

Master Control

iMC-Panel-GUI Operator's Guide (for Imagestore 750s)



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NV5100MC Master Control—Operator’s Guide

- **Revision:** 1.1
- **Software Version:** 7.2.0.0
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Note

Return Material Authorization (RMA) required for all returns.

Change History

The table below lists the changes to the Operator's Guide for Imagestore 750s.

- Part # UG0053-01
- Software version: 7.2.0.0

Rev	Date	ECO	Description	Approved By
1.0	13 Oct 08	—	Initial release.	D.Cox
1.1	29 Nov 11	17941	Conforms to software release 7.2.0.	D.Cox

Important Safeguards and Notices

This section provides important safety guidelines for operators and service personnel. Specific warnings and cautions appear throughout the manual where they apply. Please read and follow this important information, especially those instructions related to the risk of electric shock or injury to persons.

Warning

Any instructions in this manual that require opening the equipment cover or enclosure are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any service other than that contained in the operating instructions unless you are qualified to do so.

Symbols and Their Meanings



The lightning flash with arrowhead symbol within an equilateral triangle alerts the user to the presence of dangerous voltages within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle alerts the user to the presence of important operating and maintenance/service instructions.



The Ground symbol represents a protective grounding terminal. Such a terminal must be connected to earth ground prior to making any other connections to the equipment.



The fuse symbol indicates that the fuse referenced in the text must be replaced with one having the ratings indicated.



The presence of this symbol in or on Miranda equipment means that it has been designed, tested and certified as complying with applicable Underwriter's Laboratory (USA) regulations and recommendations.



The presence of this symbol in or on Miranda equipment means that it has been designed, tested and certified as essentially complying with all applicable European Union (CE) regulations and recommendations.

General Warnings

A warning indicates a possible hazard to personnel which may cause injury or death. Observe the following general warnings when using or working on this equipment:

- Heed all warnings on the unit and in the operating instructions.
- Do not use this equipment in or near water.
- This equipment 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 the equipment inputs or outputs.
- Route power cords and other cables so they are not likely to be damaged.
- Disconnect power before cleaning the equipment. Do not use liquid or aerosol cleaners; use only a damp cloth.
- Dangerous voltages may exist at several points in this equipment. To avoid injury, do not touch exposed connections and components while power is on.
- Do not wear rings or wristwatches when troubleshooting high current circuits such as the power supplies.
- To avoid fire hazard, use only the specified fuse(s) with the correct type number, voltage and current ratings as referenced in the appropriate locations in the service instructions or on the equipment. Always refer fuse replacements to qualified service personnel.
- To avoid explosion, do not operate this equipment in an explosive atmosphere.
- Have qualified service personnel perform safety checks after any service.

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- To prevent damage to equipment when replacing fuses, locate and correct the problem that caused the fuse to blow before re-applying power.
- Use only the specified replacement parts.
- Follow static precautions at all times when handling this equipment.
- This product should only be powered as described in the manual. To prevent equipment damage, select the proper line voltage on the power supply(ies) as described in the installation documentation.
- To prevent damage to the equipment, read the instructions in the equipment manual for proper input voltage range selection.
- Some products include a backup battery. There is a risk of explosion if the battery is replaced by a battery of an incorrect type. Dispose of batteries according to instructions.
- Products that have (1) no on/off switch and (2) use an external power supply must be installed in proximity to a main power output that is easily accessible.



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1. Preface

This is an *operator's* guide that is intended for panel operators controlling Imagestore 750s. Operators who control MCEs or MCPMs may refer to the *iMC-Panel-GUI Users Guide for MCEs and MCPMs*.

Chapter 1 provides an introduction to this guide. It presents the following topics:

- [Chapter Structure](#)
- [The PDF Document](#)
- [Terms, Conventions and Abbreviations](#)

Chapter Structure

The following chapters provide information regarding the Software Control Panel (GUI) in the Master Control System:

- Chapter 1, [Preface](#), (this chapter) presents ways to use this guide and provides a list of terms and conventions.
- Chapter 2, [Introduction](#), describes how the GUI relates to the master control system.
- Chapter 3, [Control Panel](#), discusses the features and functions of the GUI.
- Chapter 4, [Menus](#), provides a detailed discussion of the GUI menus.
- Chapter 5, [Operation](#), provides operating instructions.
- Chapter 6, [Misc. Topics](#), presents a glossary, specifications, and miscellaneous instructions and information.

An [Index](#) is also available for your reference.

The PDF Document

This guide is provided in PDF format, allowing you to use Acrobat's "bookmarks" to navigate to any desired location. You can also easily print a hardcopy. Please note:

- Use the Table of Contents or the bookmarks page to jump to any desired section.
- Many hyperlinks are provided within the chapters.
- Use the Index to jump to specific topics within a chapter. Each page number in the index is a hyperlink.
- Use Acrobat's 'Go to Previous View' and 'Go to Next View' buttons to retrace your complete navigational path.

1. Preface

Terms, Conventions and Abbreviations

- Use the ‘First Page’, ‘Previous Page’, and ‘Next Page’, and ‘Last Page’ buttons to go to the first, previous, next, or last page within a PDF file.

Note

To display the navigation buttons, right-click the Tool Bar area, and check ‘Navigation’.

- Use Acrobat’s extensive search capabilities, such as the ‘Find’ tool and ‘Search’ tool to perform comprehensive searches as required.

Terms, Conventions and Abbreviations

The following conventions are used throughout this guide:

- The symbol ▲ denotes either an example or a special message.
- Entries enclosed in single quotes denote the names of control panel buttons and knobs, or menu items.

Choose ‘Aux’ to . . .

Press ‘Keyer 2’ button . . .

The following terms and abbreviations are used throughout this guide:

- The “iMC-Panel-GUI” is the software control panel described in this guide. The term “GUI” is an abbreviation that refers to this software control panel.
- The term “MCPM” refers to any of the several older models of master control processing modules.
- “MCE” stands for Master Control Engine. An MCE as a type of MCPM and provides one master control channel.
- “High tally” means that a button is brightly illuminated—at full intensity. “Low tally” means that a button is illuminated at low intensity. Most buttons assume a low tally state until selected. Some buttons are not illuminated at all.

Other terms, used occasionally, include the following:

- Intuition XG is a single- or dual-channel graphics processor. The term “Intuition XG” can encompass all the hardware and software involved in the Intuition XG component of master control.
- XMedia is a term that includes different software applications that create and manage images, keyers, logos, etc. used by Intuition XG.
- Xplay and the XG Dashboard are software applications under XMedia. Both of these are used to configure the Intuition XG processor.
- Xbuilder and Xstudio are creative software applications under XMedia.
- Oxtel is a division of Miranda. Its name is used to identify certain parts of the Intuition XG hardware. The Oxtel protocol is used by the Imagestore 750 in the master control system.
- The terms “XG media clip” and “XG clip” refer to one of the video and audio sequences stored in and played by the Intuition XG processor. The term “XG media” refers to the body of clips available. An XG clip is a composition of video, static and animated graphics, audio, and text (which can be obtained from live data).

Prerequisites

Please observe the following important prerequisites:

- Equipment and software properly installed.
- Video monitors properly set.
Ensure that your control room's program and preview monitors are properly set, according to the requirements of your facility.
- NV9000 requirements met.
You are using a master control system in conjunction with an NV9000 router control system. Ensure that your master control system and NV9000 are communicating with each other and configured as required.
- Channels properly configured.
Ensure that each Imagestore 750 has been configured (using the Imagestore 750 Configurator or by using the Imagestore 750's front panel). Refer also to the *Imagestore 750 Reference Manual* for more information.
- All control panels properly configured.
All control panels (and GUIs) should be configured and operational. Refer to the *MCS Panel Configuration Editor User's Guide* for details.
- User accounts for PCs used for master control set to 'Standard User' or better.
Master control software does not function properly when user accounts are set to 'Restricted User' or its equivalent.

Options

The Master Control Tally Processor is an option. It provides 32 GPI inputs and 32 GPI outputs. It can monitor master control events and trigger master control events.

Intuition XG is an option that adds rich branding to master control because it includes sophisticated design tools, a powerful graphics processor, and storage for video clips, and access to "live" data.

1. Preface

Options

2. Introduction

Chapter 2 is an introduction to the iMC-Panel-GUI as it applies to controlling Imagestore 750s. It presents the following topics:

- [Purpose](#)
- [Master Control System Overview](#)
- [Imagestore 750 Overview](#)
- [Control Panel Features](#)

Purpose

The iMC-Panel-GUI is a software control panel available in the Miranda master control system. It runs under Windows on a PC connected to a master control network. These are its distinguishing characteristics:

- A large feature set equivalent to the features of the iMC-Panel-200.
- The GUI can execute on a PC having a touch-sensitive screen without the need for a keyboard and mouse. (The GUI can, of course, operate with a keyboard and mouse, on any Windows PC.)
- A menu system that has the same structure and provides the same capabilities as the LCD touchscreen of the iMC-Panel-200.
- A set of buttons that can be configured as main sources, video effects, or voice-overs as required by your facility. Operators can switch among several groups of main sources.
- A set of customer-definable function buttons.

In summary, the GUI is a software application that is functionally identical to the iMC-Panel-200.

The GUI can control Imagestore 750s, MCEs, and MCPMs. When controlling an Imagestore 750, it has a very different user interface from when it is controlling MCEs or MCPMs.

In any case, this guide addresses the iMC-Panel-GUI as it pertains to Imagestore 750s.

Master Control System Overview

Miranda's combined master control system — a multi-channel switcher — might include one or more Imagestore 750s, MCEs, and MCPMs. Imagestore 750s are independent IRU transition processors (a.k.a. channel branding processors).

MCEs and MCPMs reside in NV5100MC frames. The frames are 8RU assemblies with 16 I/O card slots that can operate in conjunction with other switchers, routers, an NV9000 router control system, and other products. Each frame holds one or more MCPMs, MCEs, and optionally a multi-format router.

Each Imagestore 750, MCE, or MCPM is considered a *channel*.

2. Introduction

Master Control System Overview

Imagestore 750s, MCPMs, MCEs, and control panels communicate on an Ethernet LAN. When an operator presses control panel buttons (the ‘Transition’ button, for example), the control panel issues commands to the attached channel (Imagestore 750, MCPM, or MCE). The channel responds with status and (unless a problem exists) executes the command. When a command has successfully executed, the channel notifies the panel, which updates its displays and indicators accordingly.

Figure 2-1 shows the basic relationships in a master control system:

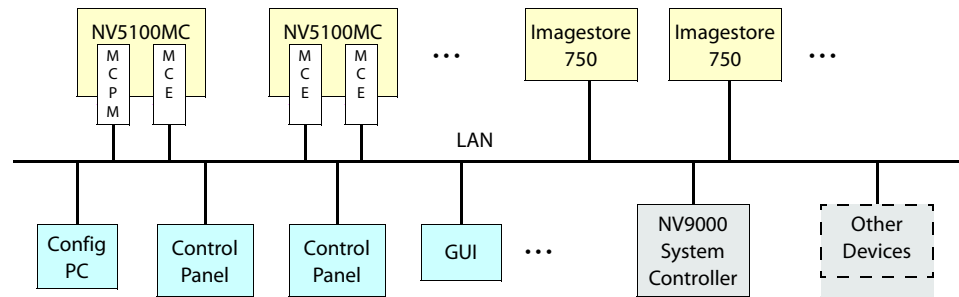


Figure 2-1. Master Control Network

Master control can work in conjunction with an NV9000 router control system. In such a configuration, a channel has access to the *entire* router input space, with the ability to select any router source.

Most control panels can control one or more channels at any time—but usually one at a time. Operators can select which channel(s) to control. When you change channels, control panel updates take about a second. We say that the panel *attaches* the newly selected channel, and the channel’s own source layout, transition rates, and presets are available for use.

Each channel can also be operated under automation. A channel can be controlled by multiple control panels.

NV9000 Router Control System

A master control system can be viewed as a part of an NV9000 system. Alternatively, the NV9000 can be regarded as a provider of inputs to the master control system.

In either case, master control allows router outputs as master control inputs and allows an operator (or automation) to take router sources to the master control output.

The NV9000 system is a requirement for master control systems that use Imagestore 750s.

An NV5100MC frame used in conjunction with an NV9000 system must be connected to the NV9000 (in the control section of the master control frame).

Control Panels

Presently there are 2 hardware control panels and 1 software control panel (GUI) that support Imagestore 750s:

iMC-Panel-GUI	A software control panel, also called the “GUI.” This panel also runs on a PC and has a graphical user interface. This GUI is a software emulation of the <i>iMC-Panel-200</i> . This GUI is designed to operate with (or without) a touch-sensitive screen.
iMC-Panel-100	A 3RU rack-mounted panel with a separate rack-mountable display. This panel has reduced size (just over 2” in depth) and reduced cost.
iMC-Panel-200	A compact hardware control panel that has a large LCD touchscreen, many function buttons, and a joystick. The iMC-Panel-200 mounts on a desktop or work surface. All buttons have LCD legends and color-coding.
iMC-Panel-300	A “full-size” control panel that has a large LCD touchscreen, many function buttons, and a joystick. The iMC-Panel-300 mounts on a desktop or work surface. All but 2 buttons have LCD legends and color-coding.

Other Miranda Products

Listed here are products that relate to master control.

Tally Processor

Miranda offers a third-party “tally processor”—a 1RU device that provides 32 optically isolated inputs and 32 relay outputs, also optically isolated. The tally processor can sense master control events such as main source selections and transitions, trigger master control events, and control various devices in your system. A master control network can include multiple tally processors.

Intuition XG

As a master control subsystem, Intuition XG is a combination of the following:

- Intuition XG—a single- or dual-channel HD/SD graphics processor. This processor stores XG media clips and transmits the clips (fill and key) when directed by an Imagestore 750, MCE, or MCPM.
- XMedia software for configuration and for composing, rendering, and previewing graphics. Panel operators will generally not need to understand or use this software.

Imagestore 750 Overview

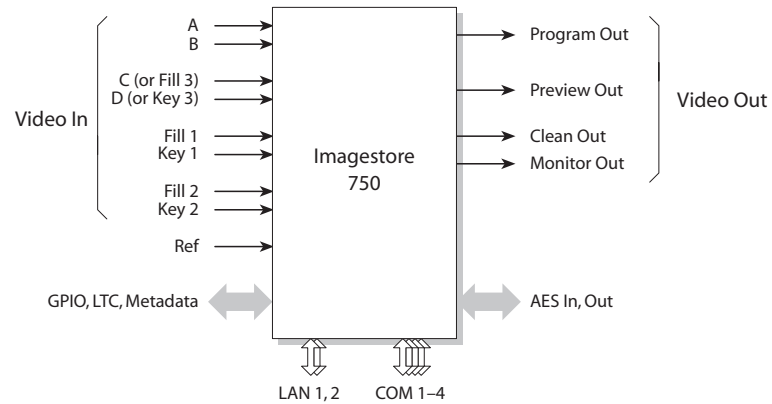
The Imagestore 750 is an independent transition processor (also called a “channel branding processor”) that can operate as a stand-alone unit with or without automation, or as part of Miranda’s combined Imagestore 750/NV5100MC master control system. In the context of the combined master control system, it operates in conjunction with an NV9000 router control system, that provides video and audio sources, and one or more master control panels, such as the iMC-Panel-200, that provide commands. The Imagestore 750 issues switching instructions to the NV9000 when it receives commands from a master control panel.

2. Introduction

Imagestore 750 Overview

The Imagestore 750 is essentially an A/B transition processor that inserts video effects (DVEs and DSKs) and voice-overs into its output. It has many configuration options.

This is a system block diagram of the Imagestore 750:



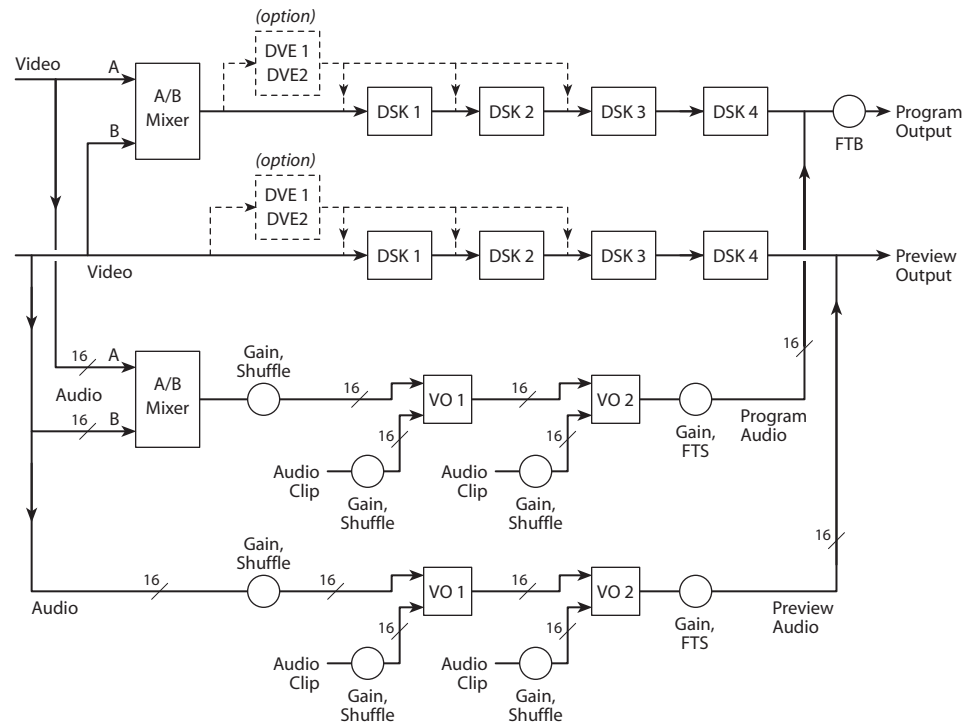
Inputs and outputs of the Imagestore 750 include:

- Four SDI inputs, A–D. These accept HD or SD input.
- Two external keyer pairs (fill and key). Inputs C and D can be used for a third keyer pair.
- A GPIO connector that supports 16 GPIO ports (each configurable as an input or an output), LTC, and Dolby metadata.
- 16 AES inputs and 16 AES outputs.
- Four SDI outputs (program, preview, clean-feed, and monitor).

There are also 4 COM ports and 2 Ethernet ports.

Conceptual Model

This diagram shows the Imagestore 750's native conceptual model:



There are two video processing paths, program and preview. Each includes 4 downstream keyers (DSKs) and an optional DVE processor.

After audio is disembedded, the audio processing path includes an A/B mixer for 16 audio channels and two voice-over processors, also having 16 channels. Audio is re-embedded in program and preview audio after processing.

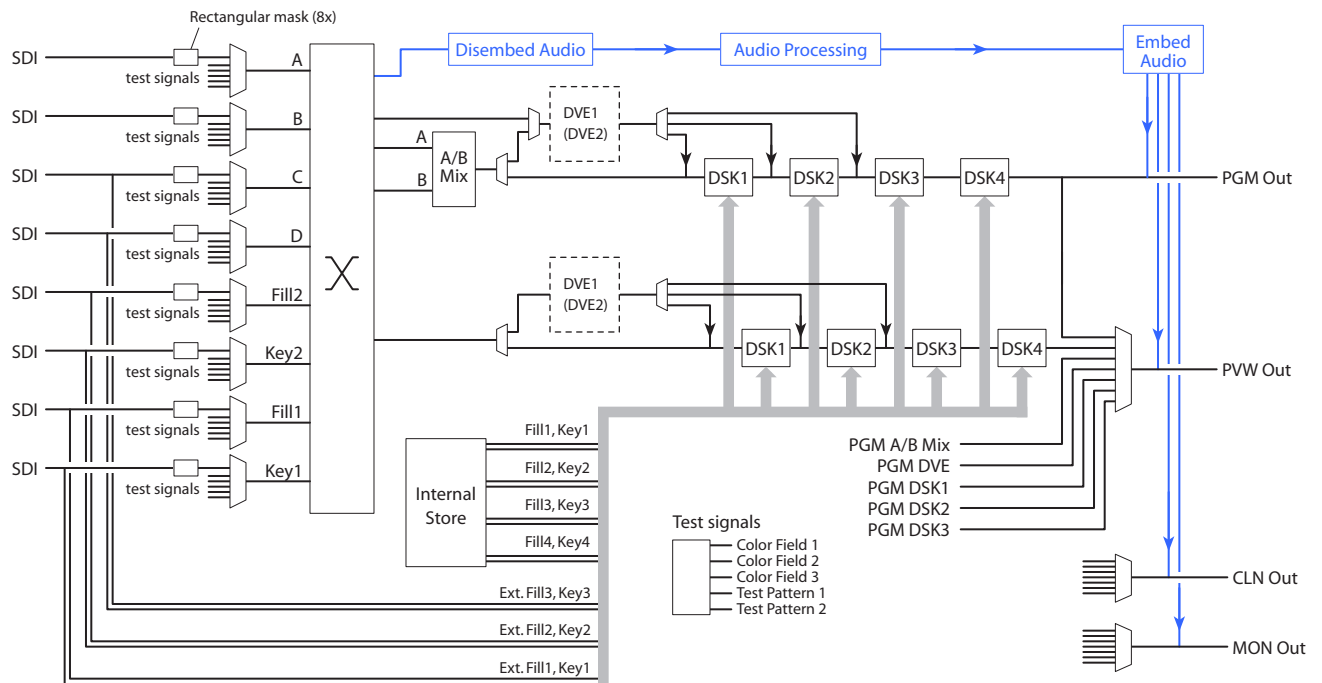
The model also includes a clean-feed (video) output and a (video) monitor output (not shown). There are many selectable tap locations for these outputs.

