PresentationPRO™	
R	HD15-Pin 1	Y	HD15-Pin 2
G	HD15-Pin 2	Pr	HD15-Pin 1
B	HD15-Pin 3	Pb	HD15-Pin 3
H	HD15-Pin 13	or	
V	HD15-Pin 14	Y	HD15-Pin 2
Format – S-Video (Y/C) (Typical Devices: S-Video VCR)		U	HD15-Pin 1
Source to PresentationPRO™		V	HD15-Pin 3
Format – Composite/PAL (Typical Devices: NTSC/PAL VCR)		Source to PresentationPRO™	
Y	HD15-Pin 2	NTSC/PAL	HD15-Pin 2
C	HD15-Pin 3		

PresentationPRO™ has eight audio inputs that accept balanced and unbalanced signals for audio Sources 1 through 7 and a single Line input. A ninth input accepts several types of microphones. Connect each type of audio input source to PresentationPRO™ as indicated in the following diagram:



Step 3: Connect Audio Outputs

Connect the Audio Out signals to an appropriate audio amplifier.

Step 4: Power Up

Connect PresentationPRO to 115 VAC power using the power cord supplied with the unit. Locate the power switch on the power entry module at the rear of the unit and turn the power on. While the main board is initializing, "please wait" will be displayed and the front panel keys will be turned on and off. When initialization is complete, the front panel display will indicate that the unit has powered up successfully. The Set Up Menu is displayed when the initialization process is complete.

Step 5: Select Desired Output Format

An arrow ">" will be displayed next to "Input A/V Setup." Scroll down using the ADJUST control to "Output Video Setup." Press the SEL key. An arrow ">" will be displayed next to "Format." Press the SEL key. Rotating the ADJUST control will scroll through the available output resolutions. Stop on the desired output resolution and press SEL. The output is now set to the desired output format. Other selections in the output Set Up Menu are Frame Rate, Sync Type, Test Patterns, and Raster Box. All Of the functions needed to ensure proper output display device compatibility.

Press the ESC key to leave the Output Setup menu.

Step 6: Projector Adjustments

Proper projector setup is critical to optimize the quality of the output image. Once PresentationPRO's output is set to match the native resolution or "sweet spot" of the projector, the scaling engine in the projector should be disabled.

The methods to disable the internal Scaler within the projector vary from manufacturer to manufacturer. Please consult the operator's manual for your equipment. PresentationPRO's Output Setup menu allows the user to select test patterns that are used during projector adjustment.

Step 7: Configure Input Sources

PresentationPRO will automatically lock to video applied to the seven universal inputs and will make a "best guess" at the video format (RGB, YUV, S-Video, NTSC) and all associated video parameters. While the "best guess" approach generally leads to an acceptable output image, it is **strongly recommended** that the user set up a configuration file to precisely define the video parameters associated with each input before conducting a presentation. The use of configuration files provides consistent, repeatable operation and allows the user to adjust video parameters for each source to optimize image quality. Each time a source is selected with the Source Selection keys, the configuration file associated with that source is automatically reloaded.

Setting up input configuration files is simple. Proceed as follows for each input.

1. Select the source you wish to work with.
2. Enter the INPUT SETUP menu. Examine the image on the projector or other display device and adjust the input parameters as desired. The Input Setup menu is described in detail on page 16 of this manual. Many of the parameters may require no adjustment, however, be sure that the INPUT TYPE menu item is selected to match the incoming source.
3. When the input setup parameters have been set as desired, press Save. The setup information is automatically assigned to the source used for the input setup process. The input configuration file will automatically be recalled for use each time the source is selected.

NOTE: Whenever a modification is made to a configuration, you must resave the changes following the procedure above.

This is a quick reference guide. For detailed information on the PresentationPRO™, please refer to the Installation and Operating Manual supplied with your unit.

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CHAPTER ONE

Introduction

What you will find in this chapter...

- ❑ *About the PresentationPRO*
- ❑ *Features*
- ❑ *Technical Description*

PresentationPRO™
Audio and Video Seamless Switcher

Introduction

About the PresentationPRO

PresentationPRO is a compact, reliable system that simplifies the task of supporting professional-quality video presentations. The unit combines a seven input A/V router, a high performance video scaler, an audio processor, and a full-featured control panel in a single integrated package. Seven universal A/V inputs accept composite video, s-video, component, computer and video sources with HDTV timing, as well as stereo audio signals. The unit also accepts two non-switched audio sources (LINE and MIC) that can be mixed with the audio from the selected input channel. The input video is converted directly to the native resolution or “sweet spot” of the projection device to optimize image quality. PresentationPRO supports seamless transitions including cut, fade, dissolve, and wipe effects when sources are switched. The operator can also capture and store a high-resolution image (typically a logo) for quick recall.

PresentationPRO is designed to support professional quality presentations for a wide variety of applications including corporate boardrooms/training facilities, courtrooms, churches, and educational institutions. The user interface has been designed to be simple to use. To select an A/V source, the operator simply presses the desired Source Select key on the front panel. PresentationPRO automatically locks to the new source and scales the input video to match the projector's native resolution. Image size, position, contrast, brightness, color balance, and audio level are automatically restored from a setup file. The selected source is seamlessly transitioned to the output with the user-selected transition effect.

Attention to the Installation and Operation Sections of this manual is important to ensure trouble-free operation. Should you have any questions regarding the operation of this unit, please consult the factory.

Features

The PresentationPRO provides the following features:

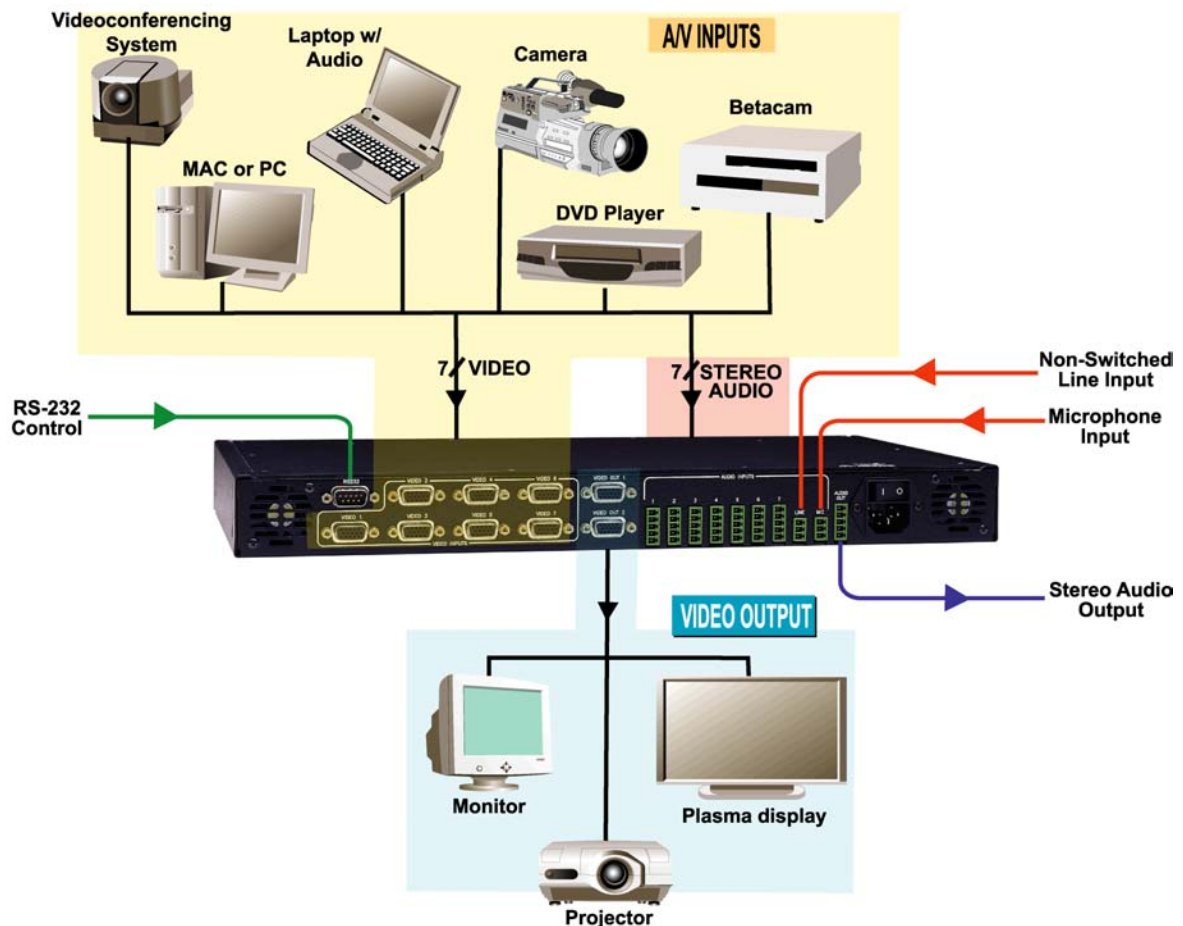
- Seven universal input channels accept composite (NTSC/PAL), s-video, component, and computer video sources (640x480 VGA to 1600x1200 UXGA). Videos with progressive 480p and 720p HDTV timing are also supported
- True auto-sync operation; the unit automatically locks to the selected source
- Seven stereo audio inputs (one for each input channel) accept Consumer or Professional audio levels
- High-performance A/V router and scaler provide superior image quality
- Input video is scaled to match the native resolution or “sweet spot” of the projector
- User-programmable output formats: VGA (640x480), SVGA (800x600), XGA (1024x768), SXGA (1280x1024)
- Seamless transitions; cut, fade, dissolve, and wipe effects with programmable duration
- Two non-switched audio inputs (MIC and LINE) can be mixed with the audio from the selected input channel
- Intuitive user interface simplifies set-up
- RS-232 serial port supports remote control operation
- Motion adaptive de-interlacing
- Logo image capture and recall feature
- Pre-programmed test patterns for projector calibration
- Two independently buffered video outputs
- One professional quality stereo audio output

Technical Description

PresentationPRO is a compact, reliable system that simplifies the task of supporting professional-quality video presentations. The unit combines a seven input A/V router, a high performance video scaler, an audio processor, and a full-featured control panel in a single integrated package. Seven universal A/V inputs accept composite video, s-video, component, computer and video sources with HDTV timing, as well as stereo audio signals. The unit also accepts two non-switched audio sources (LINE and MIC) that can be mixed with the audio from the selected input channel. The input video is converted directly to the native resolution or "sweet spot" of the projection device to optimize image quality. PresentationPRO supports seamless transitions including cut, fade, dissolve and wipe effects when sources are switched. The operator can also capture and store a high-resolution image (typically a Logo) for quick recall.