2. Introduction

Imagestore 750 Overview

Detailed Model

This diagram shows a more detailed view of the Imagestore 750's video processing:



Each input (A, B, C, D, Fill1, Key1, Fill2, and Key2) can be individually selected as an SDI input or one of 5 test signals. (Each SDI input can be subject to a rectangular clipping mask.)

Inputs C and D can be used as a (fill3, key3) pair. The Imagestore 750 can use any of its fill/key inputs to receive clips from an Intuition XG processor. The Intuition XG processor produces up to 8 “XG keyer layers.” The Imagestore 750 sends commands to the Intuition XG processor that control the layout of the clips.

Both the A and B side of the A/B mixers can connect to any of the inputs (A, B, C, D, Fill1, Key1, Fill2, and Key2). Similarly, any of the DVEs can connect to any of those inputs.

The DVEs also accept the output of the A/B mixer. The DVE output (either DVE1 or DVE2) can be inserted in the processing path in one of 3 places: before DSK1, before DSK2, or before DSK3. The DVE processing section is a purchase option. The DVE processor can be bypassed if it is installed.

The Imagestore 750 has (up to 2 GB) storage supporting internal keyers (logos, etc.). Inputs C and D can be used as external keyer (fill3, key3).

The preview output can present video from one of several different tap points. Similarly, the clean-feed (CLN) output and the monitor (MON) outputs can present video from several different tap points.

Audio is disembedded from SDI sources, sent to the audio processing section, and re-embedded on output. The audio is re-embedded in the PGM, PVW, CLN, and MON outputs.

Options

The Imagestore 750 has many feature options. Some or all might not be present in the Imagestore 750 you are controlling. The master control option of course must be present and enabled if the Imagestore 750 is to function properly in the master control system.

The Imagestore 750 also has many configuration options that can affect the way the control panel can control it. Some of those are listed under [Transition Options](#) on page 88.

Control Panel Features

The GUI offers the following features. (In many cases, the features are those of the Imagestore 750 under control.)

- Configurable function buttons.

All master control panels have a set of buttons whose functions can vary according to the needs of the facility and the operator. When it is controlling an Imagestore 750, the GUI has 3 sets of customer-definable buttons.

- Channel selection, including ‘no channel’ mode, and ganged channels.

Your panel will usually have a default channel which is the channel selected when the panel powers up. Your panel might be configured so that its default channel is part of a channel gang. That is called “automatic gang mode.” Whenever that channel is selected, all the channels in the gang are selected.

- Salvos.

The GUI can trigger a NV9000 control system salvo each time a channel change occurs. For example, a salvo can be programmed to change your entire audio/video monitor configuration instantly. Refer to the NV9000-SE Utilities User’s Guide for instructions on programming system salvos.

Salvos can also be assigned to panel buttons.

▲ Salvos are inhibited when a channel gang is in effect.

- Independent downstream keyers (DSKs). When it is controlling an Imagestore 750, the GUI can control 4 independent (linear) DSKs, each with separate key and fill inputs. Keyer parameters (e.g., clip, gain, and transparency) are configured independently.

The DSKs handle internal keys (stills and animations) as well as (up to 3) external keys.

- DVEs.

A DVE (digital video effect) is a sequence of operations that can dynamically scale and position a video image on the screen, overlaying the main source. A DVE might perform other effects too. DVEs are created in the DVE Editor¹ and are stored within the Imagestore 750.

The panel supports up to 4 independent DVEs. Not all Imagestore 750s have DVE processors. If your panel is controlling such an Imagestore 750, its DVE buttons, if any, are disabled.

- XG layers.

1. The DVE Editor and other applications are included on a CD that ships with the Imagestore 750.

2. Introduction

Control Panel Features

An XG layer (or clip) is one of up to 8 outputs of an Intuition XG processor. When it is controlling an Imagestore 750, the GUI can control up to 8 XG layers. XG layers are processed by one of the DSKs. Usually there is a default DSK assigned to XG layers.

- Fade to black. Master control provides a fade-to-black and a fade-to-silence function.
- General-purpose I/O (GPIO). Control panels have two optically isolated inputs that can sense external events and two relay outputs that can trigger external events.

The Imagestore 750 has GPIs can be associated with Imagestore 750 macros.

- Audio metering and monitoring.

The iMC-Panel-GUI has two audio monitor controls.

- Audio channel control.

The Imagestore 750 processes 16 audio channels.

The Imagestore 750 has 5 audio sections: program input audio, program output audio, preset input audio, and voice-over 1 audio and voice-over 2 audio. The Imagestore 750 has gain control, inversion, and 16-channel shuffles for each of these 5 sections.

- Panel lock. You can use a 'Panel Lock' button to prevent accidental changes to the panel settings.
- Automation control. You can enable or inhibit automation with a button press. There are 4 automation assist functions, such as 'Cue Next' and 'Skip Next'.
- Source groups. The iMC-Panel-GUI can have up to 16 main source buttons. The Imagestore 750 allows the definition of one or more *source groups*. Each of those source groups can be mapped to the main source buttons of the iMC-Panel-GUI. The sources in a group are selected from the sources defined in the NV9000 system. Thus, all NV9000 sources are potentially accessible.

3. Control Panel

Chapter 3 describes the structure and functioning of the iMC-Panel-GUI (a software control panel) as it applies to the Imagestore 750. It presents the following topics:

- [GUI Summary](#)
- [Functional Sections of the GUI](#)
- [Definable Button Functions](#)

GUI Summary

The GUI is a configurable software control panel that runs under Windows on a PC. The GUI is designed to operate on a tablet PC or any PC with a touchscreen as well as PCs that have a keyboard and mouse. The GUI emulates the features of the iMC-Panel-200:



Figure 3-1. GUI

At the top left is a menu area identical in form to the touchscreen of the iMC-Panel-200. At the top right is a 4×4 array of configurable function buttons.

The lower portion of the GUI closely resembles the front section of a iMC-Panel-200. There are 4 rows of 16 buttons. These button rows are configurable.

3. Control Panel

GUI Summary

The preset and program button rows contain up to 16 main sources and up to 8 video effects and up to 2 voice-overs. The video effects and voice-over *buttons* may be configured in any order, but the Imagestore 750 executes those effects in a configurable order.

The preset and program buttons are identical. They represent the same sources, video effects, and voice-overs. The preset and program buttons are paired (and identical) and support content and transitions going “on air.”

The preview/user buttons, for the Imagestore 750, are a set of 16 customer-definable buttons among which are menu buttons. (Menu buttons select menus in the menu area of the GUI.)

The aux/user buttons (labeled ‘Aux’ in the GUI) include the same sources as program and preset, but provides customer-definable buttons (at the right) instead of video effects and voice-overs. The aux buttons provide a means by which you can direct a selected router source to an auxiliary device such as a monitor.

At the bottom of the GUI are two groups of function buttons. The group of 8 buttons at the left are transition control buttons by convention. The group of 3 buttons are system control buttons by convention. All are configurable. At the bottom right is the (orange) transition button which is not configurable.

GUI Buttons

The buttons display text (3 rows of 8 characters) or graphics. In most cases, the button legend can change to reflect the source or video effect that it represents. Some configurable buttons defined in the panel configuration are not dynamic. The GUI buttons change color to provide additional information about the button function. The buttons can appear green, amber, red, blue, white, or violet, or aqua. The colors can be bright (high-tally) or less bright (low-tally) or off (disabled). Red indicates an error condition such as LOS. Amber indicates a potential error condition.

High-tally indicates that the button function is selected or active; low-tally indicates that the button function is not selected or is inactive.

Some buttons are *toggles*. Pressing a deselected toggle button will cause it to become selected. Pressing a selected toggle button will make it deselected.

Some groups of buttons operate as a mutually exclusive set. Pressing a deselected button will cause it to become selected and all other buttons in the set to become deselected.

There are two types of mutually exclusive buttons:

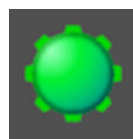
- 1 Pressing a selected button makes it deselected. (One or none is selected.)
- 2 Pressing a selected button has no effect. (Exactly one is selected.)

GUI “Knobs”

The GUI has no knobs *per se*, but has knob “proxies” under the menu area:

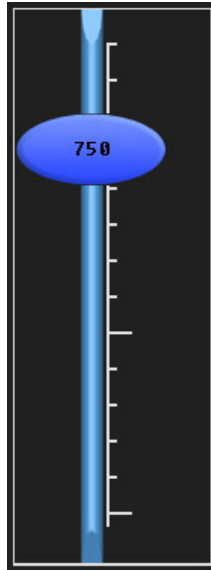


Unselected



Selected

When you select a knob proxy by clicking it (or touching it if you have a touchscreen), a slider then appears to the right of the menu area. Use the slider (instead of the knob) to adjust parameter values:



Menu Area

The menu area and its 8 associated knob proxies provide a set of menus in which you can do the following:

- Select a channel (i.e., Imagestore 750, MCE, or MCPM).
- Select an Intuition XG clip or a DSK.
- Control the size and position of DSKs.
- Manipulate audio.
- Perform panel maintenance and updates.

Some menus have a scrollbar with which to select items. You can use the menu knobs to “dial in” a parameter value or you can enter a value using a keypad menu.

The GUI as a whole is designed to be used on a PC touchscreen. If you have a touchscreen, you can simply touch a menu button or any feature of the GUI to operate it. Otherwise, you can use your Windows cursor and mouse (or other positioning device) to click on GUI features.

3. Control Panel

Functional Sections of the GUI

Functional Sections of the GUI

Figure 3-2 shows the location of the GUI's menu, function buttons, and controls.



Figure 3-2. Sections of the GUI

1	Title bar	5	Menu “knobs”	9	Transition control buttons
2	Menu area	6	Aux/user buttons	10	System control buttons
3	Configurable buttons	7	Preview/user buttons	11	Transition button
4	Slider	8	Program and preset buttons		

Following are brief descriptions of each section:

1 Title bar

This section, common to most Windows applications, shows the name of the running application. Like most other title bars, this title bar provides maximize, minimize, and close buttons.

2 Menu area

Using the menu area, you can control various system functions and change various parameters. Associated with the area are 8 “knobs” for adjustment of parameters. See [Menu Area](#) on page 18 for detail.

3 Configurable buttons

The configurable button section includes 16 buttons with LCD legends, each of which may be programmed to perform functions such as channel selection, GPI triggers, or source group selection. Some of these buttons can function as status indicators. See [Configurable Button Section](#) on page 19 for detail.

4 Slider

The slider appears only when you have selected a knob proxy. Use the slider to perform rapid (but coarse) adjustments of menu parameters. See [Slider](#) on page 20 for detail.

5 Menu “knobs”

The 8 knob “proxies” under the menu area allow you to adjust menu parameters. Not all of these “knobs” are active all the time. When a knob is active, the menu shows a colored indicator near the knob.

Click a knob proxy to select it. When you do, a slider appears with which you can perform parameter adjustments.

6 Aux/user buttons

When the panel is controlling an Imagestore 750, this button row contains aux buttons and up to 6 customer-definable buttons.

The aux buttons are source buttons. The sources are the same sources as on the preset and program button rows. These buttons allow you to direct a source to an auxiliary device such as a monitor.

- ▲ Imagestore 750s have an “aux bus follow” option. Depending on how this option is set, your aux buttons might follow the PGM or PST bus or might remain independent. When they follow the program bus, whatever source becomes selected on the program bus is also selected on the aux buttons. When they follow the preset bus, whatever source becomes selected on the preset bus is also selected on the aux buttons.

In any case, you can always use the aux buttons, normally, regardless of what was selected on the preset or program bus.

- ▲ If the Imagestore 750 is not configured for controlling an auxiliary device, the aux button row’s source buttons are disabled (dark).

7 Preview/user buttons

This row of buttons is a set of customer-definable buttons when the panel is controlling an Imagestore 750. (Among the customer-definable buttons can be menu buttons.)

Note that when the GUI is controlling an MCE, this row of buttons is a set of “preview” buttons and it controls the preview bus of an MCE². When the GUI is controlling an MCPM, the button row is disabled.

8 Program and preset buttons

The 16 program buttons include main source buttons and “layer” buttons. The layer buttons can be configured as video effects or voice-overs. The number of main sources, video effects, and voice-overs varies according to the panel configuration.

Whatever main source, video effects, and voice-overs are selected on the program buttons form the *program* output of the Imagestore 750 that is currently controlled by the GUI.

The preset buttons also includes main source buttons and “layer” buttons. In fact, the preset bus and program bus have the same button functions. The function assigned to a program button is also assigned to the preset button directly beneath it.

3. Control Panel

Functional Sections of the GUI

Whatever main source, video effects, and voice-overs are selected on the *preset* bus form the *preview* output of the Imagestore 750 that is currently controlled by the GUI.

▲ The preset and program buses behave differently under different transition options. See [Transition Options](#) on page 88.

See [Program and Preset Buttons](#) on page 20 for detail.

9 Transition control buttons

The buttons in this section are, by convention, transition buttons, but they are all configurable. (See [Definable Button Functions](#), on page 25.)

See [Definable Button Functions](#), on page 25 and [Transition Control](#) on page 25.

10 System control buttons

The buttons in this section are, by convention, system control buttons, but they are all configurable. (See [Definable Button Functions](#), on page 25.)

See [System Control](#) on page 25 for detail.

11 Transition button

The transition button displays the word “Take.” The button is bright orange.

Pressing the transition button initiates a transition in the Imagestore 750 according to the GUI setup.

See [Transition Button](#) on page 25 for detail.

Menu Area

Figure 3-3 shows the menu area and its 8 associated “knobs”:

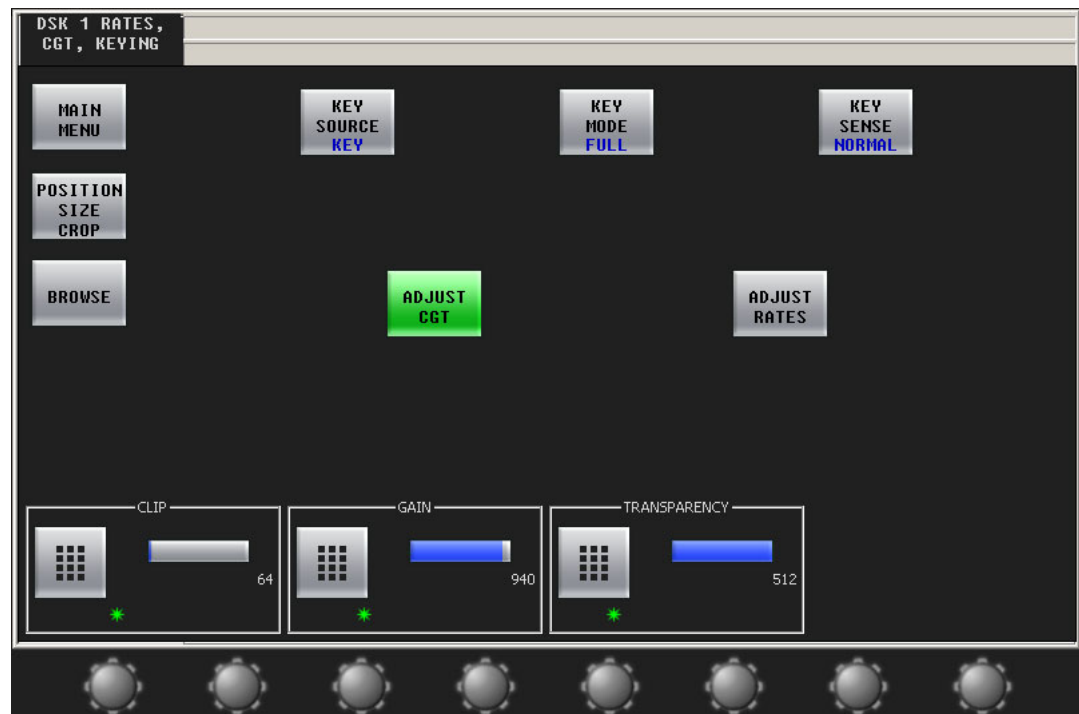


Figure 3-3. Menu Area (Sample Showing Knob Proxies)

The menu area presents a number of different menus that allow you to perform source selections and adjust operating parameters.

Menu buttons allow you to select the menu that appears in the menu area. Menu buttons are toggles: pressing the button once displays the menu; pressing the button again displays the main menu.

Some menus allow you to adjust function parameters, such as the ‘DSK Rates, CGT, and Keying’ menu shown in Figure 3-3. You can adjust function parameters in two ways:

- Using the adjacent rotary knobs.
- Within the area itself, using an on-screen keypad to adjust numeric values, or by enabling or disabling control functions.

The menu area has a region at the top for status and error messages and another region at the top for informative messages.

Refer to Chapter 4, [Menus](#), on page 31 for a comprehensive review of all menus.

Configurable Button Section

Figure 3-4 shows the configurable button section:

RX16 IS2			
IS 750	HD_124	IS 131	MCE 125
FADE TO SILENCE XXXXX LI	FADE TO BLACK LI NE 2 LIN	PGM DUE ENABLE LINE 3	PST DUE ENABLE LINE 3
SD GRP 1	SD GRP 2		

Figure 3-4. Configurable Button Section

The configurable button section includes 16 buttons, each of which may be programmed to perform various functions such as channel selection, system control, or group selection. The buttons can also be status buttons.

Each button incorporates an LCD that has 3 rows of 8 characters. The button functions and button legends are determined during panel configuration. Each configured button is illuminated. Buttons that are not configured are dark (not illuminated) and have no legend. Buttons that are momentarily disabled are also dark. The illumination can be high or low tally—green, white, amber, or red. Red usually indicates a problem.

There are about 27 different button functions available to the configurator (for panels that control Imagestore 750s). You, the operator, will find a variety of these button types in the configurable button section of the GUI you are using.

These buttons provide two distinct sets of buttons: one set applies when the panel is controlling an Imagestore 750 and another set applies when the panel is controlling an MCE or MCPM.

These are the button function classes for controlling Imagestore 750s:

Channel Selection	Transition Type	Salvo	Automation Assist
System Control	Transition Rate	Menu	

3. Control Panel

Functional Sections of the GUI

- ▲ Buttons in the ‘Aux/User’ row, ‘Preview/User’ row, and the [Transition Control](#) and [System Control](#) sections are also configurable.

Slider

Figure 3-5 shows the slider:

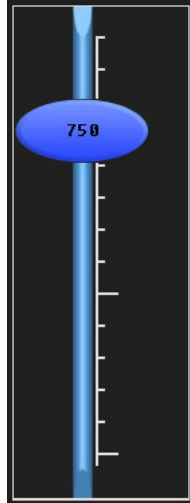


Figure 3-5. Slider

There are 8 knob “proxies” under the menu area.

When you select a knob proxy, it turns green, and a slider then appears to the right of the menu area. Use the slider to adjust parameter values.

The slider scale changes according to the value being adjusted. If you are adjusting an audio level, the range is -99.5 dB to $+28.0$ dB. If you are adjusting transparency, the scale shows values in the range 0 to 512.

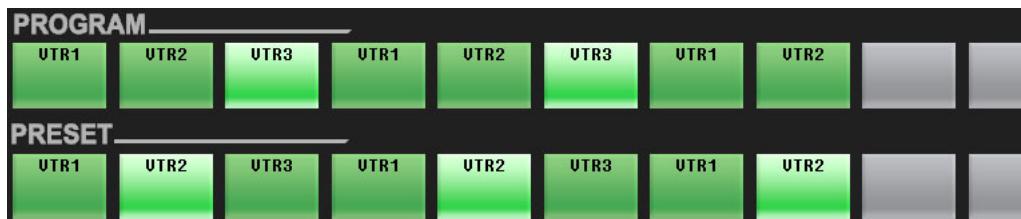
The slider is for rapid and coarse adjustment only. Its steps are large and uneven. To operate the slider, click or touch and drag the oval up or down. The setting value is displayed within the oval.

Program and Preset Buttons

The program and preset buses are divided into two parts:

- Main source buttons.

The leftmost buttons represent main sources *only*.



Main source buttons are usually green, high-tally when selected and low-tally when not. If a main source has a problem (e.g., LOS or non-sync), it is high-tally amber when unselected and red when selected. Unused main sources are dark.

3. Control Panel

Functional Sections of the GUI

Main source buttons can be configured so that buttons for selected sources are white or red.

- “Layer” buttons.

The rightmost buttons can be configured as video effects, and voice-overs:



The layer section provides up to 4 DSKs, 4 DVEs, 8 XG layers, and 2 voice-overs.

Sixteen main sources buttons and 18 “layer” buttons obviously do not fit in a button row. The panel’s configurer will have made trade-offs in this regard.

- ▲ The preset and program buses behave differently under different transition options. For example, the preset buttons can be configured to tally according to the “PresStation” model or the traditional model. See [Transition Options](#) on page 88.

The main source buttons and layer buttons together form 2 buses:

Program Selections on the *program* buttons compose the *program* output of the currently selected Imagestore 750.

Preset Selections on the *preset* buttons preview the content of the program bus roughly as it will appear after the next transition.

The preset button row (and its output) allow you to set up new output for the program output. When the new output is ready, you press the transition button and the Imagestore 750 transitions the armed contents of preset to program.

Your GUI might be configured with one or more “group select” button. If it has group select button(s), you can switch between several groups of main sources. When you switch groups, the source mnemonics of the selected group appear on the physical buttons.

In any case, up to 16 source buttons are available, using one group or another. Usually a GUI will have fewer than 16 source buttons.

Main source buttons are mutually exclusive. Pressing one selects that source and deselects an other source. Video effects are independent and *not* mutually exclusive.

Preview/User Buttons

When the panel is controlling an Imagestore 750, the buttons in the ‘Preview/User’ row are customer-definable. There are several dozen configurable button types among which are menu buttons.



(The buttons control the preview bus of the MCE when the panel is controlling an MCE. The buttons are disabled when the panel is controlling an MCPM.)

3. Control Panel

Functional Sections of the GUI

Aux/User Buttons

The aux/user buttons are divided into two parts:

1 Main source buttons.

The leftmost buttons represent sources *only*. They are the same sources as on the program, and preset buttons:



Source buttons are usually green, high-tally when selected and low-tally when not. If a main source has a problem (e.g., LOS or non-sync), it is high-tally amber when unselected and red when selected. Unused buttons are dark.

- ▲ If the Imagestore 750 under control does not support an auxiliary device, all source buttons of the aux/user row are disabled (dark).
- ▲ Imagestore 750s have an “aux bus follow” option. Depending on how this option is set, your aux buttons might follow the program or preset bus or might remain independent. When they follow the program bus, whatever source becomes selected on the program bus is also selected on the aux bus. When they follow the preset bus, whatever source becomes selected on the preset bus is also selected on the aux bus.

In any case, you can always use the aux buttons, normally, regardless of what was selected on the preset or program bus.

2 “Customer-definable buttons.

The rightmost buttons, if not committed to sources, are customer-definable buttons:



Some or all of these buttons might be blank. When a menu button is selected, its color is aqua.

Button Details

Main Source Button Characteristics

The main source buttons display an 8-character source name on the button.

The main source buttons use the following color scheme:

Dark	Button is not in use.
Low Green	Not selected.
High Green	Selected video.
High Amber	An unselected video source is non-sync or LOS, or an unselected audio source is LOS.
High Red	The selected video source is non-sync or LOS, or audio source is LOS.

The menu displays the source status. If status is “OK,” there is no message text. These are possible fault conditions:

1 Video LOS	3 Video Non-Sync
2 Audio LOS	4 Audio Problem

The numbers here show the priority of the messages (in case more than one condition arises).

“Hot Cuts”

When you press a button on the *program* bus, whether main source, video effect, or voice-over, the GUI will request the Imagestore 750 to perform a “hot cut” on the program bus. The Imagestore 750 performs the hot cut without benefit of a transition. Hot cuts are not recommended.

Video Effects

Selected video effects overlay the selected main video source. Video effects are cumulative and apply in the order defined by the Imagestore 750.

DSKs are applied in this order: DSK1, DSK2, DSK3, DSK4.

If the Imagestore 750 has a DVE unit, it can insert DVEs in the video stream in one of three places: before DSK1, before DSK2, or before DSK3.

Any one effect is electronically *downstream* and visually *on top of* all the effects preceding it in the order. Any one effect is electronically *upstream* and visually *under* of all the effects following it in the order.

“Downstream” effects modify “upstream” effects and the main source. Upstream effects never modify downstream effects. For example, a DVE might transform the main source and DSK1, but not DSK2 or DSK3.

- ▲ Please note: the order of effects and the number of effects assigned to the *buttons* do not affect the order in which the Imagestore 750 applies the effects. (Also, the main source is always upstream of any effect.)

The video effect buttons use the following color scheme:

Dark	The video effect is not supported by the Imagestore 750.
Low-tally blue	The video effect is <i>not</i> selected.
High-tally blue	The video effect is selected.
High-tally amber	An unselected video effect has a problem (e.g. non-sync or LOS). Amber is a warning flag.
High-tally red	The selected video effect has a problem (e.g. non-sync or LOS). Red is an error flag or a severe warning.

A video effect button has 3 lines of 8 characters.

The first line of text identifies the video effect itself.

The second line of text identifies the effect assigned to the effect processor.

The third line of text displays error status when an error has occurred and nothing at all if no error has occurred.

3. Control Panel

Functional Sections of the GUI

Downstream Keyers

The 4 keyer buttons are independent toggles. A downstream keyer (DSK) is active when its button is selected (high-tally) and inactive when its button is low-tally. (A DSK cannot actually be used when it is non-sync or LOS.)

An external key is usually a pair of video sources—a key and a fill. The key forms a mask for the fill. An internal key is a stored still frame or an animation. External keys can be provided by an Intuition XG processor.

A key source overlays the upstream source (and upstream effects) with specified clip, gain, and transparency parameters that control the key values.

Any DSK button can be associated with any key source, including Intuition XG clips.

DVE

The 4 DVE buttons are independent toggles. A DVE is active (selected) when its button is high-tally and inactive when its button is low-tally.

A DVE button is pre-configured with a DVE stored in the Imagestore 750.

There are button functions available ('PGM DVE Enable' and 'PST DVE Enable') that enable or disable DVEs on the program button row and the preset button row.

Video Effect Source Status

The menu area displays an effect's source status. Possible fault conditions include LOS and non-synchronous video.

You can check panel status to view all error conditions. Use the 'Manage Log' sub-menu under the 'Panel' menu. See page 78.

Voice-Overs

Like video effect buttons, the 2 voice-over button pairs on the program and preset bus are *not* mutually exclusive. When an over is selected on the program button row, its audio contributes to program audio. When an over is selected on the preset button row, it becomes armed and will play at the next transition.

▲ An over function mixes the selected audio source to air, but it does *not* trigger audio playback.

Voice-Over Button Characteristics

The voice-over buttons use the following color scheme:

Low violet	The voice-over is <i>not</i> selected.
High violet	The voice-over is selected.

Voice-Over Source Status

The menu area displays a voice-over's source status. These are possible fault conditions:

-
- 1 LOS
 - 2 Problem
-

If status is "OK," there will be no message.

Transition Control

These buttons are transition control buttons by convention. However, these 8 buttons are configurable.



The configurable button functions are described under [Definable Button Functions](#), on page 25.

System Control

These buttons are system control buttons by convention. However, these 3 buttons are configurable:



The configurable button functions are described under [Definable Button Functions](#), on page 25.

Transition Button

Pressing the transition (labeled ‘Take’) button initiates a transition in the Imagestore 750 controlled by the GUI. You can change the transition rate and type.



The transition button is orange under normal circumstances. The transition button is high-tally while the Imagestore 750 is performing a transition. Otherwise it is low-tally.

The maximum transition period is 999 frames. The minimum is 1.

When you press this button, the GUI sends a transition request to the Imagestore 750.

Please note the following points regarding transitions:

- You can start a new transition only after the current transition has completed.
- You can always interrupt a transition in progress with a hot cut on the program bus.
- Cut-fade, V-fade, U-fade, and fade-cut involve a fade to black during the transition.

Definable Button Functions

Buttons in the preview/user row, the aux/user row, the configurable button section, the transition control section, and the system control section of the iMC-Panel-GUI can be redefined. This table lists the button function classes:

Channel Selection	System Control	Transition Type	Automation Assist
Salvo	Menu	Transition Rate	

Following are descriptions of the functions that can be assigned to definable buttons during configuration (using the MCS Panel Configuration Editor).

3. Control Panel

Definable Button Functions

Remember that the GUI's button legends are at the discretion of the configurer. They might not be exactly what you see listed in this guide.

None

This kind of button has no function. On the panel, the button's legend is blank and the button is dark. (The GUI can never enable or disable this kind of button.)

Channel Selection

An Imagestore 750 is equivalent to a *channel*. A typical GUI configuration provides a set of channel selection buttons. (You can also select channels in the menus.)

A channel can be configured to invoke an NV9000 salvo when selected. Consult your administrator to determine which channels execute salvos.

Your panel will usually have a default channel which is the channel that is selected when the panel powers up. Your panel might be configured so that its default channel is part of a channel gang. If so, your panel is configured in what is called "automatic gang mode." Whenever the default channel is selected, all the channels in the automatic channel gang are selected—as a channel gang.

There are 2 button types for channels:

- 'Channel' selection.
- 'No Channels'.

Channel Select

A channel is equivalent to an Imagestore 750, an MCE, or an MCPM. Press a 'Channel Select' button to select a channel to control.

When you press a 'Channel Select' button, all status and configuration data for the newly selected channel are downloaded to the panel. (It takes about one second.)

'Channel Select' buttons are mutually exclusive unless gang selection is enabled.

If "automatic gang mode" is in effect and the channel you select is the default channel, the 'Channel Select' button causes all channels in the automatic channel gang to be selected. If you have a 'Channel Gang' button, it becomes high-tally. The main channel in the gang (which is the default channel, to which the button corresponds) tallies green and the follower channels in the gang tally amber.

When "automatic gang mode" is not in effect or you are selecting a channel other than the default channel, pressing the 'Channel Select' button does nothing more than acquire that channel. The channel button tallies green unless there are problems.

'Channel Select' buttons use the following colors:

- Low-tally green. The associated channel is not selected.
- High-tally green. The associated channel is selected and communicating. The channel might or might not be the main channel in a channel gang.
- High-tally amber. The associated channel is selected as a follower in a channel gang and is communicating.
- High-tally red. The associated channel is selected, but the iMC-Panel-GUI cannot establish communication with it.

A channel selection button also displays a mnemonic for the associated Imagestore 750, MCE, or MCPM.

A channel can accept up to 4 concurrent connections: any combination of up to 4 control panels may acquire the same channel at the same time. If a fifth control panel attempts to connect to an Imagestore 750 that already has four control panel connected to it, the fifth control panel's request for connection will be ignored.

- ▲ Note to configurers: only one channel selection button may be assigned to a channel.

No Channels

A 'No Channel' button quickly disconnects the GUI from all channels. (To restore operation, select any channel.) These are the 'No Channel' button colors:

- Green. The GUI is connected to a channel.
- Red. The GUI is not connected to any channel.

- ▲ Note to configurers: a GUI configuration can have only one 'No Channel' button.

- ▲ A "no channel" button is typically used in diagnostic situations.

Salvo

A GUI might have one or more salvo buttons. Pressing a salvo button causes an NV9000 salvo to execute.

- ▲ A channel change can also execute a salvo (except when you are switching to the default channel under automatic gang mode). That is because of the following restriction:
- ▲ When channel gang selection is enabled, salvos are inhibited.

System Control

There are 10 system control button *types* that can be present on your GUI:

Panel Lock	Fade-to-Black	Macro Arm	PGM DVE Enable	Auto Off
Group Select	Fade-to-Silence	Fire Macro	PST DVE Enable	Kaleido-X Layout

Panel Lock

The panel lock button prevents you (or someone else) from accidentally making changes to the Imagestore 750 while allowing you see the status of the Imagestore 750.

A panel lock button is a toggle. Press it once to lock the GUI. Press it again to unlock the GUI.

When the panel is locked:

- The panel lock button is high-tally red.
- All other buttons on the panel are disabled (locked) but their colors and legends remain unchanged.

When the panel is locked and you press the panel lock button, the panel will become unlocked and the panel will function normally.

Automation Off

The 'Automation Off' button is a toggle that enables or disables control of the currently selected Imagestore 750 by an automation system. When this button is high-tally red, the currently selected

3. Control Panel

Definable Button Functions

Imagestore 750 ignores commands from the automation system (if there is one). When this button is low-tally green, the Imagestore 750 communicates with the automation system normally.

If the currently selected Imagestore 750 does not allow you to turn automation off and on, the button is disabled (dark).

Fade to Black

A 'Fade To Black' (FTB) button is a toggle. Press it once to fade the program output of the currently selected Imagestore 750 to both black and silence. Press it again to fade the program output up from black and silence.

When the program output is in black/silence, fading to it, or fading up from it, the FTB and FTS buttons of the main menu are red.

Fades occur at the FTB (and FTS) rate defined in the Imagestore 750 configuration. The FTB rate is fixed in the Imagestore 750 configuration.

These are the button colors:

- High-tally green. The program output is fading or has faded to black.
- Low-tally green. The program output is fading or has faded back to normal.

Fade to Silence

A 'Fade To Silence' (FTS) button is a toggle. Press it once to fade the program output of the currently selected Imagestore 750 to silence. Press it again to fade the program output up from silence.

When the program output is silent, fading to it, or fading up from it, the FTS button of the main menu is red.

Fades occur at the FTS rate defined in the Imagestore 750 configuration. The FTS rate is fixed in the Imagestore 750 configuration.

These are the button colors:

- High-tally green. The program output is fading or has faded.
- Low-tally green. The program output is normal.

Group Select

The Imagestore 750 allows different source groups to be defined, where the sources in a group can be mapped to the main source buttons of the panel.

A 'Group Select' button selects a source group. When the group is selected, its source mnemonics appear on the main source buttons and (if your system is so configured) the sources in the group appear on monitors in a monitor wall.

Macro Arm

A 'Macro Arm' button selects an Imagestore 750 macro that will execute at the next transition.

- ▲ Certain macros can contain functions that must not execute during a transition. Such macros will execute immediately *after* the transition completes.

Fire Macro

A 'Fire Macro' button executes an Imagestore 750 macro immediately.

PGM DVE Enable

A 'PGM DVE Enable' button enables or disables the use of DVE buttons on the program button row.

PST DVE Enable

A 'PST DVE Enable' button enables or disables the use of DVE buttons on the preset button row.

Kaleido-X Layout

A 'Kaleido-X Layout' button triggers a *re-layout* of a Kaleido-X multi-viewer. (The panel will probably not have any 'Kaleido-X Layout' buttons if your master control system is not associated with a Kaleido-X multi-viewer. The Kaleido-X multi-viewer supports multiple layouts.)

Menu

A 'Menu' button is a toggle. Press it once to place the indicated menu on the touchscreen. Press the button again to place the main menu on the touchscreen.

There are 20 different menus that you can control:

- Main
- Automation
- Macro
- XG Keyer Layers
- Audio Monitor
- Audio Meters
- Source
- A/B Mixer
- DSK 1–4
- Channel Select
- Program Output Audio
- Program Input Audio
- Preset Input Audio
- Voice-Over 1, 2
- EasyPlay 1, 2

Each menu button controls one menu. To control all 18 menus, you need 18 menu buttons.

Details on the different menus can be found in Chapter 4, [Menus](#), on page 31.

Automation Assist

There are 4 'Automation Assist' button functions:

- 1 Cue next.
- 2 Skip next.
- 3 Hold next.
- 4 Take next.

These buttons allow you to manipulate the automation playout to a limited extent.

Transition Type

There are 8 'Transition Type' button functions:

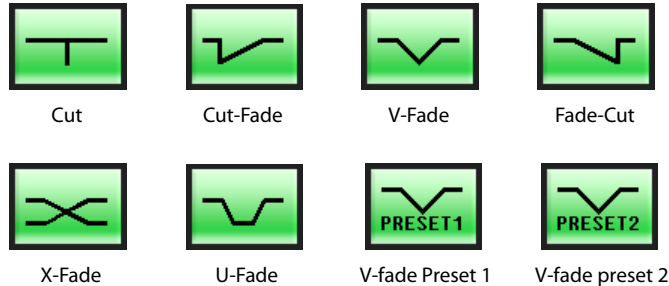
- Cut
- Cross fade (or X-fade)
- Cut/fade
- U-fade
- V-fade (or fade-fade)
- Fade/cut
- V-fade preset 1
- V-fade preset 2

3. Control Panel

Definable Button Functions

Transition type buttons are mutually exclusive. Press one to select the transition type the Imagestore 750 will use subsequently to execute transitions. All other transition type buttons become deselected.

Transition type buttons appear green and show graphics instead of text:



(A U-type transition is like a V-fade, but with a pre-configured dwell period. The exact length of the dwell period is defined by the person configuring the Imagestore 750. The characteristics of the V-fade preset1 and preset 2 types are also defined by the person configuring the Imagestore 750.)

Transition Rate

There are 4 'Transition Rate' button types:

- 1 Slow.
- 2 Medium.
- 3 Fast.
- 4 Automation Rate.

In the default configuration, the 3 transition rate buttons are in the transition control section at the front of the GUI.

The actual rates (i.e., the duration, in frames, of the transitions) that correspond to slow, medium, and fast are defined in the Imagestore 750 configuration.

The 'Automation Rate' button selects whatever rate is in effect in your automation system (if there is one).

The transition rate buttons are mutually exclusive. Press one to select the transition rate the Imagestore 750 will use subsequently to execute transitions. Other rate buttons become deselected.

Transition rate buttons are green.

- ▲ Keep in mind that each DSK has its own slow, fast, and medium rate settings. If you press the 'Medium' button, for instance, all DSKs will play out at their own medium rate (unless they are set to cut to the program output).

Notes

Remember that many of the iMC-Panel-GUI's button legends are at the discretion of the configurator. They might not be exactly what you see listed in this guide.

4. Menus

Chapter 4 describes the menus of the iMC-Panel-GUI as they apply to Imagestore 750s. It presents the following topics:

- [About the Menus](#)
- [Main Menu](#)
- [Automation Menu](#)
- [Channel Select Menu](#)
- [Audio Preview Menu](#)
- [Program Input Audio Menu](#)
- [Preset Input Audio Menu](#)
- [A/B Mixer Menu](#)
- [XG Keyer Layers Menu](#)
- [“EasyPlay” Menus](#)
- [Menu Button Conventions](#)
- [Audio Meters Menu](#)
- [Channel Select Menu](#)
- [DSK Menus](#)
- [Macro Menu](#)
- [Program Output Audio Menu](#)
- [Voice-Over Menus](#)
- [Sources Menu](#)
- [GUI Info Menu](#)

About the Menus

The GUI’s menu area presents a number of selectable menus. Using the menu(s), you can make source selections and parameter adjustments in several ways:

- Pressing the menu’s buttons or selecting an item in a list.
- Entering numeric values on the menu’s keypad.
- Pressing any of the 8 knob proxies below the menu, and moving the slider that appears as a result, to set a parameter value.
- Using the joystick.

It is possible to navigate from a menu to another menu. For example, the ‘Panel Settings’ button in Figure 4-2 is a navigation button that takes you to the ‘Panel’ menu.

4. Menus

About the Menus

Main Menu

Figure 4-2 illustrates the main menu components:

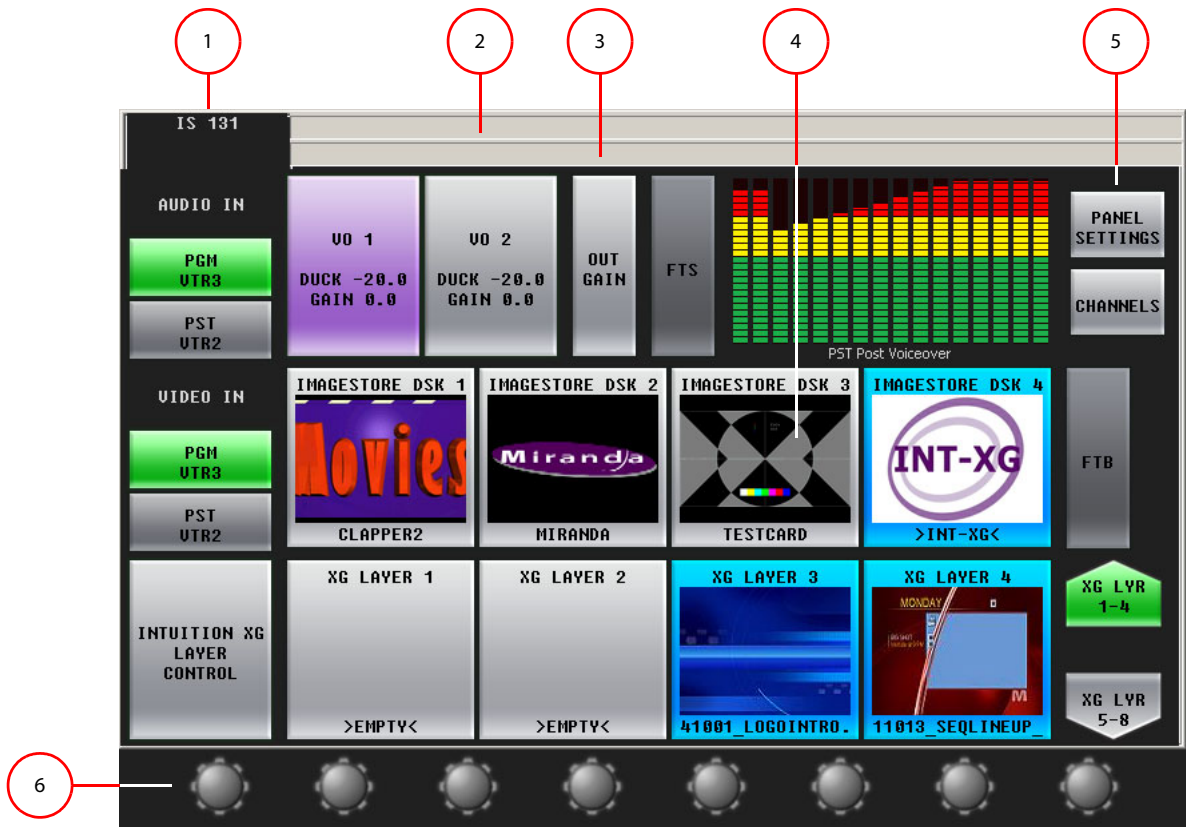


Figure 4-1. Menu Parts (Showing the Main Menu)

1	Menu name	3	Message bar	5	Navigation buttons
2	Error Bar	4	Toggle button	6	Knob proxies

Following are descriptions of each menu area:

1 Menu name

The current menu name is always present in the top left corner. This label changes dynamically as you use different menus.