A functional connectivity diagram of the unit is provided below.

PresentationPRO Connectivity Diagram



CHAPTER TWO

INSTALLATION

What you will find in this chapter...

- ❑ *Rear Panel Connectors*
- ❑ *Rack-Mount Installation*
- ❑ *Power Cord/Line Voltage Selection*
- ❑ *Video Input, Audio Input & Output Connections*

PresentationPRO™
Audio and Video Seamless Switcher

Installation

Rear Panel Connectors

NOTE: Front Panel features are shown on page 14

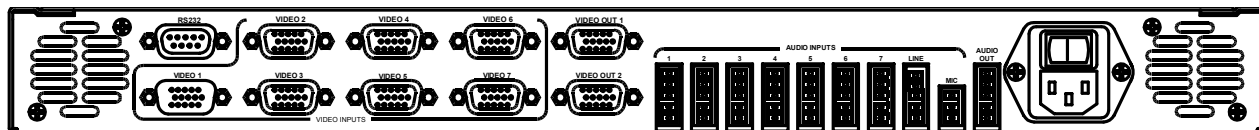


Figure 2-1: PresentationPRO Rear Panel

- AC Power connector
- Video Input connectors
- Audio Inputs
- Video Output HD-15 connectors
- RS-232 HD-15 Connector

Rack-Mount Installation

PresentationPRO units are designed to be rack mounted and are supplied with front rack-mount hardware. Rear rack-mount brackets are available as a kit and are recommended for use when units are mounted in transit cases. When rack mounting the unit, remember that the maximum ambient operating temperature for the unit is 40 degrees C. Leave at least one inch of space front and rear to make sure that the airflow through the fan and vent holes is not restricted. When installing equipment into a rack, distribute the units evenly to prevent hazardous conditions that may be created by uneven weight distribution. Connect the unit only to a properly rated supply circuit. Reliable grounding (earthing) of rack-mounted equipment should be maintained.

Power Cord/Line Voltage Selection

PresentationPRO is rated to operate with the following supplies:

Input Power: 115-230 VAC, 47-63 Hz

Power Consumption : 125 watts maximum

The PresentationPRO High Resolution Seamless Switcher performs line voltage selection automatically. No user controls are required for line voltage selection.



When the PresentationPRO is used with 230-volt supplies, a UL listed line cord rated for 250 volts at 15 amps must be used. This cord will be fitted with a tandem prong-type plug.

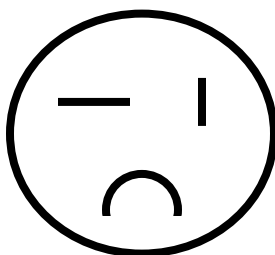


Figure 5-2: Tandem Plug



La choix de la ligne de voltage se realize automatiquement par l'PresentationPRO Transformateur Graphique On n'apas besoin du controller usager pour la choix de la ligne de voltage.

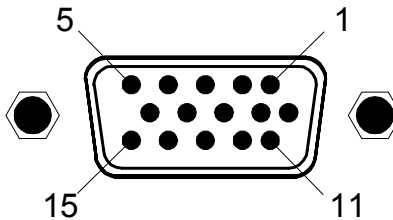


Das PresentationPRO-Gerät mu beim Anschlu an 240V ~ mit einer vom VDE auf 250V/10A geprüften Netzleitung mit einem Schukostecker ausgestattet sein.

Video Input Connections

The video input section on the PresentationPRO rear panel provides seven universal inputs. Each input accepts RGB, YUV, S-Video (Y/C), or composite (NTSC or PAL) video signals. The connections for each input channel are made via HD-15 connectors. No adapter cables are required to connect standard computer sources. Adapter cables are available from the factory to facilitate connection to sources that utilize BNC or S-Video connectors. Connection pins for each type of video signal are specified below.

	RGB Computer	Color Difference DVD player, Camera, Betacam Deck	S-Video (Y/C) VCR	Composite Video (NTSC or PAL) VCR, Camera
Pin 1	RED	U or Pr or Cr		
Pin 2	GREEN	Y (luminance)	Luminance (Y)	NTSC/PAL video
Pin 3	BLUE	V or Pb or Cb	Chrominance (C)	
Pin 4				
Pin 5				
Pin 6	RED return	U or Pr or Cr return	Luminance (Y) return	
Pin 7	GREEN return	Y return	Chrominance (C) return	NTSC/PAL return
Pin 8				
Pin 9	BLUE return	V or Pb or Cb return		
Pin 10				
Pin 11	GND	GND	GND	GND
Pin 12				
Pin 13	Hsync or Csync			
Pin 14	Vsync			
Pin 15				



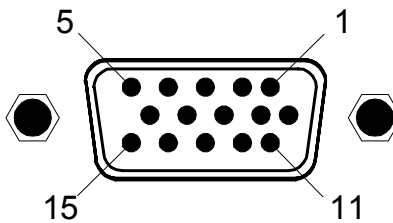
HD-15 Input Connector Pinout
(as viewed from rear of unit)

Video Output Connections

Two independently buffered RGB outputs are provided. The video on the two output connectors is identical and the signals are designed to connect to projectors and monitors with standard HD-15 cables. One output should be connected to the projection system. The other output may be used for remote monitoring or down-converted to allow the presentation to be recorded. Note that the type of output sync can be selected to match application requirements. Separate C (Composite) or separate H/V (Horizontal/Vertical) sync modes are supported (refer to page 23).

Connection pins on the output connectors are specified below.

	RGB Output
Pin 1	RED
Pin 2	GREEN
Pin 3	BLUE
Pin 4	
Pin 5	
Pin 6	RED return
Pin 7	GREEN return
Pin 8	BLUE return
Pin 9	
Pin 10	GND
Pin 11	
Pin 12	
Pin 13	Hsync or Csync
Pin 14	Vsync
Pin 15	



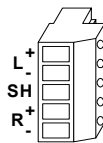
HD-15 Input Connector Pinout
(as viewed from rear of unit)

Audio Input Connections

A/V Inputs

Each video input has an associated stereo audio input. Mating connectors are provided with the unit to facilitate connection of the audio inputs. The mating connector is FRI P/N 14-9000050-00. The pinout of the connectors is illustrated in the figure below.

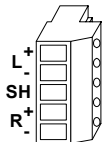
+ Left
- Left
GND
+ Right
- Right



LINE Input

The LINE Input is a non-switched input that may be mixed with microphone audio as well as audio from the selected A/V source. The LINE Input can accept a mono or stereo input signal. When a stereo source is input, the right and left channels are mixed to provide a mono output signal. Mating connectors are provided with the unit to facilitate connection of the LINE Input. The mating connector is FRI P/N P/N 14-9000050-00. The pinout of the connectors is illustrated in the figure below.

+ Left
- Left
GND
+ Right
- Right



MIC Input

The MIC Input is a non-switched input designed to accept input from a microphone. The MIC Input may be mixed with audio from the selected A/V source as well as the Line Input. Mating connectors are provided with the unit to facilitate connection of the MIC Input. The mating connector is FRI P/N 14-9000051-00. The pinout of the connector is illustrated in the figure below.

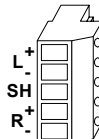
+
-
GND



Audio Output Connections

One stereo audio output is provided. Mating connectors are provided with the unit to facilitate connection of output devices. The mating connector is FRI P/N P/N 14-9000050-00. The pinout of the connectors is illustrated in the figure below.

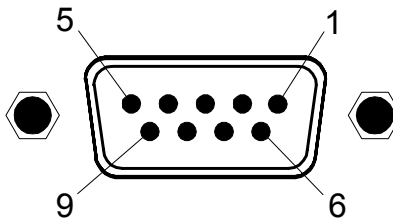
+ Left
- Left
GND
+ Right
- Right



Serial Port Connections (Optional)

Connection pins on the RS-232 connector are specified below.

	RS-232
Pin 1	DCD
Pin 2	RxD
Pin 3	TxD
Pin 4	DTR
Pin 5	Sig Gnd
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	--



DB-9 Input Connector Pinout
(as viewed from rear of unit)

Connection to AC Power

Connect PresentationPRO to 115 VAC power using the power cord supplied with the unit. Locate the power switch on the power entry module at the rear of the unit and turn the power on. While the main board is initializing, "please wait" will be displayed and the front panel keys will be turned on and off. When initialization is complete, the front panel display will indicate that the unit has powered up successfully.