The main menu shows the channel name in this area.

2 Error Bar

The error bar is a rectangular area at the top of the menu that displays error messages (e.g., “Panel Not Connected”) and other important “alerts.”

3 Message bar

The message bar is a second rectangular area at the top of the menu that displays confirmation messages when certain actions are in progress (e.g., “Changing Channels”) or have completed (e.g., “NV9000 Salvo Successful”).

4 Selection buttons

A selection button lets you choose an one of several items. In Figure 4-2, the selection button identified selects DSK 3.

5 Navigation buttons

A navigation button takes you to another menu. In Figure 4-2, the navigation button identified selects the panel menu.

6 Knob proxies

You can adjust menu parameters (such as DSK transparency) by clicking a parameter’s associated knob “proxy” and moving the slider that appears. (The proxy turns green when you select it.) For disabled parameters, the knob proxy is also disabled. Enabled parameters show a green “asterisk” near by the proxy to show that it is usable.

Other Menu

Figure 4-2 illustrates the usual menu components:

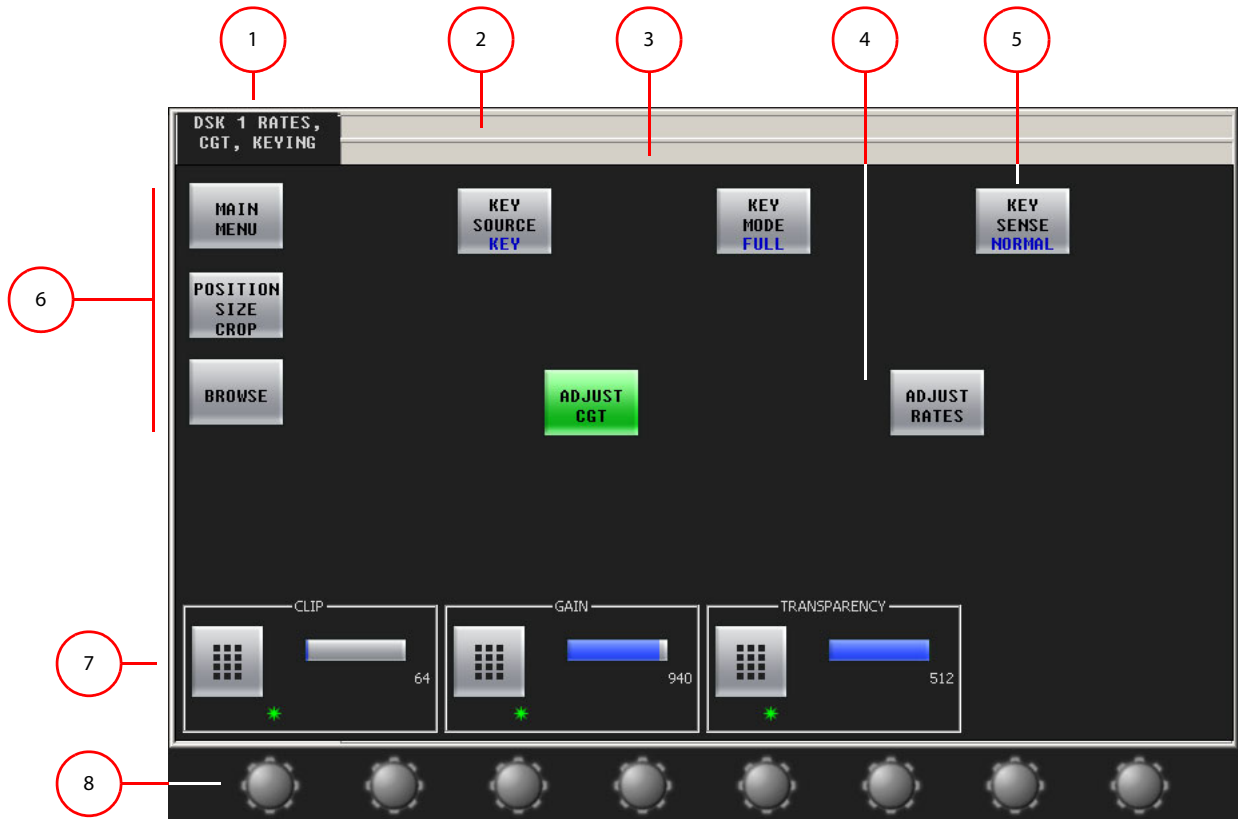


Figure 4-2. Menu Parts

1	Menu name	3	Message bar	5	Functional area	7	Keypad Buttons
2	Error Bar	4	Toggle button	6	Navigation bar	8	Menu “knobs”

4. Menus

About the Menus

Following are descriptions of each menu area:

1 Menu name

The current menu name is always present in the top left corner. This label changes dynamically as you change menus.

2 Error Bar

The error bar is a rectangular area at the top of the menu that displays error messages (e.g., “Panel Not Connected”) and other important “alerts.”

3 Message bar

The message bar is a second rectangular area at the top of the menu that displays confirmation messages when certain actions are in progress (e.g., “Changing Channels”) or have completed (e.g., “NV9000 Salvo Successful”).

4 Toggle button

A toggle button lets you switch a function or an option on and off or switch between two options.

5 Functional area

The function area is the menu’s working area for all selections, adjustments, and modifications. The content of the area changes according to the selected menu. Content can include messages, lists of settings, a scroll bar, graphics, buttons, and a keypad.

6 Navigation bar

Some buttons are “navigation buttons.” These buttons either change the display, introducing new controls, or take you to another menu altogether.

These are typical navigation buttons:



Press ‘Main Menu’ to return to the main menu.



Press ‘Back’ to jump one level up in the menu structure, from your current location. This button is present on many menus.



Press ‘Edit/More’ to jump one level down the menu structure, for purposes of adjusting a selected item (e.g., an item in a list). Only a few menus have this button.

7 Keypad Buttons

The keypad buttons appear when a menu has a parameter that you can set with a numeric value. When you touch a keypad button, the GUI displays the keypad.

8 Menu “knobs”

You can adjust menu parameters by clicking a parameter’s associated knob “proxy” and moving the slider that appears. (The proxy turns green when you select it.) For disabled parameters, the knob proxy is also disabled. Enabled parameters show a green “asterisk” near by the proxy to show that it is usable.

Menu Button Conventions

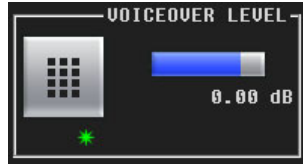
The following rules apply to menu buttons in the GUI's menu area:



A *momentary* button executes the selected function, changes to bright green for an instant, then returns to dark green. The 'Restore Default' button is an example.



A few buttons are red, indicating that caution is advised. The 'Apply' buttons in the audio channel shuffle menus are also red.



Keypad buttons appear bright when they are enabled and usually have a green "asterisk" that indicates the knob below it will change the button's parameter value. The parameter's current value is present in the enclosing box. Pressing the button itself activates the keypad (menu) so that you can adjust a parameter numerically.



Some *list* buttons are blue; some are green. When a list button is selected, it is high-tally.

See [About Colors](#) on page 81 for additional information on button colors.

Keypads

Figure 4-3 shows the keypad, used throughout the menu system for numeric entry and parameter adjustment:



Figure 4-3. Keypad (Sample)

Please note:

- The box with large numbers is the "entry register" that shows your numeric entry in progress.
- Press 'Clear' to clear the entry register.
- Press 'Cancel' to return to the previous menu—without entering a number.
- Press 'Done' to accept the new entry, and return to the previous menu. The 'Done' button remains disabled until you make an entry.

If the number is out of range, an error message appears. (Press 'OK' to return to the keypad.)

4. Menus

About the Menus

Lists

The menus present channel names in lists. Lists are arrays of “buttons,” up to 3 buttons wide and indefinitely long. When a list has more than 4 rows of buttons, a scroll bar appears on the right side of the menu.

Figure 4-4 shows a sample:

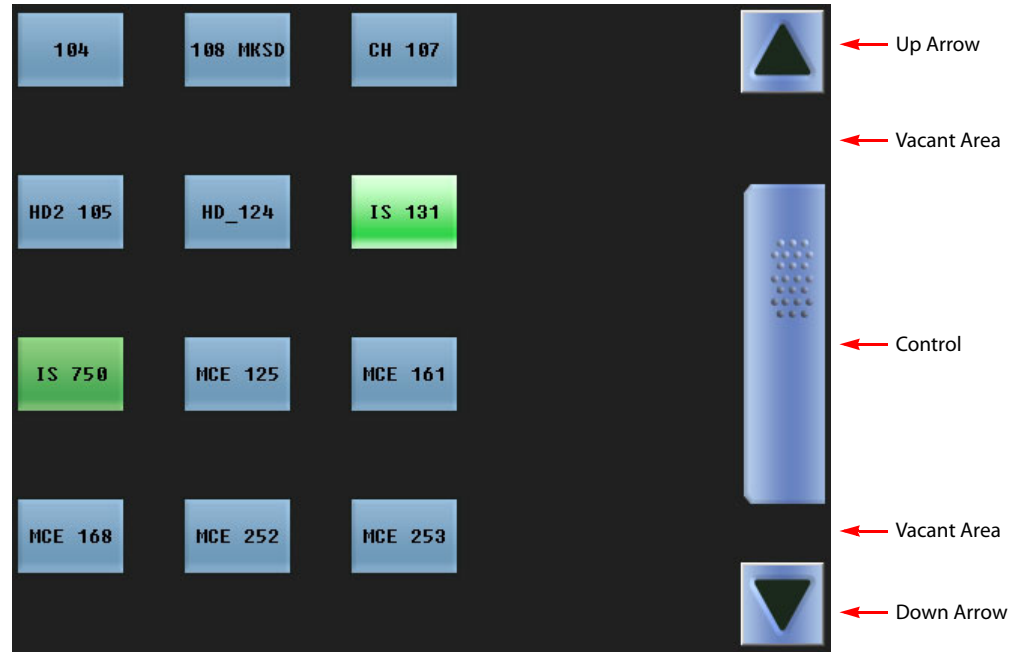


Figure 4-4. Example of a Settings List with Scrollbar

Click or touch any item in the list to select the item. Use the scroll bar when the item you want is off-screen.

You can scroll through a list in several ways:

- A page at a time.
 - A. Click or touch an up or down arrow.
 - B. Click or touch either of the vacant areas in the scrollbar.
 - C. Use any of the left 4 knob proxies.
- A row at a time.

Click or touch the scroll bar control and move it up or down.

Move the joystick up or down.

When you press a list button, your choice takes effect *immediately*. The GUI does not wait for any confirmation.

Main Menu

Figure 4-5 shows the iMC-Panel-GUI's main menu:

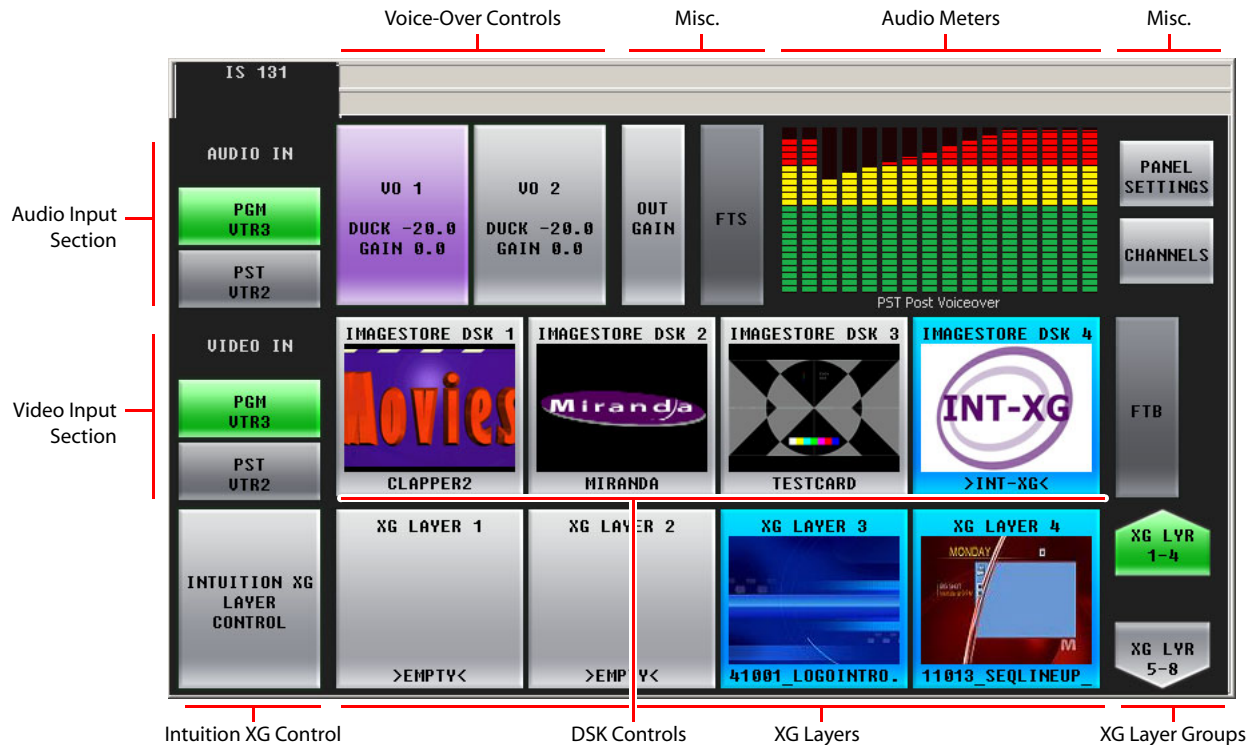


Figure 4-5. Main Menu

Following are brief descriptions regarding the main menu elements:

- Audio input section

The buttons in this section are status buttons, showing the main sources selected on the program and preset button rows. (This can be important if the source selected is not among the sources currently on the program and preset buttons.)

The buttons are labeled 'PGM' and 'PST'. The 'PGM' button is always green and shows the source currently selected on the program bus. The 'PST' button is always grey and shows the source selected on the preset bus.

If you press 'PGM', the GUI shows the 'Program Input Audio' menu. If you press 'PST', the GUI shows the 'Preset Input Audio' menu.

- Video input section

The buttons in this section are status buttons, showing the main sources selected on the program and preset button rows. (This can be important if the source selected is not among the sources currently on the program and preset buttons.)

Here too, the buttons are labeled 'PGM' and 'PST'. The 'PGM' button is always green and shows the source currently selected on the program bus. The 'PST' button is always grey and shows the source selected on the preset bus.

If you press either of these buttons, the GUI shows the 'Sources' menu.

4. Menus

Main Menu

- Voice over control

The two buttons in this section access the voice-over 1 and voice-over 2 menus. The button becomes highlighted (in purple) when the corresponding voice-over is on program output. See [Voice-Over Menus](#) on page 65.
- Audio Meters

The meters in this portion of the screen show the audio levels of the designated audio source which can be selected in the audio meters menu. See [Audio Meters Menu](#) on page 39.

Touch the meters section to access the ‘Audio Meters’ menu.
- Intuition XG, XG layers and Layer groups.

The button on the left, labeled ‘Intuition XG Layer Control’, accesses the [XG Keyer Layers Menu](#) (page 69).

The two buttons on the right, labeled ‘XG Lyr 1–4’ and ‘XG Lyr 5–8’ cause the 4 middle buttons to represent XG layers 1–4 or 5–8.

The 4 middle buttons at the bottom represent XG layers.
- DSK controls

Each of the 4 ‘Imagestore DSK’ buttons in the middle of the screen accesses a DSK browser menu. See [DSK Menus](#) on page 47.
- Miscellaneous controls

The ‘Output Gain’ button accesses the ‘Program Output Audio’ menu. See [Program Output Audio Menu](#) on page 58.

The ‘FTS’ button is a status button that turns red when the channel’s program output is in silence, fading to silence, or fading up from silence.

The ‘FTB’ button is a status button that turns red when the channel’s program output is in black/silence, fading to black/silence, or fading up from black/silence.

The ‘Panel Settings’ button accesses the panel menu. See [GUI Info Menu](#) on page 77.

The ‘Channels’ button accesses the channel selection menu. See [Channel Select Menu](#) on page 43.

Audio Meters Menu

Figure 4-6 shows the iMC-Panel-GUI's audio meters menu:



Figure 4-6. Audio Meters Menu

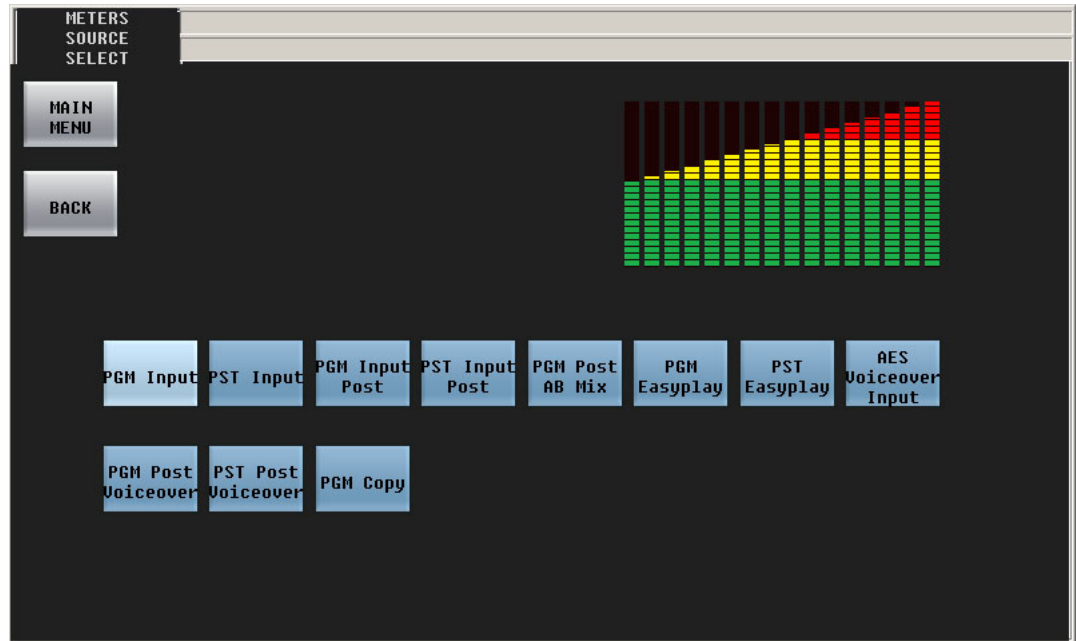
The audio meters menu displays 16 audio meters. The meters show the audio channels for the selected source. Click 'Meters Source Select' to get the 'Meters Source Select' menu where you can select the source for the meters.

Click 'Main Menu' to return to the main menu.

4. Menus

Audio Meters Menu

This is the 'Meters Source Select' menu:



Press any source button to change the metering source.

There are 11 source choices illustrated here:

PGM Input	PGM Input Post	PGM Easyplay	PGM Post Voice-Over
PST Input	PST Input Post	PST Easyplay	PST Post Voice-Over
PGM Copy	PGM Post AB Mix	AES Voice-Over Input	

The number of sources and the names of the sources are determined by the person who configured the Imagestore 750. Please consult your management if you need to know what the sources represent.

Press 'Back' to return to the 'Audio Meters' menu.

Press 'Main Menu' to return to the main menu.

▲ Easyplay is a trade name that represents audio segments stored in the Imagestore 750.