CHAPTER THREE

Operation

What you will find in this chapter...

- ❑ *Front Panel Controls*
- ❑ *Source selection, Logo, and Audio Control Keys*
- ❑ *Menu Control and Operation*
- ❑ *RBG, S-Video, Composite, Beta, MII, and EBU Color Balance, and Processing Submenus*
- ❑ *Input Audio/Video Setup Menu*
- ❑ *Output Video Setup Menu*
- ❑ *Mic and Line Setup*
- ❑ *Logo Menu*
- ❑ *Effects Menu*
- ❑ *Miscellaneous Menu*

Presentation PRO™
Audio and Video Seamless Switcher

Operation

Front Panel Controls

NOTE: Rear Panel features are shown on page 6

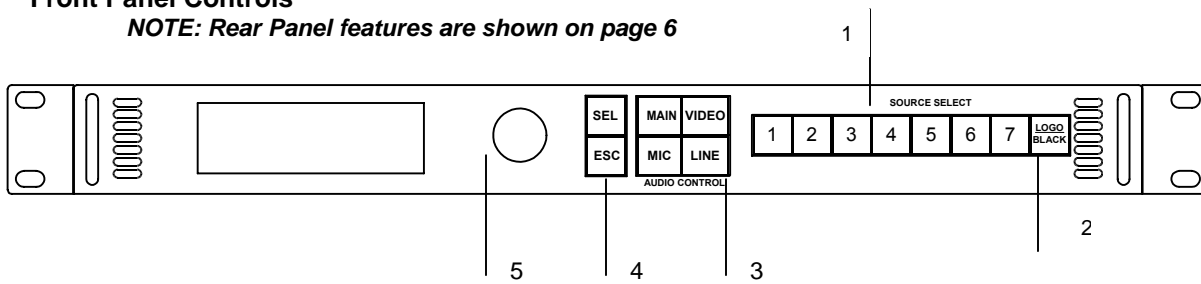
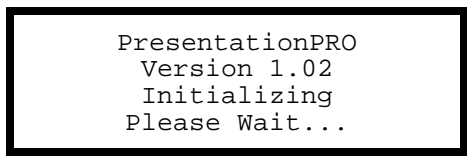


Figure 3-1 PresentationPRO Front Panel

- 1 Main Source Select Keys
- 2 Logo Storage Key
- 3 Audio Control Keys
- 4 Select and Escape Keys
- 5 Menu Adjust/Control

Power Up Initialization

Locate the power switch on the rear panel and turn PresentationPRO ON. While PresentationPRO is initializing, the following menu will be displayed:



The second line of the menu displays the version of software that is currently being executed. The software version number will change as software upgrades are released. The most current software version is available for download from the Folsom Research web site at <http://ftp.folsom.com/>.

If a logo image is stored in non-volatile memory, the image is retrieved and a progress bar is shown with the message "Retrieving Image". When a logo image has not been captured in non-volatile memory, black is used for the logo.

The Audio Status Menu (at the bottom of this page) is displayed when the initialization process is complete.

Source Selection Keys

The SOURCE SELECTION keys labeled 1-7 are used to select one of the seven different A/V input sources for output to the projection system. The key associated with the currently selected source is illuminated. The default power-up condition is to select source 1.

LOGO/BLACK Key

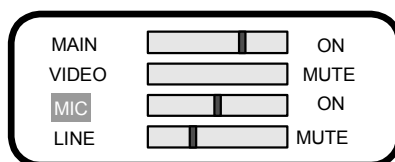
The LOGO/BLACK key allows the user to capture and display a stored image (typically a company logo). To capture an image, the operator presses and holds the Source Select key to select the desired A/V source and then simultaneously presses the LOGO/BLACK key down for two seconds. PresentationPRO captures a frame from the selected A/V source and stores the image in non-volatile memory for future use. A progress bar is shown with the message "Saving Image".

A logo is captured from the video output of the PresentationPRO, which is adjustable from 640x480 to 1365x1024. Because of memory and compression limitations, the maximum resolution for which an entire screen may be captured is 1024x768 pixels. Two output resolutions (1280x1024 and 1365x1024) are above the full-screen capture threshold. A logo captured at either of these resolutions will have the top and bottom of its image cropped. When retrieved, the resulting image will be centered on the screen with black bands above and below the image.

Once an image has been stored, the operator can use the LOGO/BLACK key to recall the stored image. When the LOGO/BLACK key is pressed, a transition will occur to bring up the stored image in a manner similar to the way A/V sources are selected. If an image has not been stored, the default image is a black frame. In this case, pressing the LOGO/BLACK key will select a black screen.

Audio Control Keys

The audio control keys are grouped at the center of the front panel. Three keys provide control for audio level associated with MIC, LINE or A/V sources and the fourth key serves as a MAIN volume control. When one of the audio control keys is pressed, the Audio Status Menu appears on the display.



The first column of the menu identifies the audio controls and the second column is a graphical “slider” with a marker. The position of the marker represents the volume level of each control. The third column of the menu is a status indicator that may assume three states: ON, OFF, or MUTE.

When an audio control key is pressed, the corresponding line on the display becomes active and the corresponding text is highlighted. The user turns the adjustment knob to perform volume adjustments and the marker on the graphics display moves accordingly. When the audio menu is displayed, the SEL key controls MUTE functions. To mute the selected source the user presses the SEL button. To enable the audio again, the user presses the SEL button again.

As part of the initial setup of the unit, the user must sequentially enable all of the available audio sources and adjust the volume to the desired level. If, during setup, the user declares that a video source does not have an associated audio input, the status column indicates “OFF”.

Menu Control

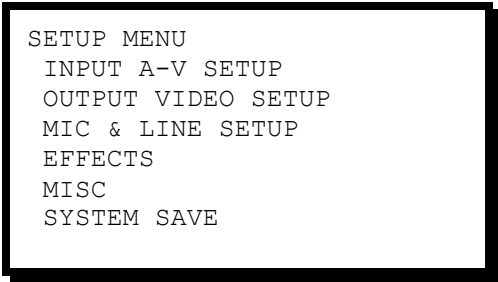
The user utilizes the adjustment knob as well as the SEL and ESC keys to navigate through the menus on the high-resolution graphics display. The menus are used to enter setup parameters. Once setup parameters are entered, they are stored in non-volatile memory for future use.

The user accesses the Setup Menu by pressing the ESC key. The user can scroll through the menu items by turning the ADJUST control. A pointer at the left of the menu indicates the current position of the scroll bar. When the desired menu item is reached, the user presses the SEL key to select that menu item. The pointer at the left hand side of the display changes to a pound sign (#) indicating that a parameter is selected. After a parameter has been selected, the user can modify the associated parameter values by turning the ADJUST control. The operator can save the changes or press ESC to exit the current menu without modifying currently saved settings.

For detailed description of the Setup Menus, please refer to page 16.

Menu Operation

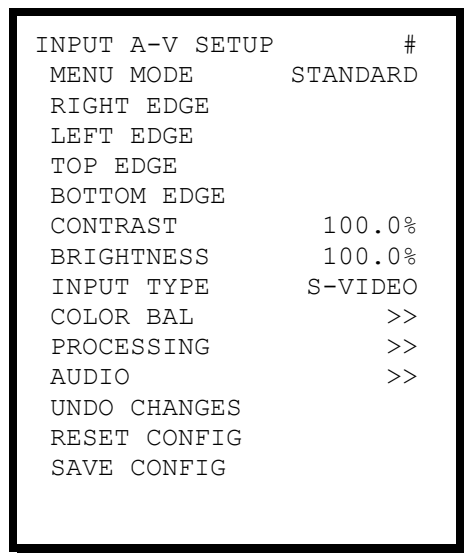
The PresentationPRO has two primary menus. The Audio Menu is displayed during normal operation to support real-time control of audio levels as described on page 15. The other primary menu is the Setup Menu. The Setup Menu is used to perform initial setup to configure the unit to accept the desired A/V sources. Setup information is stored in non-volatile memory within the PresentationPRO and is automatically recalled each time the unit is turned on.



```
SETUP MENU
INPUT A-V SETUP
OUTPUT VIDEO SETUP
MIC & LINE SETUP
EFFECTS
MISC
SYSTEM SAVE
```

Input A/V Setup Menu (Standard Mode)

Although PresentationPRO will automatically lock to all types of video inputs, the Input A/V Setup menu allows the operator to fine-tune video parameters to control the size and position of the image as well as to adjust contrast, brightness, color balance, and processing modes. The Input Setup A/V Menu (shown in Standard Mode) is illustrated below.



There are two menu modes, Standard and Advanced. The Standard menus are sufficient for most users. The Advanced menus provide controls for 1:1 pixel sampling features to optimize image quality for critical applications.

Save Configuration

The Save Configuration menu item saves the setup parameters as a configuration file that is automatically assigned to the source used for the input setup process. The configuration file is automatically recalled each time the source is selected.

NOTE: Whenever a modification is made to a configuration, you must save the changes following the procedure above.

Menu Mode

There are two menu modes, Standard and Advanced. The Standard menus are sufficient for most users. The Advanced menus provide control for 1:1 pixel sampling features to optimize image quality for critical applications. The Advanced Menus are described on page 21.