Audio Preview Menu

Figure 4-6 shows the GUI's audio preview menu:

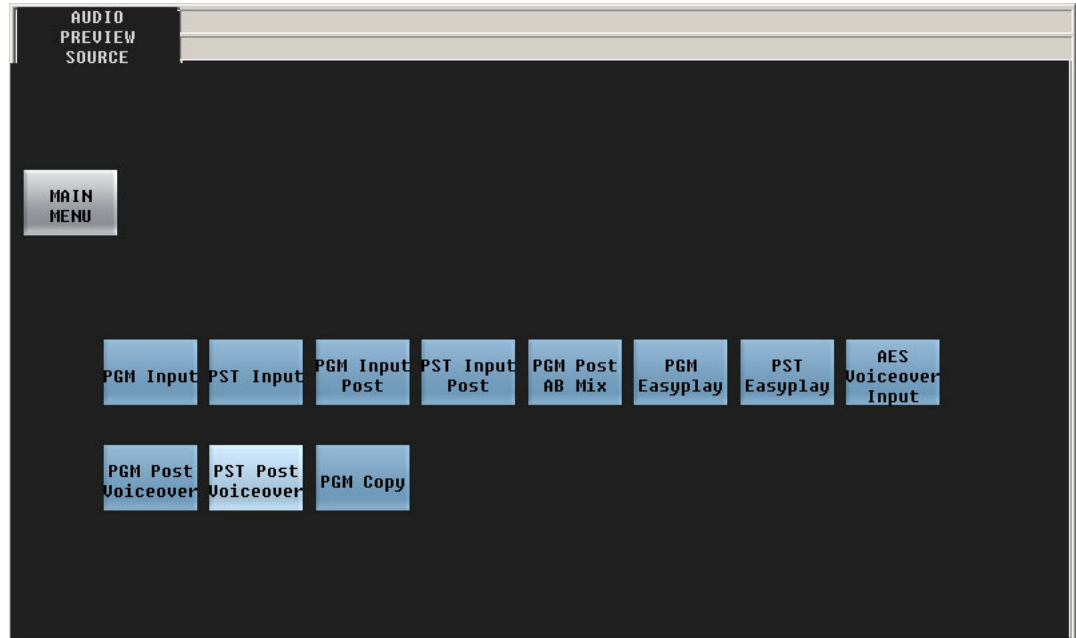


Figure 4-7. Audio Preview Menu

This menu allows you to select the source for the audio that is directed to the preview monitor.

There are 11 source choices illustrated here:

PGM Input	PGM Input Post	PGM Easyplay	PGM Post Voiceover
PST Input	PST Input Post	PST Easyplay	PST Post Voiceover
PGM Copy	PGM Post AB Mix	AES Voiceover Input	

The number of sources and the names of the sources are determined by the person who configured the Imagestore 750. Please consult your management if you need to know what the sources represent.

▲ Easyplay is a trade name that represents audio segments stored in the Imagestore 750.

Click the 'Main Menu' button to return to the main menu.

4. Menus

Automation Menu

Automation Menu

Figure 4-8 shows the GUI's automation menu:

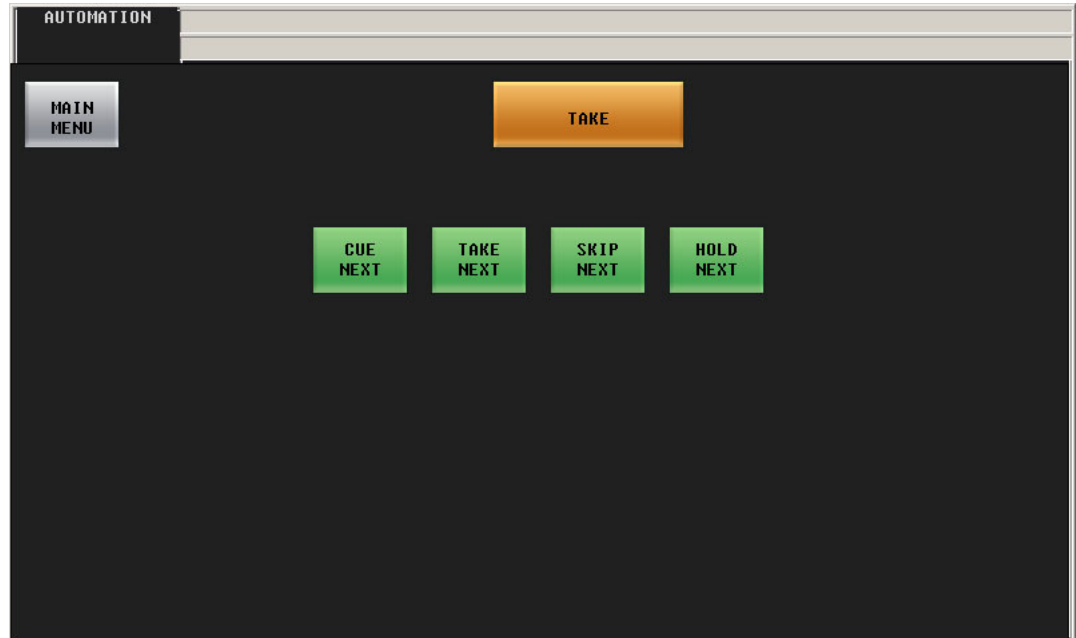


Figure 4-8. Automation Menu

The automation menu provides an alternative to dedicated function buttons.

Buttons

These buttons allow you to manipulate the automation playout to a limited extent.

The meanings of the terms 'Cue Next', 'Skip Next', 'Hold Next', and 'Take Next' are defined by the automation system. Consult your management if necessary.

The 'Take' button initiates a transition.

Press the 'Main Menu' button to return to the main menu.

Channel Select Menu

Figure 4-9 shows the GUI's channel select menu:

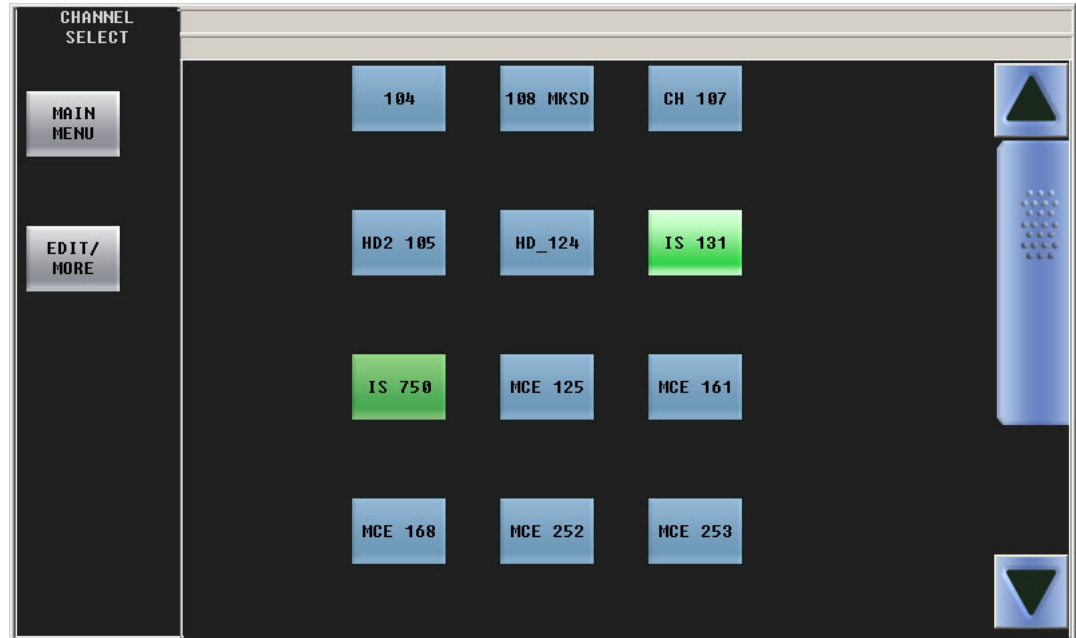


Figure 4-9. Channel Select Menu

This menu shows a list of channels. The currently selected channel is highlighted. If the list has more than 12 channels, scrolling is enabled.

Press any channel button to select that channel. The channel selection is immediate, although it takes about one second for the switch to occur. If your GUI is under “automatic gang mode” and you choose the default channel, all channels in the automatic channel gang are selected and gang selection is enabled. A multiple channel selection takes slightly longer than one second.

However, the channel selection is not immediate if the channel (or one of the ganged channels) is in use at a panel that does not share. Either you will be given the opportunity to preempt (i.e., “kick”) the other panel or you will be denied access to the channel. See [Sharing Channels](#), following.

- ▲ When you and other operators share the same channel, the other panels reflect any change you make, and your control panel reflects changes made on other panels.

When your GUI is in “automatic gang mode,” one of the channels (the default channel) is the main channel in a channel gang. The menu does not indicate which channel is the default channel. Consult your administrator if you need to determine which is the default channel. (The default channel is the channel that is selected on panel power-up.)

If a configurable button is assigned to the channel you select, it becomes high-tally. Under automatic gang mode, any buttons assigned to the channels in the gang become high-tally.

4. Menus

Channel Select Menu

Sharing Channels

Your GUI can be configured to share or not to share channels with other panels.

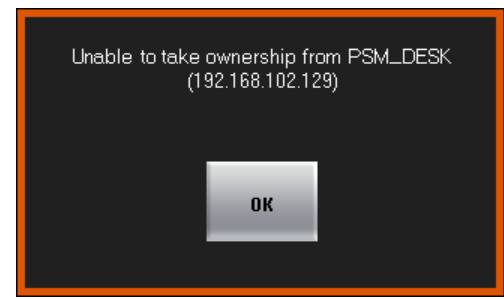
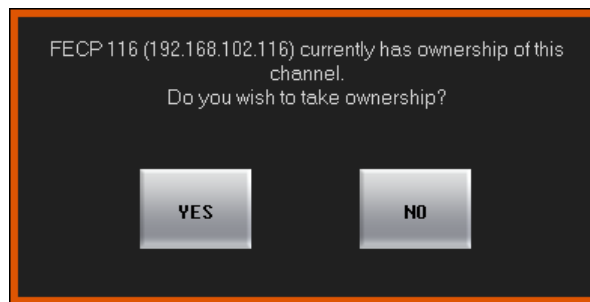
If your GUI is not configured to share, an attempt to acquire the channel at an other panel can preempt your use of the channel. If the other panel has a higher priority than yours has, it will preempt you and take over the channel, and you will be notified of the fact.

Conversely, if you wish to preempt another panel, and have a higher priority than that panel, you can preempt the other panel.

If your GUI is configured for sharing, it is possible for you to share a channel with other panels, unless some other channel that is not configured for sharing controls that channel.

Preemption

When your GUI is not configured for sharing, if the channel (or one of the ganged channels) you want to control is in use, you will see either a permission message or a denial of access message:



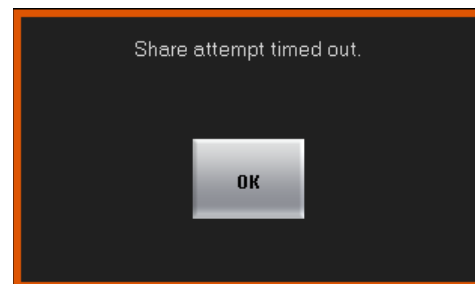
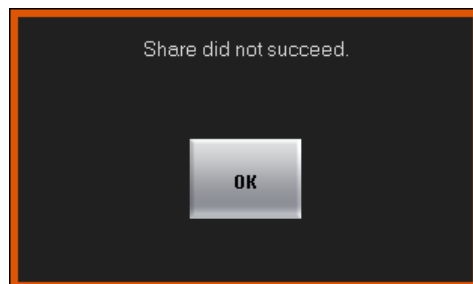
If you see a permission message, and you wish to preempt the other panel, click 'OK'. Otherwise click 'Cancel'.

If you see a denial of access message, click 'OK'. You may not acquire the channel. You can try again later, choose another channel, or negotiate with the other panel operator.

- ▲ If someone preempts you, your panel will immediately appear to "go dead." What actually happens is the same thing that would happen if you pressed a 'No Channel' button. You will have to wait for the channel to become available again or switch to another channel.
- ▲ A panel can preempt another panel if it has been configured with a higher priority or in some cases, with the same or higher priority.

Sharing

When your GUI is configured for sharing, if the channel (or one of the ganged channels) you want to control is in *exclusive* use (at a panel that does not share), you will see a failure message:



If the sharing attempt failed, your panel will revert to its previous state, controlling the channel it controlled prior to the sharing attempt.

Edit/More

Press 'Edit/More' to access the [Channel Details Sub-Menu](#), which lets you view a channel's parameters and the channel's log.

Note

You cannot specifically gang channels with the 'Channel Select' menu although you can select the default channel which might be part of a channel gang under automatic gang mode.

In general, ganging or "un-ganging" channels must be performed with a 'Gang Channels' button.

Channel Details Sub-Menu

Press 'Edit/More' in the 'Channel Select' menu to view the 'Channel Details' menu:

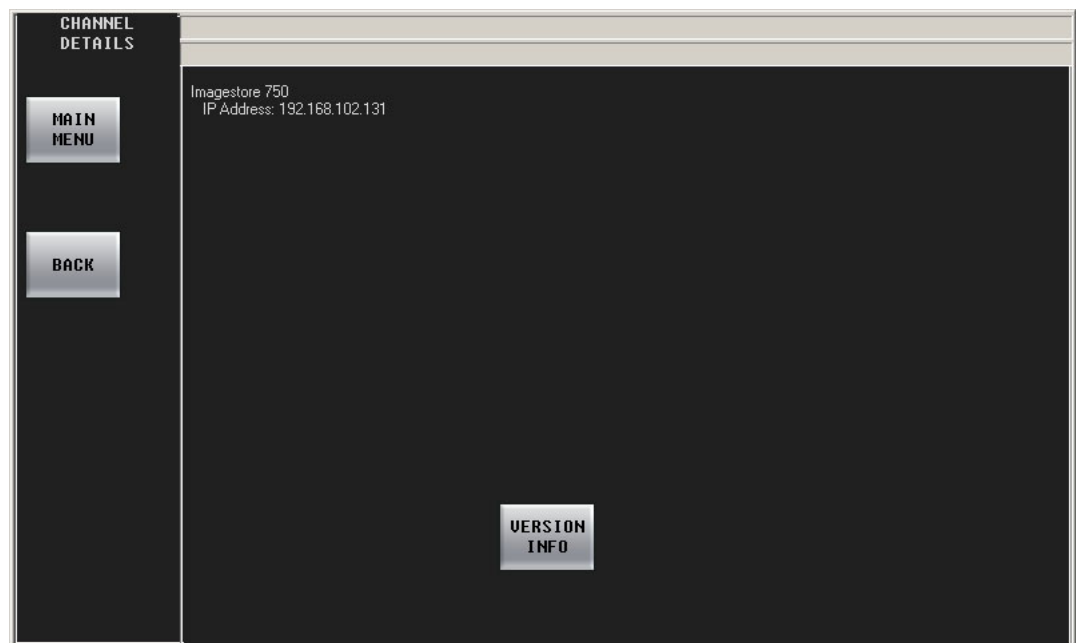


Figure 4-10. Channel Details Menu (Sample)

The top of the function area displays the name, IP address, and type of the selected Imagestore 750. Press 'Version Info' to display the 'Version Info' sub-menu.

If the channel you have selected is the default channel and it is part of an automatic channel gang, the 'Channel Details' sub-menu displays information about the default channel only. (The default channel is the main channel of the gang.)

4. Menus

Channel Select Menu

Version Info Sub-Menu

The 'Version Info' sub-menu lists the software and firmware versions of the attached Imagestore 750. Refer to this menu, as required, for channel-related trouble-shooting:

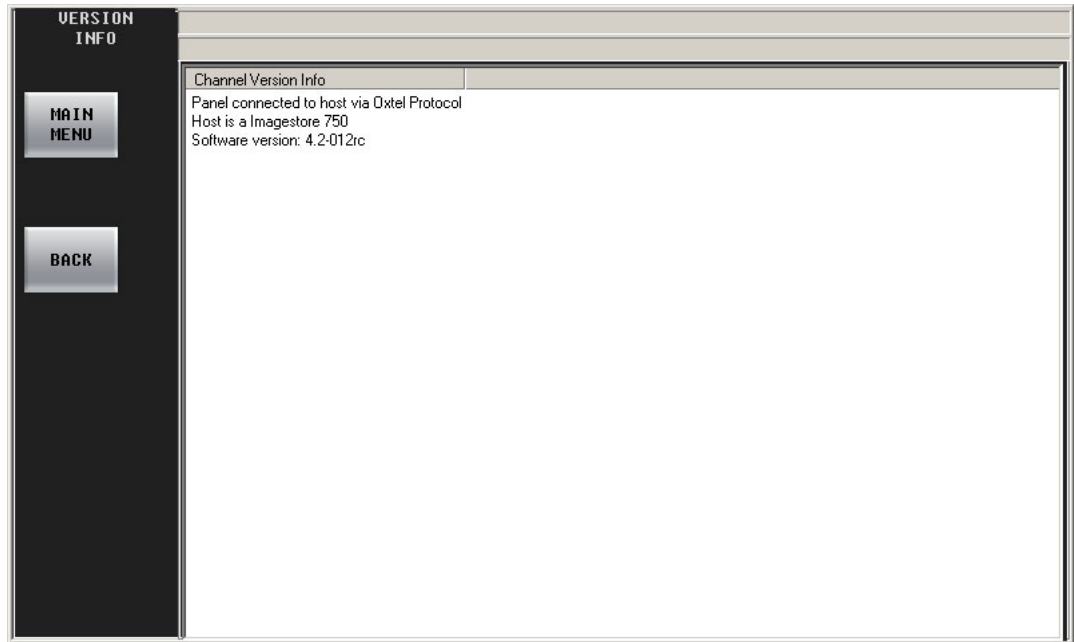


Figure 4-11. Version Info Menu (Sample)

DSK Menus

Figure 4-12 shows the GUI's 'DSK 1 Browser' menu:



Figure 4-12. DSK 1 Menu

The DSK 2, DSK 3, and DSK 4 browser menus are just like the DSK 1 browser menu.

The DSK browser menus let you select a key (downstream key) and specify display parameters for it.

Click a DSK thumbnail to select the DSK. Use the scroll bar to view additional thumbnails. The outer arrows of the scrollbar scroll the list to its top or bottom. The inner arrows scroll the list of DSKs by one line up or down. The 'Show Selection' button causes the list to scroll so that the currently selected DSK appears in the window. This can be important if you have very many DSKs from which to choose.

The parameters controlled by the options buttons apply to the most recently selected DSK.

Press the red 'Load Disabled' button to enable selection of clips using thumbnails. The button turns green and reads 'Load Enabled' when clip selection is enabled. Disabling loads prevents accidental select of a clip. Press 'Load Enabled' again to re-disable selection of clips.

Press the 'Clear DSK' button to unselect the currently selected clip. The result is no selection.

Press the 'Main Menu' button to return to the main menu.

XG layers are handled by one of the DSKs. The relationship between XG layers and a DSK is not simple. See [Working with XG Layers](#) on page 97 for information.

4. Menus

DSK Menus

Options Buttons

There are 3 options buttons:

- ‘Position Size Crop’
This button accesses the [Position, Size, Crop](#) sub-menu.
- ‘Rates CGT Keying’
This button accesses the [Rates, CGT, Keying](#) sub-menu.
- ‘Options Saving’
This button accesses the [‘Options Saving’](#) sub-menu.

List Buttons

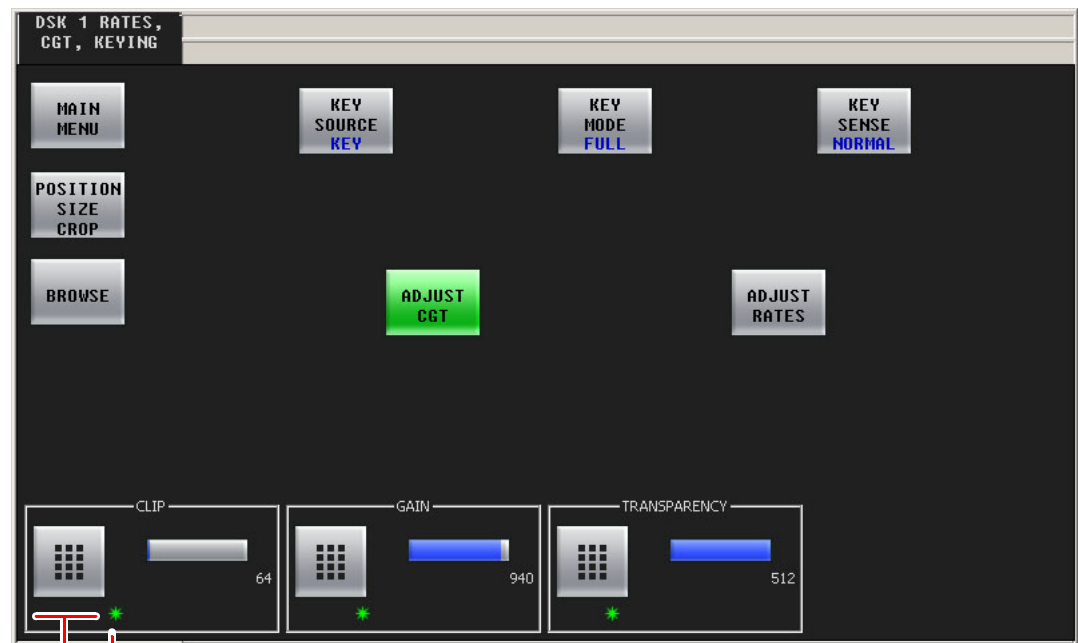
There are 2 list buttons. These buttons filter the list of keys presented in the menu. When the button is green, the list includes items of the type indicated:

Still Stored still frames.
Anim Stored animations.

When the button is dark gray, the list of keys does not show items of that type. If all the list buttons are dark gray, the list appears empty.

Rates, CGT, Keying

This is the ‘Rates, CGT, Keying’ sub-menu:



Keypad Icon Green Asterisk

In this menu, you can make adjustments to the currently selected DSK.

The ‘Main Menu’ button returns you to the main menu.