Image Size and Position Adjustments

The Right Edge, Left Edge, Top Edge, and Bottom Edge parameters allow the operator to adjust the size and position of the output image. To perform adjustments, scroll to the appropriate menu item with the ADJUST control, select the menu item with the SEL key, and then turn the ADJUST control to adjust the position of the selected edge of the image while viewing the output screen. The menu will show '+' or '-' depending on which direction the ADJUST control is being turned.

Contrast/Brightness

The Contrast and Brightness controls allow the operator to adjust the overall contrast and brightness of the image. To perform adjustments, scroll to the appropriate menu item with the adjustment knob, select the menu item with the SEL key and then turn the adjustment knob to perform adjustments while viewing the output screen. The adjustment range is 75.0% to 125.0%.

Input Type

The Input Type menu item allows the operator to select settings optimized for a specific type of input video. Selection options are S-video, Composite (NTSC), EBU, MII, Beta 50, Beta 60, and RGB. PresentationPRO will attempt to determine the type of input video on the selected input channel and will initially choose the format. The Input Type menu allows the operator to override the selections in the event that an error is made (it is sometimes difficult to automatically distinguish between different video types as input image content is unknown). To perform adjustments,

scroll to the Input Type menu, select the menu item with the SEL key and then turn the ADJUST control to select the desired format while viewing the output screen.

Color Balance

The Color Balance menu line calls up a submenu where color balance adjustments are performed. Scroll to the Color Balance menu line and press the SEL key to display the Color Balance Submenu. The Color Balance menu corresponding to the current contents of the Input Type field (directly above this menu field) will be displayed. The Color Balance Submenus are described on page 19

Processing

The Processing menu item calls up a submenu to control input sync selection, DC restoration, de-interlacer, 3:2 Sequence Detect, Video Bandwidth and Peaking functions. Scroll to the Processing menu line and press the SEL key to display the Processing submenu. The Processing submenu is described on page 20.

Audio Setup

The Audio menu line calls up a submenu to control the input audio for the currently selected source. The menu allows the user to select between Professional and Consumer input levels, to adjust the input trim gain (0 - 51dB) or disable the audio path if no audio is present.

AUDIO		#
INPUT TYPE	CONSUMER	
TRIM ADJUST		26
AUDIO PRESENT		YES

Undo Changes

The Undo Changes menu item allows the user to undo all changes made since the last configuration saved to non-volatile memory for the selected source. Scroll to the Undo Changes menu line and press the SEL key to restore to the last saved configuration for the source and return to the Main menu.

Set Up Access

The Set up Access Menu allows a user either simple access to the set up menus or a more advanced two-button access. When the two-button is selected, access to the Set Up Menus will only be granted when Select and Escape are pressed together and held down for 2 seconds.

Reset Configuration

The Reset Configuration menu item forces the PresentationPRO to ignore Input Setup configuration information previously entered by the user, to perform an analysis of the input video and to derive and enter new input video default values. To activate this function scroll to the Reset Configurations menu line and press the SEL key.

NOTE: The saved configuration in non-volatile memory of a source that has been reset remains unchanged until a save changes is done.

Color Balance Submenus

There are 3 different types of Color Balance submenus as described below. Each submenu corresponds to a specific type of input video as selected in the Input Type field of the Input Setup menu.

RGB Color Balance Submenu

This menu allows the operator to balance the colors on an RGB input source. Independent Contrast and Brightness adjustments are provided for each color channel. Parameters entered by the operator are saved as part of the input configuration file for the corresponding video input channel.

```
COLOR BALANCE RGB
R  CONTRAST    0.0%
R  BRIGHTNESS  0.0%
G  CONTRAST    0.0%
G  BRIGHTNESS  0.0%
B  CONTRAST    0.0%
B  BRIGHTNESS  0.0%
RESET COLOR
```

To perform adjustments, scroll to the desired menu line, select the menu item with the SEL key and then turn the ADJUST control to select the desired contrast or brightness level while viewing the output screen. Press SEL or ESC to exit the edit mode. The adjustment range for Brightness and Contrast is -25.0% to +25.0% with 0.0% as the default value.

The Reset Color menu item resets all the fields in this sub menu to the default value (0.0%). To reset the color balance controls, scroll to the Reset Color menu line and select the menu item with the SEL key.

S-Video or Composite Video Color Balance Submenu

This menu allows the operator to balance the colors on an S-video or Composite (NTSC/PAL) input source. Independent Saturation and Hue adjustments are provided. Parameters entered by the operator are saved as part of the input configuration file for the corresponding video input channel.

```
COLOR BAL
SATURATION    100.0%
HUE (DEGREES)  0°
RESET COLOR
```

To perform adjustments, scroll to the desired menu line, select the menu item with the SEL key and then turn the ADJUST control to select the desired saturation or hue level while viewing the output screen. Press SEL or ESC to exit the edit mode. The adjustment range for saturation is 50.0% to 200.0%. Hue is adjustable in 1degree increments from 0 to 360 degrees.

The Reset Color menu item resets all the fields in this sub menu to the default values. To reset the color balance controls, scroll to the Reset Color menu line and select the menu item with the SEL key. The saturation parameter will be reset to 100.0% and the Hue field will be reset to 0 degrees.

Beta 50, Beta 60, MII, and EBU Color Balance Submenus

This menu allows the operator to adjust saturation on Beta 50, Beta 60, MII, and EBU input sources. Parameters entered by the operator are saved as part of the input configuration file for the corresponding video input channel.

```
BETA COLOR BALANCE
SATURATION  100.0%
RESET COLOR
```

To perform adjustments, scroll to the Saturation menu line, select the menu item with the SEL key and then turn the ADJUST control to select the desired saturation level while viewing the output screen. Press SEL or ESC to exit the edit mode. The adjustment range for saturation is 50.0% to 200.0%.

The Reset Color menu item resets all the fields in this sub menu to the default values. To reset the saturation controls, scroll to the Reset Color menu line and select the menu item with the SEL key. The saturation parameter will be reset to 100.0%.

Processing Submenu

The Processing menu line is used to call up a submenu. Scroll to the Processing menu line and press the SEL key to display the Processing submenu.

```
PROCESSING
SYNC SELECT      AUTO
DC RESTORE       PRCH
DE-INTERLACER    DIS
3:2 SEQ DET      EN
VID BW           FULL
VID PEAKING      MIN
```

Sync Select

The Sync Select menu item allows the user to select one of four different modes (Auto, H/V, Comp or SOG). In Auto Mode, the unit will examine the incoming sync signals and automatically select the active sync source. Auto is the normal default setting. The user can select H/V (separate H and V sync), Comp (separate Composite sync), or SOG (Sync-On-Green) modes to override the automatic sync selection. This is sometimes desirable if the input signals are noisy.

DC Restore

The DC Restore menu item allows the user to select one of two DC Restoration modes (Prch or Sync). The default mode is DC Restoration to the back porch of the incoming video signal. The Sync Mode selects DC Restoration to the sync interval and may be useful for videos without a back porch interval.

De-Interlacer

This menu item is applicable only for NTSC or PAL input video. The De-Interlacer should be enabled (EN) for optimal performance with full-motion video. The De-Interlacer can be disabled by selecting the DIS (disable) mode. Delay through the system is affected by these settings as follows: with the De-Interlacer enabled input to output delay is 2 frames while it's disabled delay is only a ½ frame.

3:2 Seq Detect

This menu item is applicable only for standard video (component, s-video, composite) video inputs. The default mode is off. The 3:2 Sequence Detect feature should be turned on to process video derived from film source material, which is usually recorded at 24 frames per second.

Video Bandwidth

This menu item is applicable only for S-Video and Composite video inputs. The default mode is Full. The Reduced setting can be used to soften the image by reducing horizontal bandwidth.

Video Peaking

This menu item is applicable only for S-Video and Composite video inputs. The default mode is Minimal (MIN). Increased Video Peaking can be obtained by selecting the Nominal (NOM), Increased (INC) or Maximum (MAX) settings.

Input Audio/Video Setup Menu (Advanced Mode)

When the Advanced Menu Mode is selected the Input Setup Menu will appear as shown below. Menu items that differ from the standard Input Setup Menu are shown in bold print.

Only experienced operators should use the Advanced Input Setup Menu. This menu allows the user to configure the unit for 1:1 Pixel Sampling to provide the highest possible image quality. Please note that while 1:1 Pixel Sampling provides optimal image quality when properly adjusted, improper adjustment is likely to produce an image considerably inferior to what is obtained with the Standard Input Setup Menu.

INPUT A/V SETUP	#
MENU MODE	ADVANCED
AUTO CONFIG	
HTOTAL	1750
PHASE	0
POS (R)	40
WIDTH (L)	1327
TOP EDGE	
BOTTOM EDGE	
CONTRAST	100.0%
BRIGHTNESS	100.0%
INPUT TYPE	S-VIDEO
COLOR BAL	>>
PROCESSING	>>
AUDIO	>>
UNDO CHANGES	
RESET CONFIG	
SAVE CONFIG	

1:1 Sampling Overview

In order to scale an image, it must first be digitized. This is the process of changing the analog video signals (Red, Green, and Blue for example) into pixels stored in the system's image memory. The default mode of the PresentationPRO is to over-sample the input image producing more samples than there are in the original source material. The over-sampled image is then scaled to the final output resolution.

The approach called "1:1 Sampling" produces a superior image by sampling the analog graphics signals at exactly the same rate as that of the original source. This allows the image to be re-constructed with reduced digitizing artifacts. The 1:1 Sampling approach requires very accurate sample clock frequency and phase settings. Even small

sampling errors can cause noise on the output image. Both the sample clock frequency and phase must be correct to obtain a properly sampled image. The unit incorporates automatic adjustments in the 1:1 Sampling mode.

1:1 Sampling Operation

To automatically set-up for 1:1 Pixel Sampling, the input image should have non-black data at the edges and have some amount of text or other graphics. The standard Windows GUI is a good example. When an appropriate image is displayed, scroll to the Auto Config menu item and press SEL. In a couple of seconds, the image should return properly adjusted. The sample clock phase can be fine tuned by adjusting using the Phase adjustments. The functions of the menu items that are unique to Advanced Mode operation are described below.

Auto Config

When the Auto Config menu item is activated, the unit examines the incoming video and automatically configures the system for 1:1 pixel sampling. Parameters in the H TOTAL, PHASE, POSITION (R), and WIDTH (L) menu fields are calculated and loaded as part of the Auto Config process. To activate Auto Config mode, scroll to the Auto Config menu item and press the SEL key.

H Total

This menu field displays the total number of pixel clock periods during a horizontal line. The parameter is automatically loaded when the Auto Config process is complete. To manually adjust this parameter, scroll to the menu item and press the SEL key. Once the item has been selected make the adjustment using the adjustment knob.

Phase

This menu field displays a number between -31 and +31, which represents phase adjustment for the sample clock. Phase is adjustable to the nearest 1/32 of a clock period. This parameter is automatically loaded when the Auto Config process is complete. To manually adjust this parameter, scroll to the menu item and press the SEL key. Once the item has been selected, make the adjustment using the adjustment knob.

Position (R)

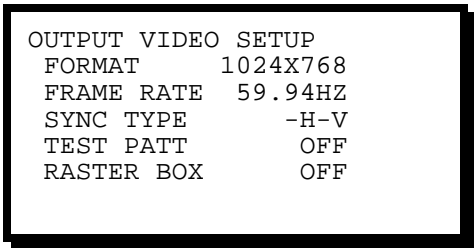
This menu field displays the number of clock intervals assigned to the horizontal front porch. The parameter is automatically loaded when the Auto Config process is complete. To manually adjust this parameter, scroll to the menu item and press the SEL key. Once the item has been selected, make the adjustment using the adjustment knob. Adjustments should be made to move the right edge of the image to the desired location.

Width (L)

This menu field displays the number of clock intervals assigned to the horizontal active area. The parameter is automatically loaded when the Auto Config process is complete. To manually adjust this parameter, scroll to the menu item and press the SEL key. Once the item has been selected, make the adjustment using the adjustment knob. Adjustments should be made to move the left edge of the image to the desired location.

Output Video Setup Menu

The Output Video Setup Menu allows the operator to select the desired output format as well as to control the output of the internal test pattern generator.



```
OUTPUT VIDEO SETUP
FORMAT      1024X768
FRAME RATE  59.94HZ
SYNC TYPE   -H-V
TEST PATT   OFF
RASTER BOX  OFF
```

Output Format

The Output Format menu item allows the user to select an output format that matches the native resolution of the projection device in order to optimize image quality. To perform adjustments, scroll to the Format menu line, select the menu item with the SEL key and then turn the ADJUST control to select the desired output format. The available output formats are; VGA (640x480), SVGA (800x600), XGA (1024x768), SXGA (1280x1024), (1280x768),

(1365x768) and (1365x1024). Press SEL to accept the newly entered settings or ESC key to exit without accepting the changes that have been entered. Please note that selections for this menu item do not become active until the SEL key is depressed.

Frame Rate

The Frame Rate menu item allows the user to select the desired output frame rate. To perform adjustments, scroll to the Frame Rate menu line, select the menu item with the SEL Key, and then turn the adjustment knob to select the desired output frame rate (50Hz, 59.94 Hz or 75 Hz). Press SEL to accept the newly entered settings or ESC key to exit without accepting the changes that have been entered. Please note that selections for this menu item do not become active until the SEL key is depressed.

Note: To eliminate the potential for frame rate artifacts it is recommended that the output frame rate be set to match the input frame rate for video sources (59.94 Hz for NTSC, 50 Hz or 75Hz for PAL).

Sync Type

The Sync Type menu item allows the user to select the desired output sync format. To perform adjustments, scroll to the Sync Type menu line, select the menu item with the SEL key and then turn the adjustment knob to select the desired output sync format. The available output formats are +H+V (active high Horizontal Sync, active high Vertical Sync), +H-V (active high Horizontal Sync, active low Vertical Sync), -H+V (active low Horizontal Sync, active high Vertical Sync), -H-V (active low Horizontal Sync, active low Vertical Sync) -C (active low Composite Sync). Press SEL to accept the newly entered settings or ESC key to exit without accepting the changes that have been entered. Please note that selections for this menu item do not become active until the SEL key is depressed.

Test Pattern

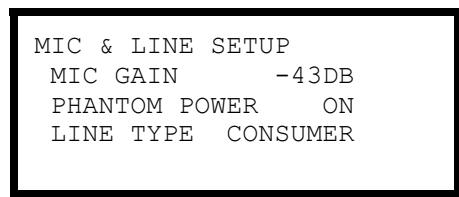
The Test Pattern menu item allows the user to select a test pattern for display. To select a test pattern, scroll to the Test Pattern menu line, select the menu item with the SEL key and then turn the adjustment knob to select the desired test pattern. Each test pattern is displayed as the adjustment knob is turned. Press SEL to accept the newly entered settings or ESC key to exit without accepting the changes that have been entered. The Off selection disables the internal test pattern generator and return to live conversion mode.

Raster Box

The Raster Box menu item allows the user to overlay a border on the output image. To control the display of the Raster Box, scroll to the Raster Box menu line, select the menu item with the SEL key and then turn the ADJUST control to select the desired output. The Off selection is used to disable the display of the Raster Box. The raster box can be displayed on the test patterns or over live data.

Mic and Line Setup

The MIC and LINE Setup Menu allows the user to define the MIC Gain (-43, -50, or -57db), microphone Phantom Power mode (Off or On), and the LINE input levels (Pro or Consumer).



```
MIC & LINE SETUP
MIC GAIN      -43DB
PHANTOM POWER  ON
LINE TYPE     CONSUMER
```

Effects Menu

The Effects Menu allows the user to adjust the effect duration for transitions as well as the type of transition to be performed.

```
EFFECTS
WIPE TYPE      RIGHT
EDGE ADJ       16
TRANS TIME     1.0
TRANS MODE     IMAGE
FREEZE MODE    OFF
```

Wipe Type

To control the type of wipe transition select the Wipe Type menu item with the SEL key and then turn the adjustment knob to select the desired transition. The transition types include cut, dissolve, curtain open, curtain close, mosaic, wipe left, wipe right, wipe up, and wipe down where the wipe sweeps in the direction indicated (a right wipe proceeds from left to right).

Edge Adj

To control the edge width of the transition, select the EDGE ADJ menu item with the SEL key and then turn the adjustment knob to select the desired edge width in pixels. The possible selections are 2-32 pixels.

Trans Time

To control the duration of the transitions, select the Wipe Time menu item with the SEL key and then turn the adjustment knob to select the desired transition time. The adjustment range is 0.0 to 5.0 seconds.

Trans Mode

At the start of a transition, the IMAGE may be frozen or a BLACK screen may be shown.

Freeze Mode

A displayed image may be temporarily frozen by setting this menu item to ON. Any front panel event will un-freeze the image.

Miscellaneous Menu

The Miscellaneous Menu allows the user to change the configuration of the serial port, provides information for access to factory technical support, allows the system to be completely reset to factory default values and provides the user with a startup menu choice.

```
MISC MENU
CONFIG SERIAL    >>
TECH SUPPORT     >>
FACTORY RESET
STARTUP MENU     SETUP
```

Serial Port Configuration

The RS-232 Port Menu allows the user to change serial port control parameters. The default settings are shown below.

```

CONFIG SERIAL
ECHO                ON
BAUD RATE           38.4K
DATA BIT            8
STOP BIT            1
PARITY              NONE
HANDSHAKING         ON
RESET RS-232

```

Echo

The user can turn ECHO ON or OFF. When ECHO is ON, commands received by the unit will be transmitted back to the source device.

Baud Rate

The following baud rate settings are supported 1.2K, 2.4K, 9.6K, 19.2K, and 38.4K.

Data Bit

The number of data bits per character can be set to 7 or 8.

Stop Bit

The number of stop bits can be set to 0, 1 or 2.

Parity

Parity can be set to Even, Odd or None.

Handshaking

CTS/RTS hardware handshaking can be set to ON or OFF.

Reset RS-232

All RS-232 parameters can be reset to factory defaults by selecting this menu item and pressing the SEL key.

Tech Support Menu

The Tech Support Menu displays the latest version of software and a customer service number to contact for technical assistance.

```

TECH SUPPORT
Version  1.06
Phone   916 859-2500

```

Factory Reset

Selecting the Factory Reset line will display the following:

```

DELETE ALL USER
FILES AND RESET?
<SEL>  = YES
<ESC>  = NO

```

Pressing SEL will reset the system to factory configuration and reboot the system. All stored input configuration files are cleared. Pressing ESC will return to the Misc Menu.

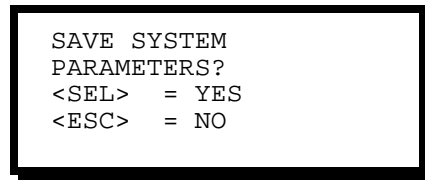
Startup Menu

The STARTUP MENU Menu allows the user to define the startup menu to be AUDIO or SETUP using the SEL button and the adjustment knob.