The ‘Position Size Crop’ button switches to the ‘Position, Size, Crop’ sub-menu.

The ‘Browse’ button takes you back to the DSK browser.

The 'Adjust CGT' button causes the clip, gain, and transparency controls to appear (as shown above).

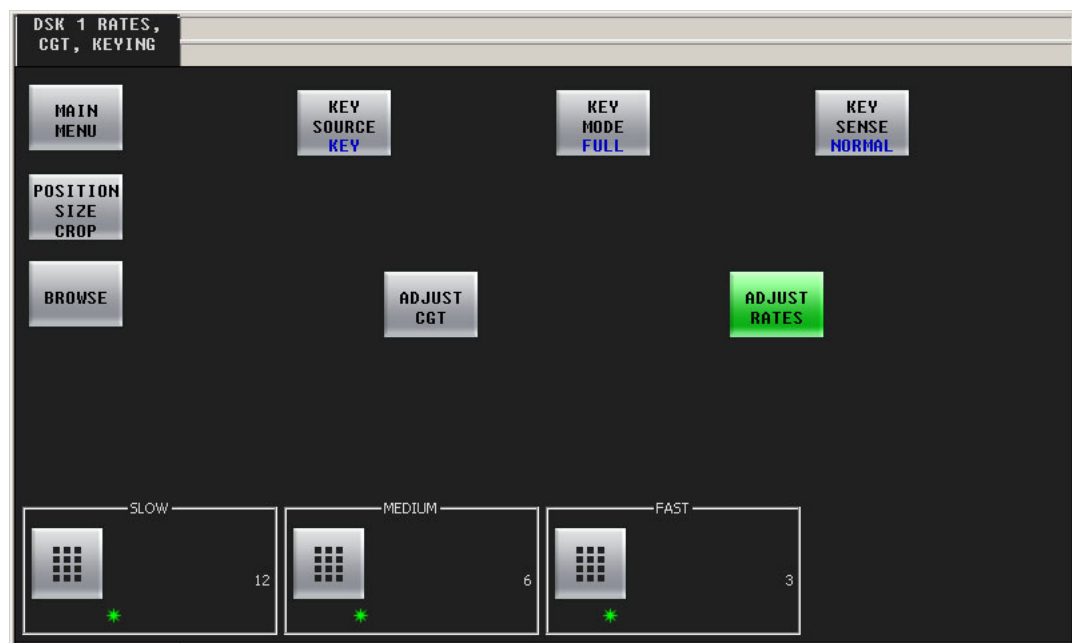
The 'Adjust Rates' button causes the slow, medium, and fast rate controls to appear.

Clip, Gain, Transparency

At the bottom of the screen are 3 numerical controls for the CGT (clip, gain, and transparency) parameters. To adjust any of those parameters, either use the knob proxy associated with the green asterisk in the control box, or touch the keypad icon to access a large keypad with which to enter a number.

Rate Adjustment

When you touch the 'Adjust Rate' button, the menu presents rate controls at the bottom:



There are 3 numerical controls for the 3 rates (slow, medium, and fast). To adjust any of those parameters, either use the knob proxy associated with the green asterisk in the control box, or touch the keypad icon to access a large keypad with which to enter a number.

The 'Main Menu' button returns you to the main menu.

The 'Position Size Crop' button switches to the 'Position, Size, Crop' sub-menu.

The 'Browse' button takes you back to the DSK browser.

Keying Parameters

The 'Key Source' button is a toggle that switches between 'Key' and 'Self'. 'Key' means that the key includes a key signal. 'Self' means that the key is a self-key and does not include a key signal.

The 'Key Mode' button is a toggle that switches between 'Full' and 'Linear'.

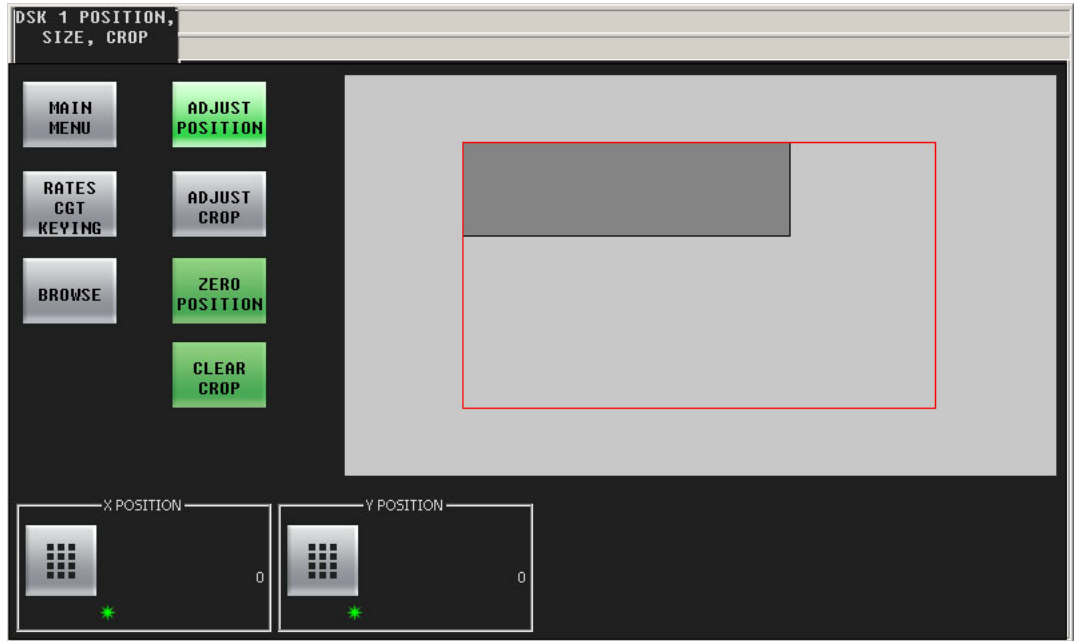
The 'Key Sense' button toggles between 'Normal' and 'Invert'.

4. Menus

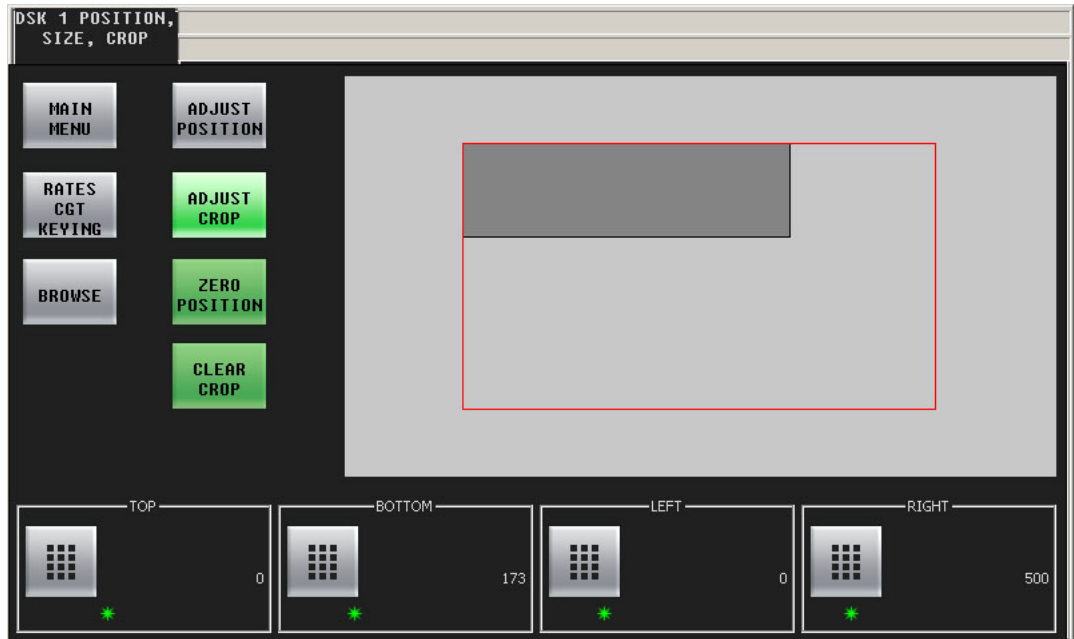
DSK Menus

Position, Size, Crop

This is the 'Position, Size, Crop' sub-menu. When you touch 'Adjust Position', two position controls appear at the bottom:



When you touch 'Adjust Crop', four boundary controls appear at the bottom:



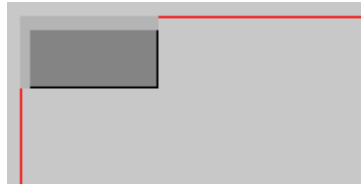
To adjust any of those parameters, either use the knob proxy associated with the green asterisk in the control box, or touch the keypad icon to access a large keypad with which to enter a number.

The numerical values are in units of pixels.

The 'Zero Position' button sets the 'X Position' and 'Y Position' parameters to 0.

The 'Clear Crop' button sets the 'Top', 'Bottom', 'Left', and 'Right' parameters to 0.

Position and crop values are independent. Changing one does not change the other. However, the position controls affect the placement of the *uncropped* boundary of the DSK. For example, with position (0,0) and crop values (left = 30 and top = 40), the DSK will appear to be inset from the edge of the frame by 30 and 40 pixels.



The amount of crop is indicated by a light grey field.

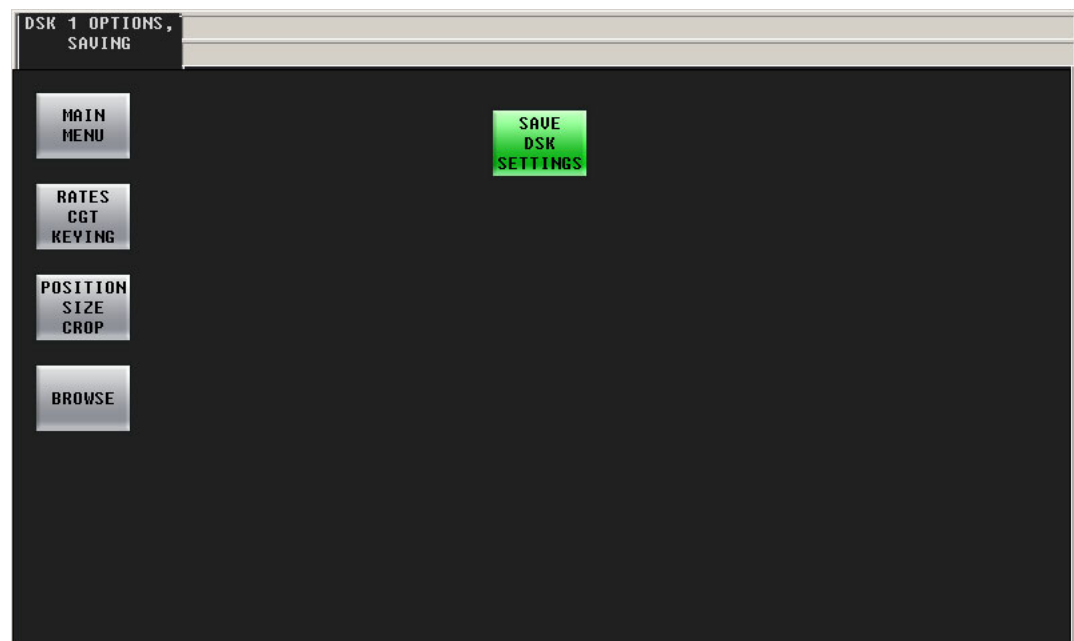
The 'Main Menu' button returns you to the main menu.

The 'Position Size Crop' button switches to the 'Position, Size, Crop' sub-menu.

The 'Browse' button takes you back to the DSK browser.

'Options Saving'

This is the 'Options Saving' sub-menu:



In this menu, you can save the settings of the currently selected DSK. Press 'Save DSK Settings' to do so.

▲ If you have cleared the DSK, the 'Save DSK Settings' button is absent.

The 'Main Menu' button returns you to the main menu.

The 'Rates, CGT, Keying' button takes you to the 'Rates, CGT, Keying' sub-menu.

The 'Position Size Crop' button takes you to the 'Position, Size, Crop' sub-menu.

The 'Browse' button takes you back to the DSK browser.

4. Menus

“EasyPlay” Menus

“EasyPlay” Menu

Figure 4-12 shows the GUI’s EasyPlay 1 browser menu:

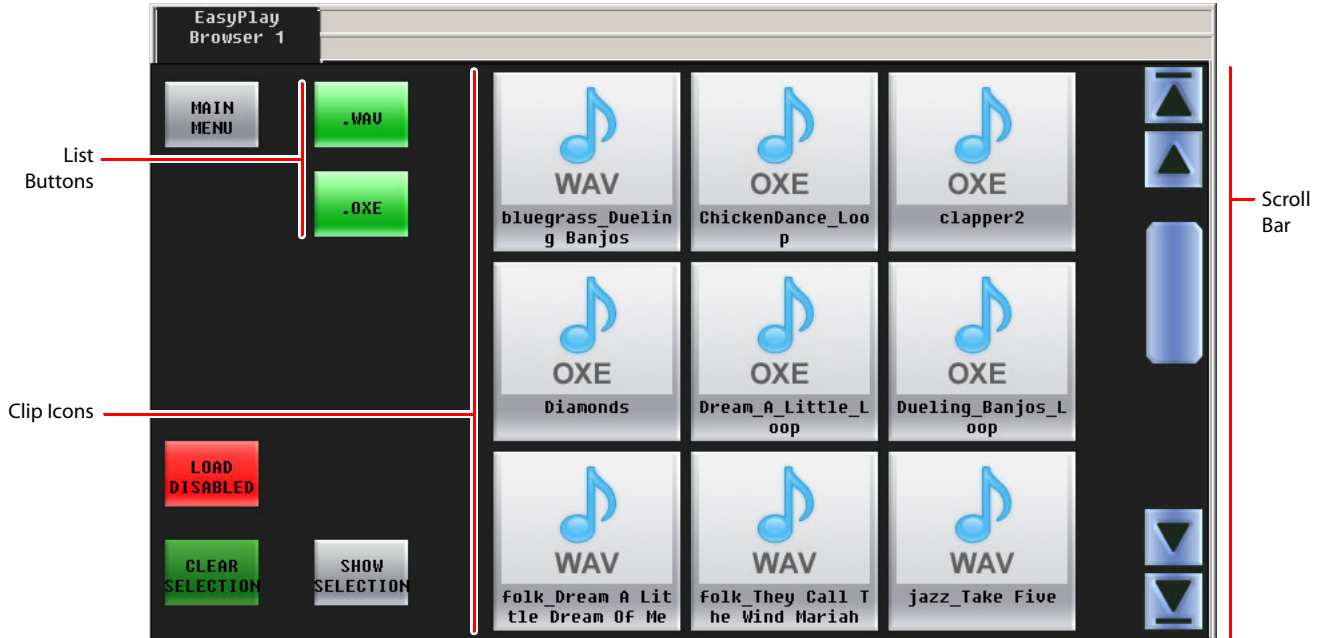


Figure 4-13. DSK 1 Menu

The EasyPlay 1 browser menu corresponds to voice-over 1. The EasyPlay 2 browser menu corresponds to voice-over 2. The menus are functionally identical.

▲ “EasyPlay” is a trademark that represents an (optional) audio clip playout component in the Imagestore 750. If your Imagestore 750 does not have Easyplay, these two menus are empty.

An EasyPlay browser menu lets you select an audio clip.

Click a clip icon to select the clip. Use the scroll bar to show additional clips. The outer arrows of the scrollbar scroll the list to its top or bottom. The inner arrows scroll the list of clips by one line up or down.

The ‘Show Selection’ button causes the list to scroll so that the currently selected clip appears in the window. This can be important if you have very many clips from which to choose.

The ‘Load Disabled’ button—when it is red—prevents you from accidentally selecting a clip. To be able to select a clip, first click the ‘Load Disabled’ button. It will turn green and you can proceed to make a selection.

The ‘Clear Selection’ button removes the currently selected clip from the EasyPlay component.

Macro Menu

Figure 4-14 shows the GUI's macro menu:

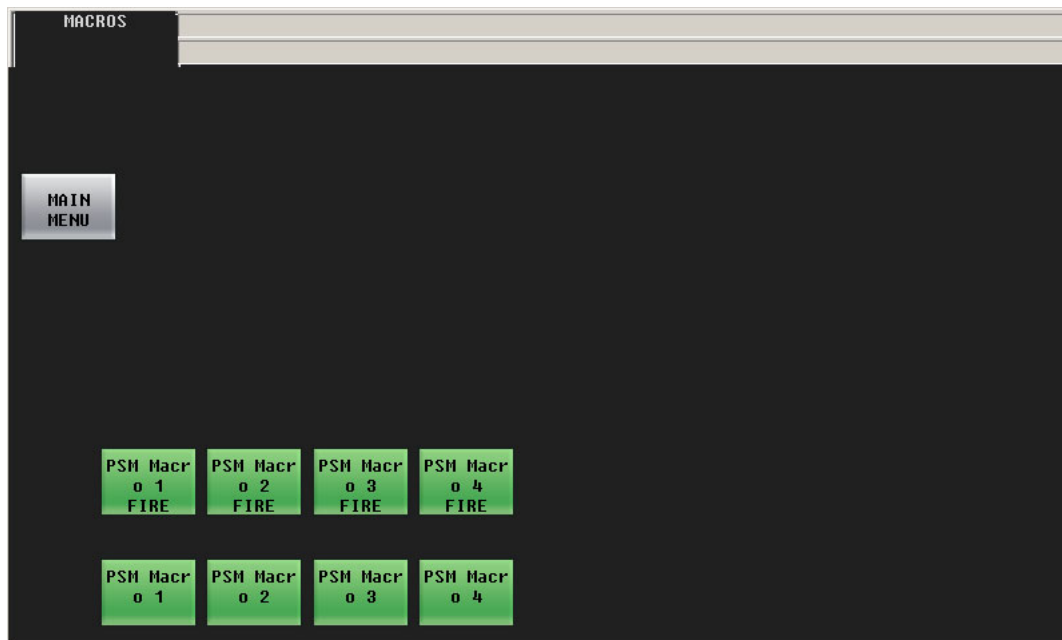


Figure 4-14. Macro Menu

This menu can arm macros or execute Imagestore 750 macros immediately. The upper row of buttons are “fire” buttons and execute the macros immediately. The lower row of buttons are “arming” buttons. An armed macro will execute at the next transition (or at the end of the next transition if it contains commands that interfere with the transition itself).

Buttons for armed macro appear high-tally and show the word ‘ARMED’.

The “fire” buttons go high-tally briefly when the macro is executing.

Press the ‘Main Menu’ button to return to the main menu.

The number of macros and the names of the macros depend on the Imagestore 750 configuration.

Consult your management to determine what the Imagestore 750’s macros do.

4. Menus

Program Input Audio Menu

Program Input Audio Menu

Figure 4-15 shows the GUI's 'Program Input Audio' menu:

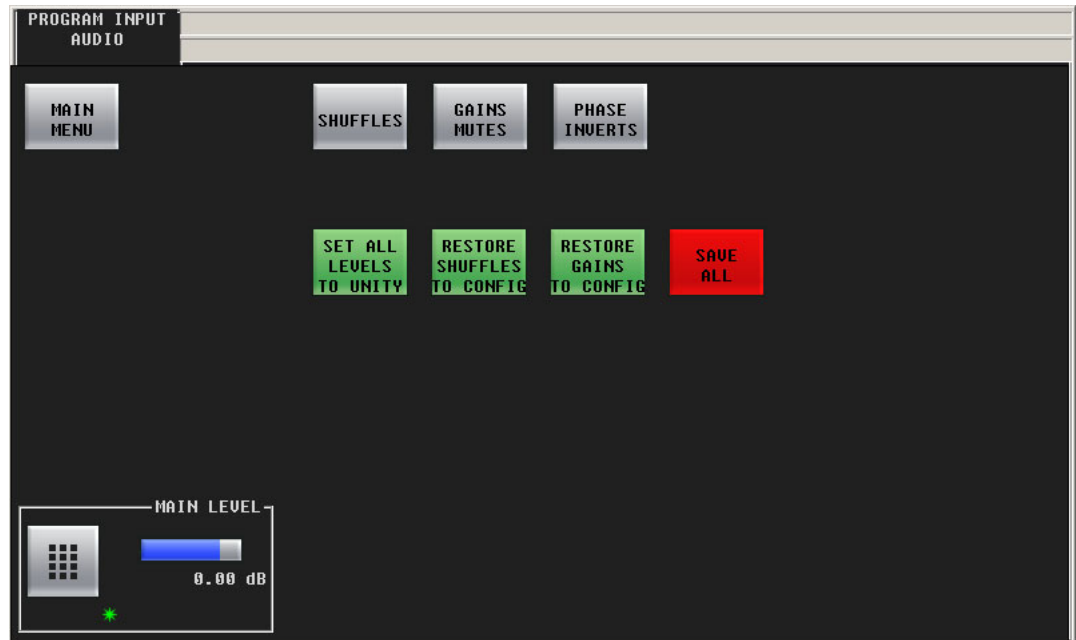


Figure 4-15. PGM Input Audio Menu

The 'Program Input Audio' menu and the 'Preset Input Audio' menu control the Imagestore 750's audio *input*.