Pressing SEL will set the startup menu, but the system save feature must be performed from the SETUP MENU to effect the change for the next power up.

System Save Feature

The System Save Feature allows the user to save system parameters to non-volatile memory. On power up the values stored in memory will be recalled.



Pressing Select (SEL) will save the system parameters in non-volatile memory. The system parameters stored in non-volatile memory are:

- RS-232 Port Settings
- Output Format
- Output Frame Rate
- Output Sync Type
- All Audio Parameters
- Effect Type
- Effect Edge Width
- Effect Transition Time
- Front Panel Lockout Mode
- Startup Menu

Pressing ESC will return the user to the Setup

CHAPTER FOUR

Remote Commands

What you will find in this chapter...

- ❑ *Remote Commands*
- ❑ *PresentationPRO Command List/Description*

PresentationPRO™
Audio and Video Seamless Switcher

Remote Commands

AUDEN op n	Audio Enable: op[M V C L 1..7] n[0 1] MUTE ON
AUDEN? op	Query Audio Enable: op[M V C L 1..7] Returns mode [0 1]
AVT op n	A-V Type: op[1..7] n[0 1] Pro Consumer
AVT? op	Query A-V Type: Returns op[1..7] n[0 1] Pro Consumer
DL op n	Download CFG: op[I] n[1..7]
ECHO	Echo Enable/Disable: n[0 1] DISABLE ENABLE
ECHO?	Query Echo Enable/Disable: Returns mode[0 1] DISABLE ENABLE
FPLOCK	Front Panel Lock Out: op[D A M] Disable All Menu Only
FPLOCK?	Query Front Panel Lock Out: Returns mode [D A M] Disable All Menu
FREEZ n	Freeze: n[0 1] OFF ON
FSB n	Force Scaler Black: n[0 1], OFF ON
FSB?	Query Force Scaler Black: Returns n[0 1], OFF ON
HELP	Displays command list
IBRT op nnn	Input Brightness: op[C R G B] C[75..125]% RGB[-25..25]%
IBRT?	Query Input Brightness: Returns common, red, green and blue %
ICGTE n	Input Clamp Gate: n[0-2], SYNC PRCH PDLY
ICGTE?	Query Input Clamp Gate: Returns mode n[0-2], SYNC PRCH PDLY
ICNT op nnn	Input Contrast: op[C R G B] c[75..125]% RGB[-25..25]%
ICNT?	Query Input Contrast: Returns common, red, green and blue %
ICPHO nn	Input clock phase offset: n[-31..31]
ICPHO?	Query Input clock phase offset: Returns [-31..31]
ICPL op nnnn	Input Clocks Per Line: op [A M] AutoConfig Manual n[0..4096]
ICPL?	Input Clocks Per Line: Returns [0..4096]
ICREC	Input Configuration Recall of Current Source
ICRST	Input Configuration Reset of Current Source
ICSAV n	Input Configuration Save: n[1-7] input source
ICSP n	Input Colorspace: n[0..6], RGB B50 B60 MII EBU NTSC SVID
ICSP?	Query Input Colorspace: Rets [0..6] RGB B50 B60 MII EBU NTSC SVID
IHUE nnn	Input Hue: n[0 - 360] degrees
IHUE?	Query Input Hue: Returns [0..360] degrees
IRSP op nnn	Input Raster Size/Position: op[L R T B] n[-999..999]
ISAT nnn	Input Saturation: n[50-200]%
ISAT?	Query Input Saturation: Returns [50..200]%
ISYNC n	Input Sync: n[0..3], SOG CSYN H/V AUTO
ISYNC?	Input Sync: Returns [0..3] SOG CSYN H/V AUTO
LCK?	Query Video Lock: Returns [0..2] NOTLOCK MATCH NOMATCH
LINET n	Line Type: n[0 1] Pro Consumer
LINET?	Query Line Type: [0 1] Pro Consumer
LOADR	Puts graphics board into LOADR mode
MADB n	Motion Adaptive De-interlacing Bypass: n[0 1] ENABLE DISABLE
MADB?	Query Motion Adaptive De-interlacing Bypass: [0 1] ENABLE DISABLE
MCGN n	Mic Gain: n[0..2] -57dB -50dB -43dB
MCGN?	Query Mic Gain: [0..2] -57dB -50dB -43dB
OCRECF n	Output Resolution: n[0..7, 10,14,16,18,20]
OCRECF?	Query Output Resolution: Returns [0..7, 10,14,16,18,20]
OFRATE n	Output Frame Rate: n[0..2] 50Hz 59.94Hz 75Hz
OFRATE?	Query Output Frame Rate: Returns [0..2] 50Hz 59.94Hz 75Hz
OSYNC n	Output Sync.: n[1..5] GR -C +H+V +H-V -H+V -H-V
OSYNC?	Query Output Sync.: Returns [1..5] GR -C +H+V +H-V -H+V -H-V
OTPM typ bx gr	Output Test Pattern: type[0..5] box[0,1] grid[0,1]
OTPM?	Query Output Test Pattern: Returns type[0..5] box[0,1] grid[0,1]
PFSD n	Progressive Frame Sequence Det. (3-2 Pulldown): n[0,1] Disable Enable
PFSD?	Query Progressive Frame Sequence Det. (3-2 Pulldown): Returns [0,1] Disable Enable
PPWR n	Phantom Power: n[0,1] Off On
PPWR?	Query Phantom Power: Returns [0,1] Off On
RESET op	Reset Defaults: op[A F] All Factory

RTE n	Router Switch Command: n[1..7]
RTE?	Query Router Switch Command: Returns [1..7]
STAT?	System Status
STATS?	Print system log
SYSAVE	Save System Parameters
TRNE nn	Transition Edge Width: n[2..32]
TRN?	Query Transition Edge Width: Returns [2..32]
TRNM n	Transition Mode: n[0-8] 0- Cut, 1-Dissolve, 2-Right Wipe, 3-Left Wipe, 4-Down Wipe, 5-Up Wipe 6-Curtain Open, 7-Curtain Close, 8-Mosaic
TRNM?	Query Transition Mode: n[0-8] 0- Cut, 1-Dissolve, 2-Right Wipe, 3-Left Wipe, 4-Down Wipe, 5-Up Wipe 6-Curtain Open, 7-Curtain Close, 8-Mosaic
TRNT n.n	Transition Time: n.n[0..5]
TRNT?	Transition Time: Returns [0..5]
UL op n	Upload CFG: op[I] n[1..7]
VBW n	Video Bandwidth: n[0,1] FULL REDUCED
VBW?	Query Video Bandwidth: Returns [0,1] FULL REDUCED
VER	Version Information
VOL op n	Volume Control op[M V C L]1-7] M[0-77] V[0-127] CL[0-178] 1-7[0-51]
VOL? op	Query Volume Control op[M V C L]1-7]: Returns Level
VPK n	Video Peaking: n[0 1 2 3] MIN NOM INC MAX
VPK?	Query Video Peaking: Returns [0 1 2 3] MIN NOM INC MAX
VRBOS n	Verbose Mode: n[0 1] Disable Enable
VRBOS?	Query Verbose Mode: Returns [0 1] Disable Enable

PresentationPRO Command List/Description

Command:

AUDEN op n

Description: Audio Enable Mode for selected audio input

Parameters: **op** - Audio input; [M|V|C|L|1-7], Main|Video|Mic|Line|Input 1-7
n - Input Mode; [0|1], Mute|Enable

Query:

AUDEN? op

Returns the audio enable mode for the selected audio input in the format:

=n

Example: AUDEN 2 0 (Set Audio Input Source 2 to Mute.)
AUDEN? 3 (Returns audio enable mode for Audio Input Source 3.)

Command:

AVT op n

Description: Adjusts the Audio Video type mode for selected input source

Parameters: **op** - input source; [1-7]
n - type; [0|1], Professional|Consumer

Query:

AVT? op

Returns the Audio Video type mode for the selected input source in the format:

=n

Example: AVT 6 0 (Sets line type for input 6 audio source to professional mode.)
AVT? 5 (Returns line type for input 5 audio source.)

Command:

DL op n

Description: Transfers the selected input source's input configuration parameters to a remote device over the serial port.

Parameters: **op** - I
n - input source; [1-7]

Example: DL I 3 (Returns the input configuration parameters of input source 3.)

Command:

ECHO port n

Description: Sets the serial port echo mode.

Parameters: **port** - serial port; [A]
n - mode; [0|1], Disable|Enable

Example: ECHO A 0 (Disables echo of serial port.)

Query:

ECHO?

Returns the current serial echo state.

=n

Example: ECHO?

Command:

FPLOCK op

Description: Front Panel Lock Out

Parameters: **op** - front panel lock out mode; [A|D|M], All|Disable|Menus Only

Query:

FPLOCK?

Returns the Front Panel Lock Out status in the format:

=op

Example: FPLOCK A (All Front Panel keys are locked out and the following message is displayed on the front panel:
FRONT PANEL LOCKED)
FPLOCK M (The Front Panel Menu keys are locked out, but the source keys are still active. The following message is displayed on the front panel:
FRONT PANEL MENU

LOCKED.
SOURCE KEYS ACTIVE)
FPLOCK D (The Front Panel is unlocked.)
FPLOCK? (Returns front panel lock out mode.)

Command:

FREEZ n

Description: Enable/Disable Freeze
Parameters: **n** - Enable/Disable; n[0/1], OFF|ON
Example: FREEZ 1 (Enables freeze on the display.)

Command:

FSB n

Description: Force Scaler Black
Parameters: **n** - force scaler black mode; [0/1], OFF|ON
Example: FSB 1 (Scaler will show a black screen.)
FSB 0 (Scaler will show the current input source.)

Query:

FSB?
Returns the force scaler black state
=n
Example: FSB?

Command:

HELP

Description: Displays the list of available command on a terminal emulator
Parameters: None
Example: HELP (Returns the command list.)

Command:

IBRT op nnn.n

Description: Adjusts the Input Brightness value of the current source.
Parameters: **op** - Select Brightness Control; [C|R|G|B], Common|Red|Green|Blue
nnn.n - Brightness value; C Range 75 to 125%, RGB Range -25 to 25%

Query:

IBRT?

Returns the Input Brightness of the Common, Red, Green, and Blue of the current source in the format:
=ccc.c rr.r gg.g bb.b

Example: IBRT C 110 (Adjusts the Input Brightness for the current source to be 110%).
IBRT? (Returns the Input Brightness for Common, Red, Green, and Blue.)

Command:

ICGTE n

Description: Adjusts the Input Clamp Gate mode of the current source.
Parameters: **n** - Clamp Gate Selection; [0/1/2], SYNC|PRCH|PDLY
Query:

ICGTE?

Returns the Input Clamp Gate mode of the current source in the format:
=n

Examples: ICGTE 0 (Adjusts the Input Clamp Gate to be SYNC.)
ICGTE 1 (Adjusts the Input Clamp Gate to be PRCH.)
ICGTE 2 (Adjusts the Input Clamp Gate to be PDLY.)
ICGTE? (Returns the Input Clamp Gate mode.)

Command:

ICNT op nnn.n

Description: Adjusts the Input Contrast values of the current source.
Parameters: **op** - Select Contrast Control; [C|R|G|B], Common|Red|Green|Blue
nnn.n - Contrast value; C Range 75 - 125%, RGB Range -25 - 25%

Query: ICNT?
Returns the Input Contrast of the Common, Red, Green, and Blue of the current source in the format:
=ccc.c rr.r gg.g bb.b

Example: ICNT C 100 (Adjusts the Common Input Contrast value as 100%.)
ICNT? (Returns the input Contrast for Common, Red, Green and Blue.)

Command:
ICPHO nn

Description: Adjusts the Input Clock Phase Offset of the current source.

Parameters: **nn** - Phase value; [-31 - 31]

Query: ICPHO?
Returns the Input Clock Phase Offset of the current source in the format:
=nn

Example: ICPH 21 (Adjusts the Input clock phase offset to 21.)
ICPH? (Returns the Input clock phase offset.)

Command:
ICPL op nnnn

Description: Adjusts the Input Clocks Per Line of the current source. When the op is A (automatic configuration), the input is automatically configured and sized to fit within the output format.

Parameters: **op** - mode; [A|M] Automatic Configuration|Manual
nnnn - Clocks per Line value; [0 - 4096]

Query: ICPL?
Returns the Input Clocks Per Line of the current source in the format:
=nnnn

Example: ICPL M 100 (Adjusts the Input clock per line to 100.)
ICPL A (Automatically position and size input configuration.)
ICPL? (Returns the Input clock per line.)

Command:
ICREC

Description: Recalls from non-volatile memory the input configuration of the current source and loads it. If the current source does not have a stored input configuration, then the default configuration is recalled and loaded.

Parameters: None

Example: ICREC (Recalls and loads the input configuration for the current source.)

Command:
ICRST

Description: Resets the input configuration of the current source.

Parameters: None

Example: ICRST (Resets the input configuration for the current source.)

Command:
ICSAV n

Description: Saves the specified input source's configuration to non-volatile memory.

Parameters: **n** - input source; [1-7]

Example: ICSAV 4 (Saves input configuration of source 4 to non-volatile memory.)

Command:
ICSP n

Description: Adjusts the Input Color Space mode of the current source.

Parameters: **n** - Color Space Selection; [0|1|2|3|4|5|6|254|255], RGB|B50|B60|MII|EBU|NTSC|SVID|Next|Previous

Query: ICSP?
Returns the Input Color Space Mode of the current source in the format:

Example: =nn
ICSP 0: Adjusts the Input Color Space to RGB.

Command:

IHUE nnn

Description: Adjusts the Input Hue setting (only applicable if input is NOT RGB) of the current source.

Parameters: **nnn** - Input Hue Selection; [0 - 360] degrees

Query:

IHUE?

Returns the Input Hue of the current source in the format:

=nnn

Example: IHUE 20 (Adjusts the Input Hue selection to 20 degrees.)

IHUE? (Returns the Input Hue.)

Command:

IRSP op nnn

Description: Adjusts the Input Raster Size/Position of the current source.

Parameters: **op** - Select Raster Control; [L|R|T|B], Left|Right|Top|Bottom

nnn - Increment/Decrement value; [-999 – 999]

Example: IRSP R 100 : Increments the Right Input Raster Size/Position by 100

Command:

ISAT nnn.n

Description: Adjusts the Input Color Balance Saturation (only applicable if input is NOT RGB) of the current source.

Parameters: **nnn.n** - Input Saturation; [50-200]%

Query:

ISAT?

Returns the Input Color Balance Saturation of the current source in the format:

=nnn.n

Example: ISAT 110.0 (Adjusts the Input Color Balance to 110.0%.)

ISAT? (Returns the Input Color Balance.)

Command:

ISYNC n

Description: Adjusts the Input Sync selection of the current source.

Parameters: **n** - Mode; [0|1|2|3], SOG|COMP|H/V|AUTO

Query:

ISYNC?

Returns the Input Sync Mode of the current source in the format:

=n

Example: ISYNC 0 (Sets Scaler to expect SOG on the input channel.)

ISYNC? (Returns the Input Sync Mode.)

Command:

LCK?

Description: Video Lock Inquiry Command for the current source.

Parameters: None

Returns: =0 for NOT LOCKED

=1 for LOCKED/MATCHED

=2 for LOCKED/MISMATCHED.

Example: LCK? (Returns the video lock status of the current source.)

Command:

LINET n

Description: Adjusts the Line Type mode.

Parameters: **n** - mode; [0|1], Professional|Consumer

Query:

LINET?

Returns the Line Type in the format:

Example: =n
 LINET 0 (Sets the line type to professional mode.)
 LINET? (Returns the line type mode.)

Command:

LOADR

Description: Places unit into loader mode. This mode is used to perform field upgrades
Parameters: None.

Command:

MADB n

Description: Bypass the Motion Adaptive De-Interlacing feature for the current source.
 This will reduce delay thru the system.

Parameters: **n** - mode; [0|1], disable|enable

Query:

MADB?

Returns the Motion Adaptive De-Interlacing Mode for the current source in the format:

Example: =n
 MADB 0 (Disable the Motion Adaptive De-Interlacing.)
 MADB? (Returns the Motion Adaptive De-Interlacing mode.)

Command:

MCGN n

Description: Adjusts the Mic Gain mode.

Parameters: **n** - gain mode; [0|1], High|Low

Query:

MCGN?

Returns the Mic Gain Mode in the format:

Example: =n
 MCGN 1 (Sets the mic gain to low gain.)
 MCGN? (Returns the mic gain mode.)

Command:

OCRECF n

Description: Select the Output Resolution

Parameters: **n** - Output Resolution
 0 or 18 = VGA, 640x480
 1 or 14 = SVGA, 800x600
 2 or 20 = XGA, 1024x768
 3 or 10 = 720P, 1280x720
 4 or 16 = SXGA, 1280x1024
 5 = 1280x768
 6 = 1365x768
 7 = 1365x1024

Note: 10-18 is kept for backward compatibility

Query:

OCRECF?

Returns the Output Resolution in the format:

Example: =n
 OCRECF 2 (Select output format to be XGA.)
 OCRECF? (Returns the output resolution.)

Command:

OFRATE n

Description: Adjusts the Output Frame Rate.

Parameters: **n** - frame rate; [0|1|2], 50Hz|59.94Hz|75Hz

Query:

OFRATE?

Returns the Output Frame Rate in the format:

Example: =n
 OFRATE 0 (Sets the output frame rate to 50Hz.)

OFRATE? (Returns the output frame rate.)

Command:

OSYNC n

Description: Adjusts the Output Sync.

Parameters: **n** - Sync mode; [1|2|3|4|5], -C|+H+V|+H-V|-H+V|-H-V

Query:

OSYNC?

Returns the Output Sync mode in the format:

=n

Example: OSYNC 3 (Adjusts the Output Sync value to be +H-V.)

OSYNC? (Returns the Output Sync mode.)

Command:

OTPM typ bx gr

Description: Selects the Output Test Pattern mode and selects the Test Pattern options.

Parameters: **typ** - Test Pattern Type; [0|1|2|3|4|5], Off|V Gray Ramp|H Gray Scl | Burst|Color Bars|Black

bx - Test Pattern Raster Box; [0|1], OFF|ON

gr - Test Pattern Grid; [0|1], OFF|ON

Query:

OTPM?

Returns the output test pattern and option mode settings in the format:

=m typ bx gr

Example: OTPM 2 1 1 (Horizontal Gray Scale test pattern has been selected with raster box on, and grid on.)

OTPM? (Returns the output test pattern mode and option settings.)

Command:

PFSD n

Description: Progressive Frame Sequence Detection. This command will allow the detection of 3-2 pulldown to be enabled or disabled for the current source.