The control at the bottom of the screen adjusts the master audio level of program input. (The levels of all individual channels are affected by the master level.) To adjust this parameter, either click the knob associated with the green asterisk in the control box, and use the slider that appears, or click the keypad icon to access a keypad with which to enter a number.

Buttons

The 'Main Menu' button returns you to the main menu.

The 'Shuffles' button accesses the 'Audio Channel Shuffle' sub-menu (for program input audio).

The 'Gains Mutes' button accesses the 'Gains and Mutes' sub-menu (for program input audio).

The 'Phase Inverts' button accesses the 'Phase Inverts' sub-menu (for program input audio).

The 'Set All Levels to Unity' sets each of the 16 audio channels to unity gain.

The 'Restore Shuffle to Config' button reverts the shuffle to that which was defined in the Imagestore 750 configuration.

The 'Restore Gains to Config' button reverts the audio channels' gains to those that were defined in the Imagestore 750 configuration.

The 'Save All' button saves all audio channel manipulations to the Imagestore 750 configuration. Audio channel data can be saved for each individual main source.

Gains and Mutes

This is the ‘Gains and Mutes’ sub-menu:



Each of the 16 audio channels has a mute button. Touch the mute button to mute or un-mute the channel. When the channel is muted, the button is amber.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB. The gain of individual channels is affected by the master gain of the program input.

Press the ‘Shuffles’ button to go to the ‘Audio Channel Shuffle’ sub-menu.

Press the ‘Phase Inverts’ button to go to the ‘Phase Inverts’ sub-menu.

Press the ‘Back’ button to return to the ‘Program Input Audio’ menu.

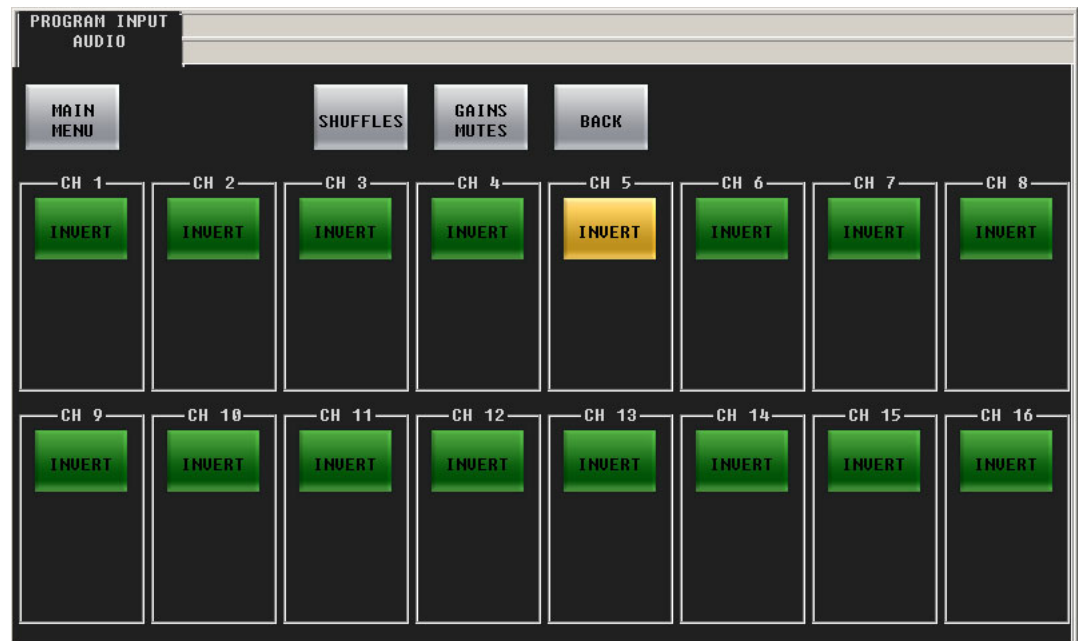
Press the ‘Main Menu’ button to return to the main menu.

4. Menus

Program Input Audio Menu

“Phase Inverts”

This is the ‘Phase Inverts’ sub-menu:



▲ The term phase is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1 .

Pressing an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

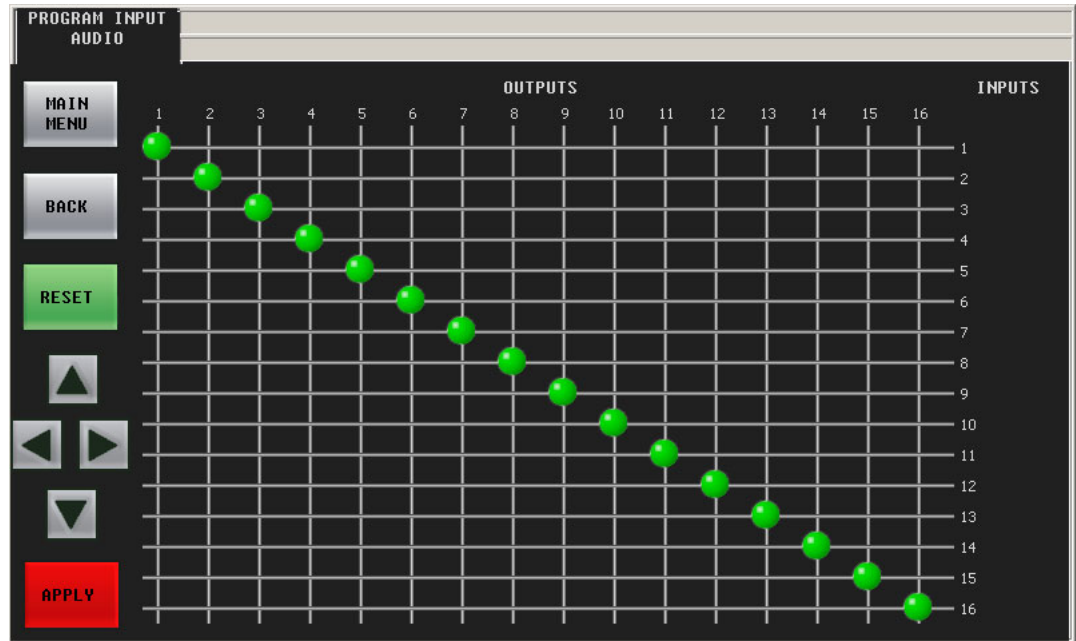
Press the ‘Gains Mutes’ button to go to the ‘Gains and Mutes’ menu.

Press the ‘Back’ button to return to the ‘Program Input Audio’ menu.

Press the ‘Main Menu’ button to return to the main menu.

Audio Channel Shuffle

This is the 'Audio Channel Shuffle' sub-menu:



See [Shuffling Audio Channels](#) on page 119.

Press the 'Back' button to return to the 'Program Input Audio' menu.

Press the 'Main Menu' button to return to the main menu.

4. Menus

Program Output Audio Menu

Program Output Audio Menu

Figure 4-16 shows the GUI's 'Program Output Audio' menu:



Figure 4-16. PGM Out Audio Menu

The 'Program Output Audio' menu controls the Imagestore 750's audio *output*.

The control at the bottom of the screen adjusts the master audio level of program output. (The levels of all individual channels are affected by the master level.) To adjust this parameter, either click the knob associated with the green asterisk in the control box, and use the slider that appears, or click the keypad icon to access a keypad with which to enter a number.

Buttons

The 'Main Menu' button returns you to the main menu.

The 'Gains Mutes' button accesses the 'Gains and Mutes' sub-menu (for program output audio).

The 'Phase Inverts' button accesses the 'Phase Inverts' sub-menu (for program output audio).

The 'Set All Levels to Unity' sets each of the 16 audio channels to unity gain.

Gains and Mutes

This is the ‘Gains and Mutes’ sub-menu:



Each of the 16 audio channels has a mute button. Touch the mute button to mute or un-mute the channel. When the channel is muted, the button is amber.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB. The gain of individual channels is affected by the master gain of the program input.

Press the ‘Phase Inverts’ button to go to the ‘Phase Inverts’ sub-menu.

Press the ‘Back’ button to return to the ‘Program Output Audio’ menu.

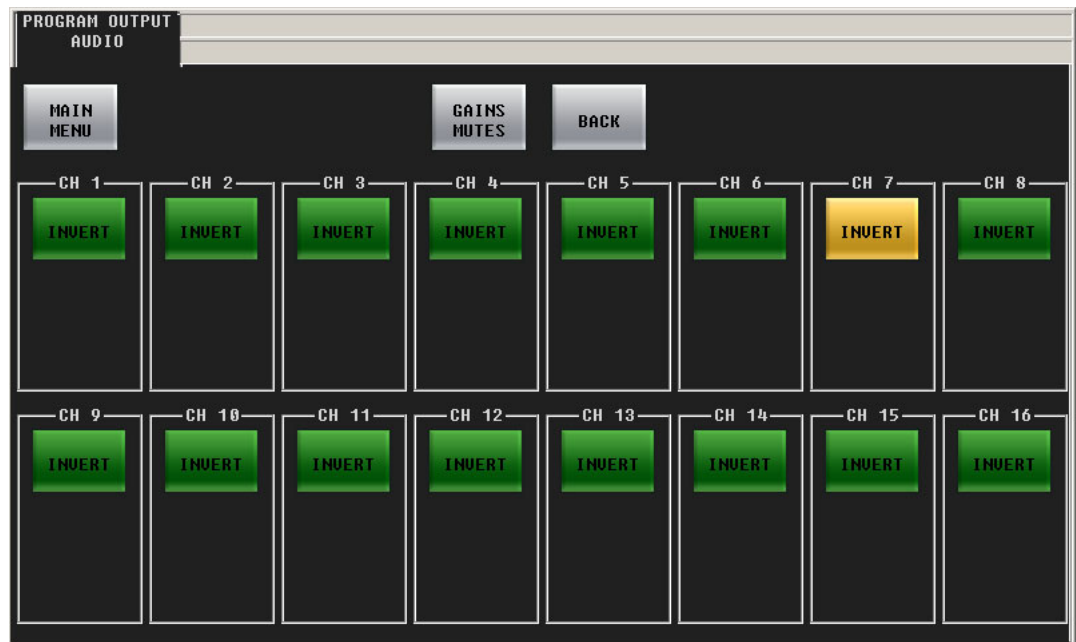
Press the ‘Main Menu’ button to return to the main menu.

4. Menus

Program Output Audio Menu

“Phase Inverts”

This is the ‘Phase Inverts’ sub-menu:



▲ The term phase is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1 .

Pressing an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

Press the ‘Gain Mutes’ button to go to the ‘Gains and Mutes’ menu.

Press the ‘Back’ button to return to the ‘Program Output Audio’ menu.

Press the ‘Main menu’ button to return to the main menu.

Preset Input Audio Menu

Figure 4-17 shows the GUI's 'Preset Input Audio' menu:

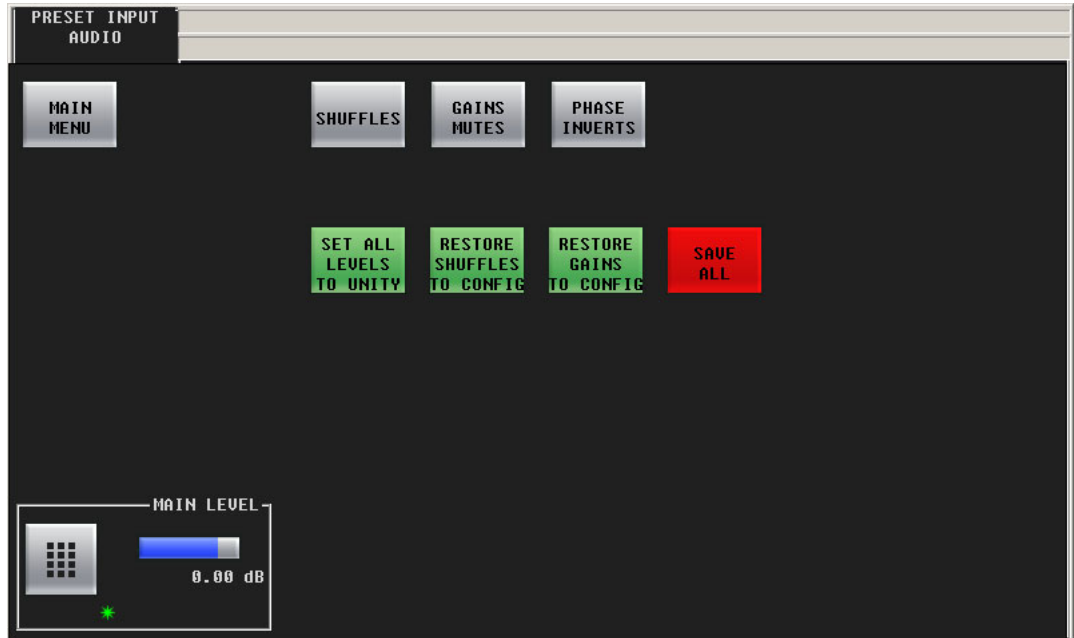


Figure 4-17. PST In Audio Menu

The 'PGM Input Audio' menu and the 'PST Input Audio' menu control the Imagestore 750's audio *input*.

The control at the bottom of the screen adjusts the master audio level of preset input. (The levels of all individual channels are affected by the master level.) To adjust this parameter, either click the knob associated with the green asterisk in the control box, and use the slider that appears, or click the keypad icon to access a keypad with which to enter a number.

Buttons

The 'Shuffles' button accesses the 'Audio Channel Shuffle' sub-menu (for preset input audio).

The 'Gains Mutes' button accesses the 'Gains and Mutes' sub-menu (for preset input audio).

The 'Phase Inverts' button accesses the 'Phase Inverts' sub-menu (for preset input audio).

The 'Set All Levels to Unity' sets each of the 16 audio channels to unity gain.

The 'Restore Shuffle to Config' button reverts the shuffle to that which was defined in the Imagestore 750 configuration.

The 'Restore Gain to Config' button reverts the audio channels' gains to those that were defined in the Imagestore 750 configuration.

The 'Save All' button saves all audio channel manipulations to the Imagestore 750 configuration. Audio channel data can be saved for each individual main source.

The 'Main Menu' button returns you to the main menu.

4. Menus

Preset Input Audio Menu

Gains and Mutes

This is the ‘Gains and Mutes’ sub-menu:



Each of the 16 audio channels has a mute button. Touch the mute button to mute or un-mute the channel. When the channel is muted, the button is amber.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB. The gain of individual channels is affected by the master gain of the program input.

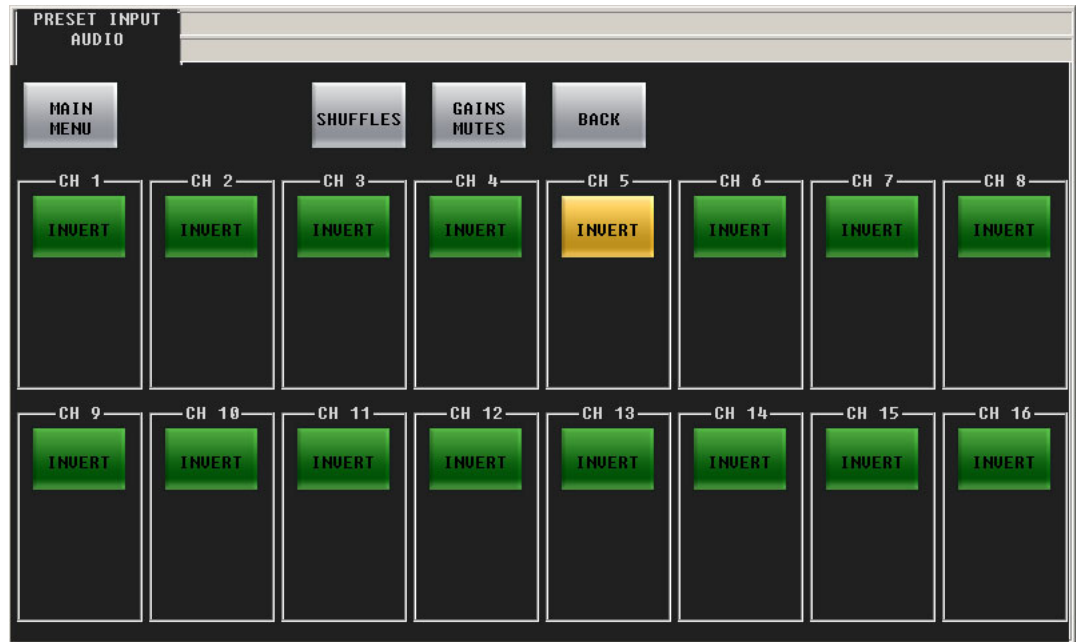
Press the ‘Phase Inverts’ button to go to the ‘Phase Inverts’ sub-menu.

Press the ‘Back’ button to return to the ‘Preset Input Audio’ menu.

Press the ‘Main Menu’ button to return to the main menu.

“Phase Inverts”

This is the ‘Phase Inverts’ sub-menu:



▲ The term phase is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1 .

Pressing an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

Press the ‘Shuffles’ button to go to the ‘Audio Channel Shuffle’ sub-menu.

Press the ‘Gains Mutes’ button to go to the ‘Gains and Mutes’ sub-menu.

Press the ‘Back’ button to return to the ‘Preset Input Audio’ menu.

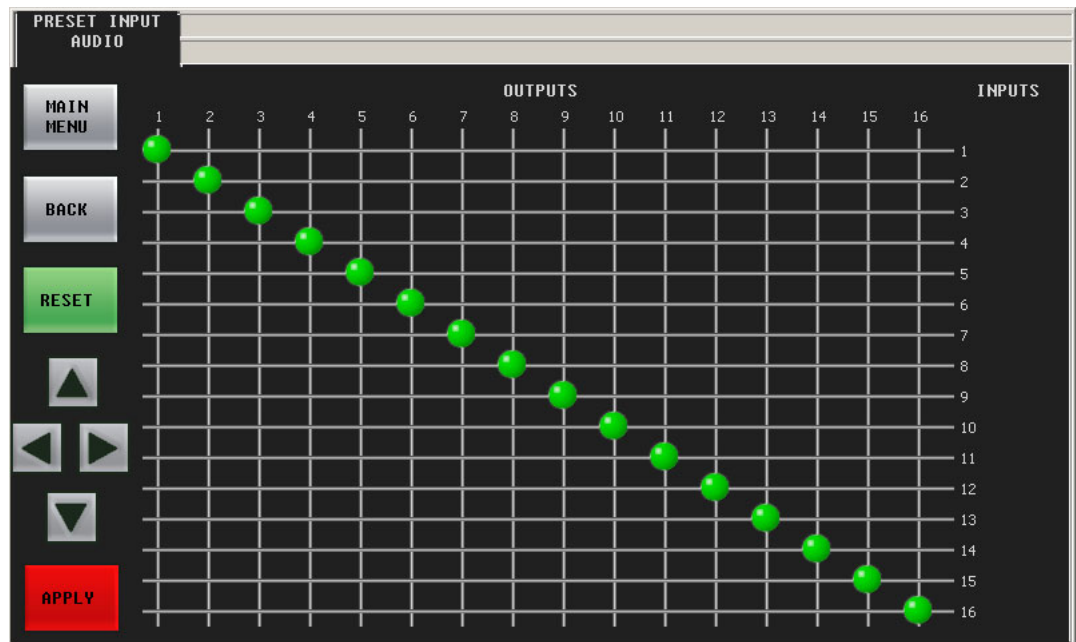
Press the ‘Main menu’ button to return to the main menu.

4. Menus

Preset Input Audio Menu

Audio Channel Shuffle

This is the 'Audio Channel Shuffle' sub-menu:



See [Shuffling Audio Channels](#) on page 119.

Touch the 'Back' button to return to the 'Preset Input Audio' menu.

Touch the 'Main Menu' button to return to the main menu.

Voice-Over Menus

Figure 4-18 shows the GUI's 'Voice-Over 1' menu:

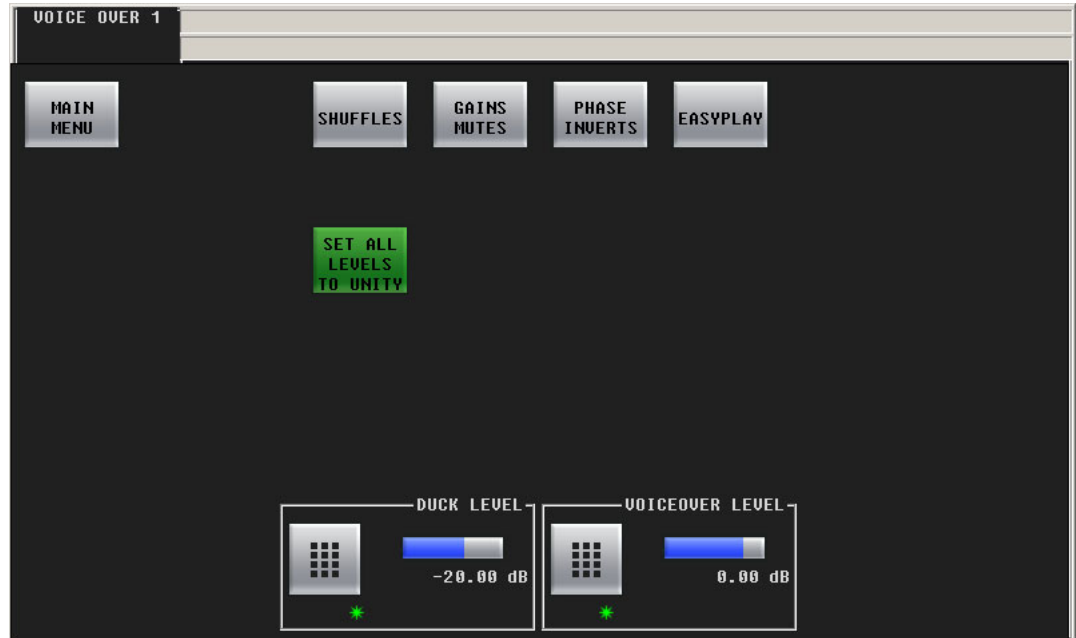


Figure 4-18. Voice-Over 1 Menu

▲ There are two voice-over menus: 'Voice-Over 2' is just like 'Voice-Over 1'.