Parameters: **n** - mode; [0|1], disable|enable

Query:

PFSD?

Returns the Progressive Frame Sequence Detection Mode in the format:

=n

Example: PFSD 0 A (Disable detection of 3-2 pulldown.)

PFSD? (Returns the progressive frame sequence detection mode.)

Command:

PPWR n

Description: Selects the Phantom Power mode.

Parameters: **n** - mode; [0|1], disable|enable

Query:

PPWR?

Returns the Phantom Power Mode in the format:

=n

Example: PPWR 0 (Disable phantom power mode.)

PPWR? (Returns the phantom power mode.)

Command:

RESET op

Description: Resets the system to factory defaults

Parameters: **op** - Reset operation; [A|F], All|Factory

Example: RESET A (Resets system to factory defaults and resets all user input configuration files.)

Command:

RTE n

Description: Selects the video input source and switches to this input using the currently selected transition type. An input source selection of 8 will display the Logo if one is stored in non-volatile memory, or black if no logo has been stored.

Parameters: **n** - Input Source; [1-8]

Query:

RTE?

Returns the Video Input Source in the format:

=n

Example: RTE 5 (Select input source 5.)

RTE? (Returns the input source.)

Command:

STAT?

Description: Print System Status value

Parameters: None

Example: STAT? (Returns a system status value for factory use.)

Command:

SYSAVE

Description: Saves the system parameters to non-volatile RAM. The system parameters stored are the output format, sync, and frame rate, the audio parameters, the effects parameters, serial port configuration parameters and the front panel lock out mode. Upon power up, the system parameters stored in non-volatile RAM are used for system configuration.

Parameters: None

Example: SYSAVE (System parameters are saved to non-volatile RAM.)

Command:

TRM n

Description: Transition freeze mode

Parameters: **n** - type [I|B|?]

Query:

TRM ?

Returns the current transition freeze mode:

= n

Example: TRM I (Set the transition mode to freeze the currently displayed image.)

TRM B (Set the transition mode to display a black screen at the start of a transition.)

Command:

TRNE n

Description: Transition Edge Width for wipe-type transitions.

Parameters: **n** - pixel width, [2 – 32]

Query:

TRNE?

Returns the Transition Edge Width in the format:

=n

Example: TRNE 4 (Set for wipes using edge adjust width of 4.)

TRNE? (Returns the transition edge width.)

Command:

TRNM n

Description: Selects the transition type to be used when changing input sources.

Parameters: **n** - Transition Type:

0 = Cut

1 = Dissolve

2 = Wipe Right

3 = Wipe Left

4 = Wipe Up

5 = Wipe Down

6 = Curtain Open

7 = Curtain Close

8 = Mosaic

Query:

TRNM?

Returns the transition type in the format:

=n

Example: TRNM 2 (Dissolve using transition # 2, wipe right effect)
TRNM? (Returns the transition type.)

Command:

TRNT n.n

Description: Transition Time for dissolve and wipe-type transitions.

Parameters: **n.n** - time; [0 – 5.0]

Query:

TRNT?

Returns the transition time in the format:

=n.n

Example: TRNT 3.5 (Sets for a 3.5 second transition.)
TRNT? (Returns the transition time.)

Command:

UL op n

Description: Receives the selected input source's input configuration parameters from a remote device over the serial port.

Parameters: **op** - I
n - input source; [1-7]

Example: UL I 5 (Sends the input configuration parameters of input source 5.)

Command:

VBW n

Description: Selects the Video Bandwidth type for the current source.

Parameters: **n** - Bandwidth Mode; [0|1], Full|Reduced

Query:

VBW?

Returns the Video Bandwidth in the format:

=n

Example: VBW 1 (Selects a reduced video bandwidth.)
VBW? (Returns the video bandwidth.)

Command:

VER

Description: This is a version query. The return format is **ss.rr.a** where:

ss is the software version

rr is the version of the rbf set

a is an alpha character used to designate minor releases

Parameters: None

Example: VER (Returns =ss.rr.a to a terminal emulator.)

Command:

VOL op n

Description: Audio Volume for selected audio input.

Parameters: **op** - Audio input; [M|V|C|L|1-7], Main|Video|Mic|Line|Input 1-7
nnn - Volume value; M: 0-77, V: 0-127, CL: 0-178, In1-7: 0-51

Query:

VOL? op

Returns the Audio Volume for the selected audio input in the format:

=nnn

Example: VOL 2 45 (Set Audio Input Source 2 to a trim of 45.)
VOL? M (Returns the trim level of Main Volume.)

Command:

VPK n

Description: Selects Video Peaking mode for the current source.

Parameters: **n** - mode; [0|1|2|3] Minimum|Nominal|Increasing|Maximum

Query:

VPK?

Returns the Video Peaking Mode in the format:

=n

Example: VPK 0 (Set for minimum video peaking.)

VPK? (Returns video peaking mode.)

Command:**VRBOS n**

Description: Enables or Disables verbose mode for queries.

Parameters: **n** - mode; [0|1], Disable|Enable

Query:

VRBOS?

Returns the query command verbose mode in the format:

=n

Example: VRBOS 1 (Enable verbose mode.)

VRBOS? (Returns the verbose mode.)

CHAPTER FIVE

Folsom Research Information

What you will find in this chapter...

- ❑ *Warranty*
- ❑ *RMA Information*
- ❑ *Technical Support/General Contact Information*

PresentationPRO™
Audio and Video Seamless Switcher

Folsom Research Information

Folsom Research Warranty

All video products are designed and tested to the highest quality standards and are backed by a full 3-year parts and labor warranty. Warranties are effective upon delivery date to customer. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modifications, lightning strikes, abuse (drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair. Folsom Research will cover shipping charges for return shipments to customers.

Return Material Authorization (RMA)

In the unlikely event that a product is required to return for repair, please call 888-414-7226 and ask for a Sales Engineer to receive a Return Merchandise Authorization number (RMA).

RMA Conditions:

- a) Prior to returning any item, you must receive a Return Merchandise Authorization (RMA) number.
- b) All RMA numbers must appear on their return-shipping label.
- c) RMA numbers are valid for ten (10) days from issue date.
- d) All shipping and insurance charges on all RMA's must be prepaid by the customer

Folsom Research Contact Information

Sales Contact Information

Direct Sales Line: 916-859-2505

Toll Free Line: 888-414-7226

E-mail: sales@folsom.com

Technical Support Information

Tech Line: 888-414-7226 (Monday – Friday, 8 - 5 pm PST)

E-mail: support@folsom.com

General Company Information

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11101-A Trade Center Drive

Rancho Cordova, CA 95670

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APPENDIX

- *Technical Specifications*

Presentation *PRO*[™]
Audio and Video Seamless Switcher

Technical Specifications

Video Input

Router

Input Channels: 8.

Video Bandwidth: 350 MHz.

Input Sync Signals: Sync-on-Video; Separate C or H, V.

Connections: HD-15.

Type

High-Resolution Video: Supports conversion of RGB videos with horizontal scan rates up to 100 KHz and resolutions up to 1600x1200. Videos with progressive 480p and 720p HDTV timing are supported. RGB input levels are independently programmable.

Standard Video: Accepts RGB, YUV, S-Video (Y/C), and Composite in both NTSC and PAL formats. Input levels are independently programmable for RGB and YUV sources. Programmable luminance and chrominance levels are provided for S-Video, and Hue and Saturation controls are provided for NTSC/PAL inputs.

Synchronization: The unit automatically locks to the incoming video source.

Video Output

Connectors:

Main Outputs: Two independently buffered outputs
(2) RGBHV with HD-15 connectors

Format: User-selectable in the following formats:

VGA (640x480) SVGA (800x600)
XGA (1024x768) SXGA(1280x1024)

Syncs: Separate C or H/V.

Frame Rate: User selectable 50Hz, 59.94Hz and 75Hz. (75Hz not available for SXGA)

Mixing and Transition Effects: The unit supports seamless switching between sources, including the following transition effects: cut, dissolve and wipes. Transition time and wipe directions are fully programmable.

Audio Inputs

Universal A/V Inputs: (7) stereo audio channels, 5-pin MCO Male connector.

Microphone Jack: One non-switched MIC input, 3-pin MCO Male connector.

Line Input: One non-switched LINE input, 5-pin MCO Male connector.

Audio Levels: Accepts Consumer or Professional signal levels.

Audio Mixing: MIC and LINE audio are mixed with audio from the selected A/V input.

Audio Output

Output: (1) stereo audio channel, 5-pin MCO Male connectors.

Audio Levels: Outputs Consumer or Professional signal levels.

User Controls

A/V Source Selection: (8) illuminated keys support selection of A/V inputs or a stored logo image.

Audio Volume/Muting Control: Independent control for Main Volume, LINE Volume, MIC volume and each of the seven A/V inputs.

Video Transition Effects: Cut, dissolve, and wipe effects with programmable duration.

Setup Controls: A vacuum fluorescent display, control knob, and (8) keys provide a menu-based front panel interface to support all setup functions.

Remote Control

Reconfigurable RS-232 port for real-time control. Serial command format is compatible with Folsom/Vista Control Systems "SmartShow" format.

Physical

Height: 1.75"; **Width:** 17" or 19" with rack-mount option

Depth: 11.25"; **Weight:** 9lbs; **Shipping Weight:** 13 lbs.

Input Power

115/130 VAC, 47-63 Hz, 1.0 – 0.5 A.

Environmental

Temperature: 0-40 degrees C; **Humidity:** 0-95% non-condensing