The controls at the bottom of the screen adjust the "duck" level and the voice-over level of program output. To adjust these parameters, either click the knob proxy associated with the green asterisk, and use the slider, or touch the keypad icon to access a large keypad with which to enter a number.

Buttons

The 'Main Menu' button returns you to the main menu.

The 'Shuffles' button accesses the 'Audio Channel Shuffle' sub-menu (for voice-over audio).

The 'Gains Mutes' button accesses the 'Gains and Mutes' sub-menu (for voice-over audio).

The 'Phase Inverts' button accesses the 'Phase Inverts' sub-menu (for voice-over audio).

The 'Set All Levels to Unity' sets each of the 16 audio channels to unity gain.

4. Menus

Voice-Over Menus

Gains and Mutes

This is the 'Gains and Mutes' sub-menu:



Each of the 16 audio channels has a mute button. Touch the mute button to mute or un-mute the channel. When the channel is muted, the button is amber.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB. The gain of individual channels is affected by the master gain of the program input.

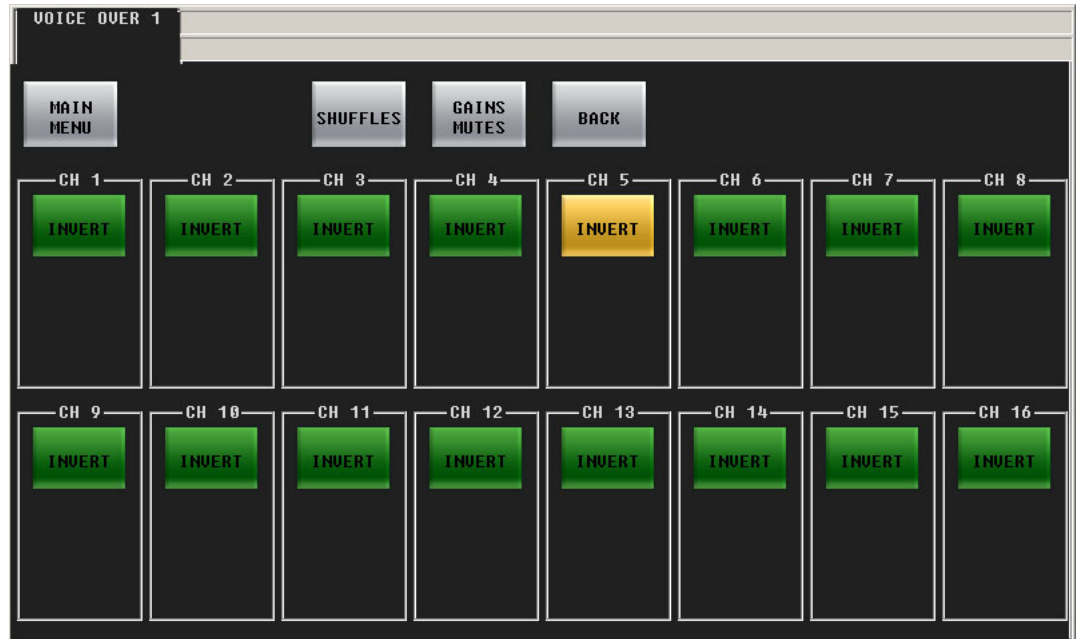
Press the 'Phase Inverts' button to go to the 'Phase Inverts' sub-menu.

Press the 'Back' button to return to the voice-over menu.

Press the 'Main Menu' button to return to the main menu.

Phase Inverts

This is the 'Phase Inverts' sub-menu:



▲ The term phase is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1.

Pressing an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

Press the 'Shuffles' button to go to the 'Audio Channel Shuffle' sub-menu (for voice-over audio).

Press the 'Gains Mutes' button to go to the 'Gains and Mutes' sub-menu (for voice-over audio).

Press the 'Back' button to return to the voice-over menu.

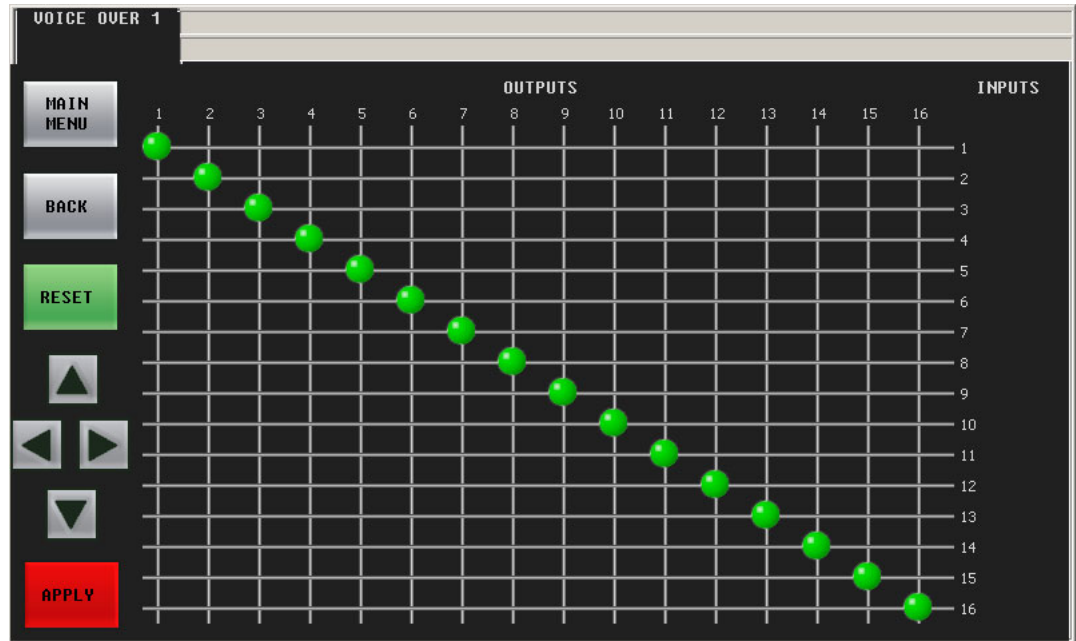
Press the 'Main menu' button to return to the main menu.

4. Menus

Voice-Over Menus

Audio Channel Shuffle

This is the 'Audio Channel Shuffle' sub-menu:



See [Shuffling Audio Channels](#) on page 119.

Touch the 'Back' button to return to the voice-over menu.

Touch the 'Main Menu' button to return to the main menu.

XG Keyer Layers Menu

Figure 4-19 shows the GUI's XG keyer layers menu:

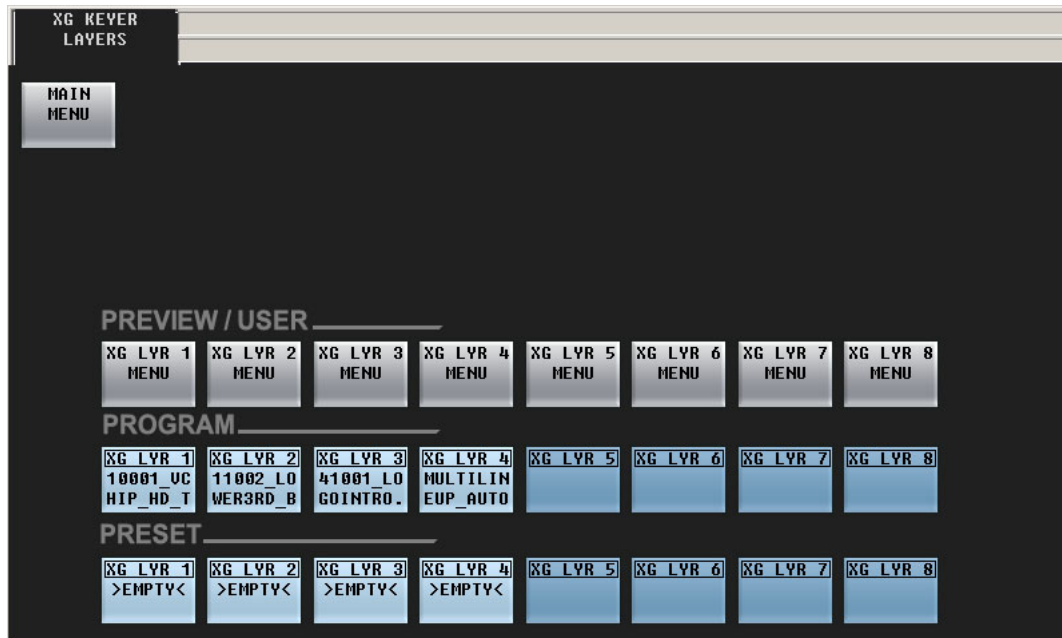


Figure 4-19. XG Keyer Layers Menu

The ‘Main Menu’ button returns you to the main menu.

(The large ‘Intuition XG Layer Control’ button in the main menu takes you to this menu.)

The buttons in the upper row—labeled ‘Preview/User’—take you to browsers for the named XG layer (1–8). Not all Intuition XG processors provide 8 layers. Also, your panel might be configured for more or fewer layers than provided by the Intuition XG processor.

The buttons in the ‘Program’ row *cut* XG layers to program output (and to the program button row of the panel).

The buttons in the ‘Preset’ row *arm* XG layers (which become selected on the preset button row of the panel).

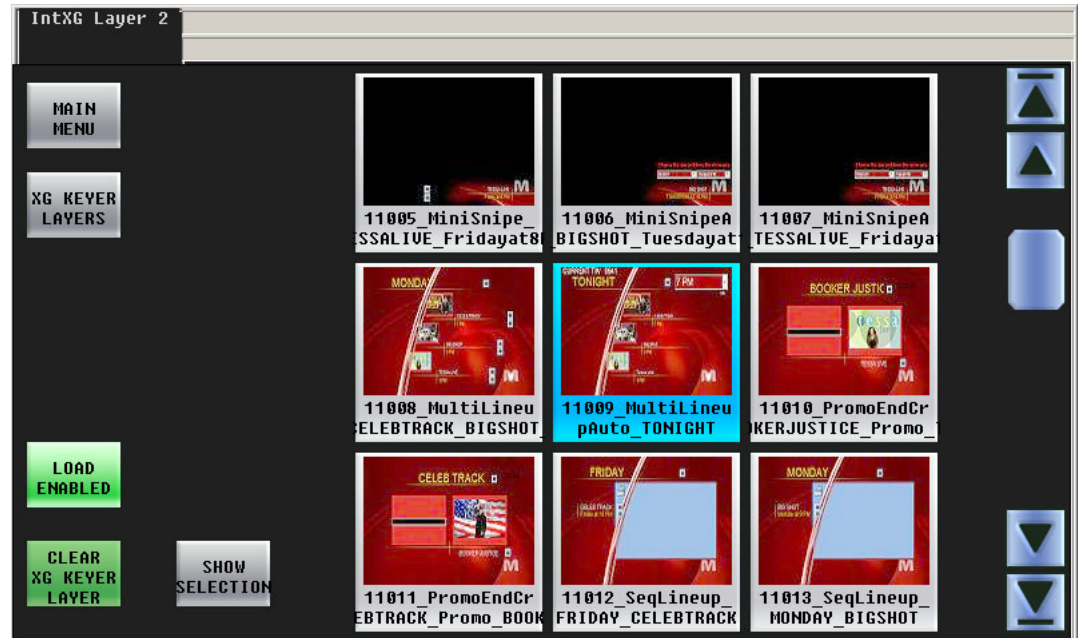
- ▲ XG layers are handled by one of the DSKs. The relationship between XG layers and a DSK is not simple. See [Working with XG Layers](#) on page 97 for information.
- ▲ With this menu, you do not need XG layer buttons on your panel, leaving room for buttons of other types.

4. Menus

XG Keyer Layers Menu

XG Layer Menus

Press any of the XG Layer menu buttons to get an XG browser for that layer. This is an example for XG layer 1:



The 'Show Selection' button will scroll the list to the currently selected clip. This can be important if you have very many clips.

To select an XG clip, click or touch its thumbnail. You might have to scroll to find the clip you want. The clip you select is highlighted in light blue.

The scroll bars at the right have two sets of arrows. The arrows at the very top and bottom take you to the beginning and the end of the list of XG clips.

The 'Load Disabled' button disables selection of the clips using thumbnails. This prevents accidental selection of a clip. Press 'Load Disabled' again to re-enable selection of clips using thumbnails.

The 'Clear XG Keyer Layer' button unloads the currently selected clip from the XG layer.

Press 'Main Menu' to return to the main menu.

A/B Mixer Menu

Figure 4-20 shows the GUI's 'A/B Mixer' menu:

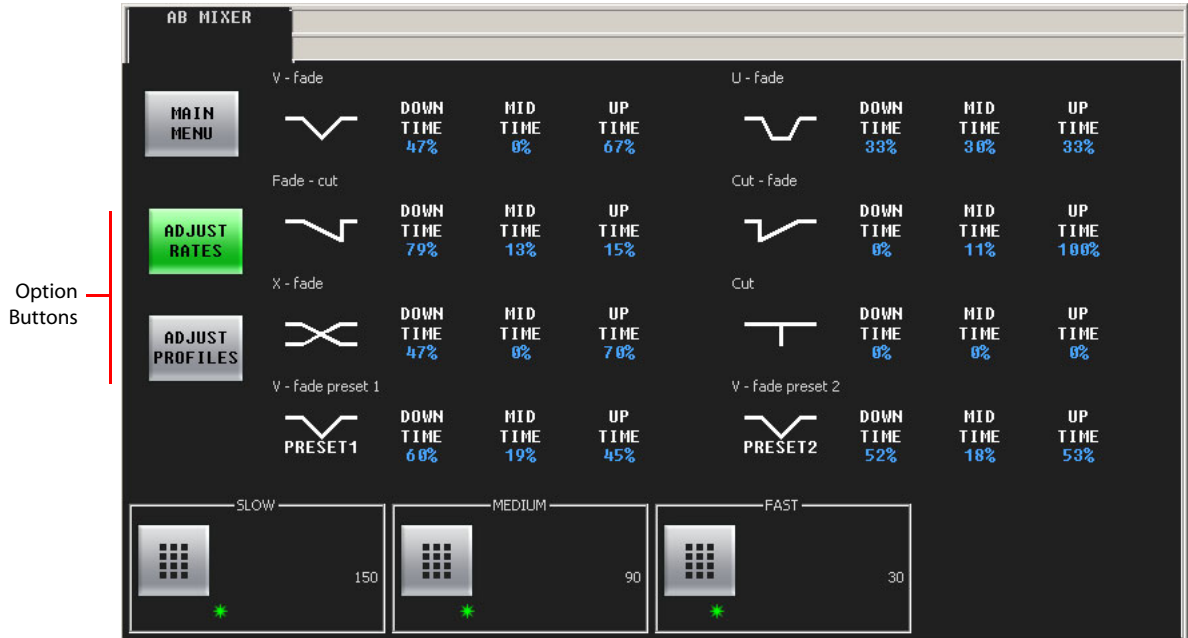


Figure 4-20. A/B Mixer (Rates Sub-Menu Shown)

This menu displays the characteristics of the transition types defined in the Imagestore 750 under control.

The 'Adjust Rates' button selects a sub-menu that lets you adjust the slow, medium, and fast rates of the A/B mixer. That sub-menu is shown in Figure 4-20.)

The controls at the bottom of the screen adjust the slow, medium, and fast transition rates. To adjust these parameter, either click the knob proxy associated with the green asterisk, and use the slider, or touch the keypad icon to access a large keypad with which to enter a number.

- ▲ Note that each DVE and DSK has its own slow, medium, and fast rates, independent of the A/B Mixer.

The 'Adjust Profiles' button selects a sub-menu (shown in Figure 4-21, following) that lets you adjust the down time, mid time, and up time (or rise time) of individual transition types.

The 'Main Menu' button returns you to the main menu.

Adjust Profiles

Figure 4-21 shows the A/B mixer's 'Profiles' sub-menu:

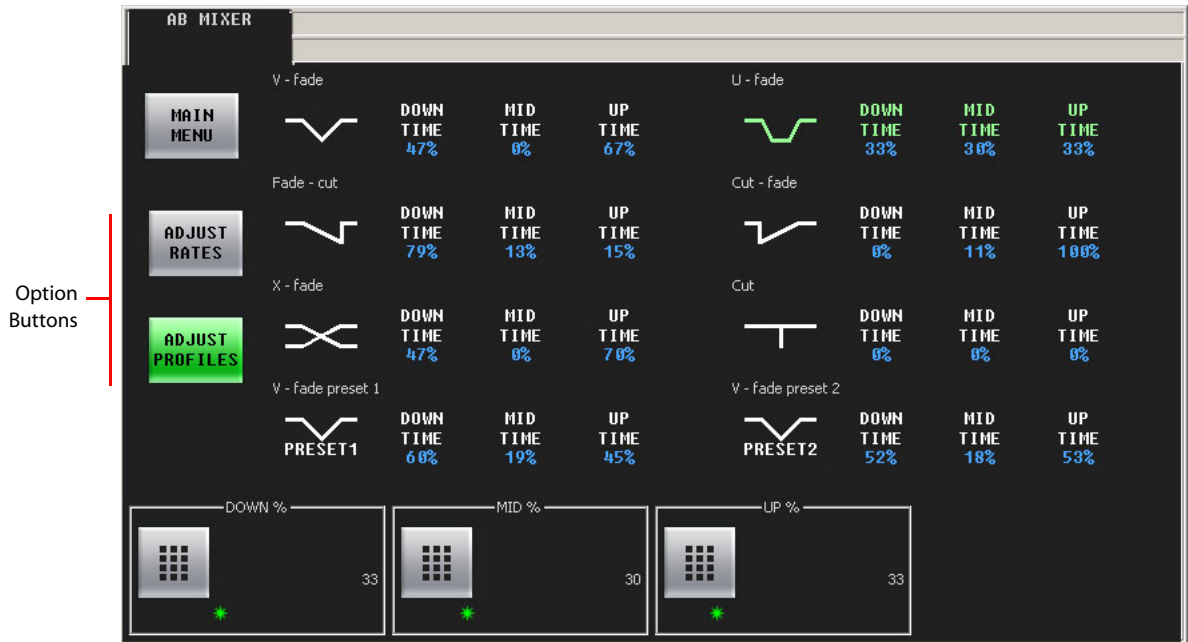


Figure 4-21. A/B Mixer (Profiles Sub-Menu Shown)

In this menu, you can adjust the down time, mid time, and up time (or rise time) of individual transition types.

Select the transition type that you want to modify. In Figure 4-21, the U-fade transition is selected and highlighted in green.

At the bottom of the menu, are 3 controls with which you can adjust the transition parameters (down time, mid time, and up time). Touch a knob proxy next to the control and use the slider that appears to change the setting. You can also touch the keypad button of the control to access a keypad in which to change the parameter numerically.

- ▲ You cannot change the parameters of the 'cut' transition type and you cannot change the mid time of the X-fade.
- ▲ A non-zero mid time for a transition type results in a dwell period in the middle of the transition (as for a U-fade).

The values for down time, mid time, and up time range from 0 to 100. They appear here as percentages, but in actuality they are integer values representing a fraction of the transition period according to the following formulas:

$$D = \text{down time} / \text{sum} \quad \text{where } \text{sum} = \text{down time} + \text{mid time} + \text{up time}$$

$$M = \text{mid time} / \text{sum}$$

$$U = \text{up time} / \text{sum}$$

and

$$D' (\text{frames}) = F \times D \quad \text{where } F \text{ is the total number of frames in the transition}$$

$$M' (\text{frames}) = F \times M$$

$$U' (\text{frames}) = F \times U$$

all rounded to the nearest integer.

For example, the values for a fade-cut (79, 13, 15) for a slow transition (150 frames) are:

$$\text{Sum} = 79 + 13 + 15 = 107$$

$$D = 79 / 107 \quad D' = 150 \times 79 / 107 = 110.747 = 111 \text{ frames}$$

$$M = 13 / 107 \quad M' = 150 \times 13 / 107 = 18.224 = 18 \text{ frames}$$

$$U = 15 / 107 \quad U' = 150 \times 15 / 107 = 21.028 = 21 \text{ frames}$$

- ▲ Up time in frames is adjusted so that total number of frames for the transition is exactly as specified.

The 'Adjust Rates' button switches to the sub-menu that lets you adjust the slow, medium, and fast rates of the A/B mixer.

The 'Main Menu' button returns you to the main menu.

Sources Menu

Figure 4-20 shows the GUI's 'Sources' menu:

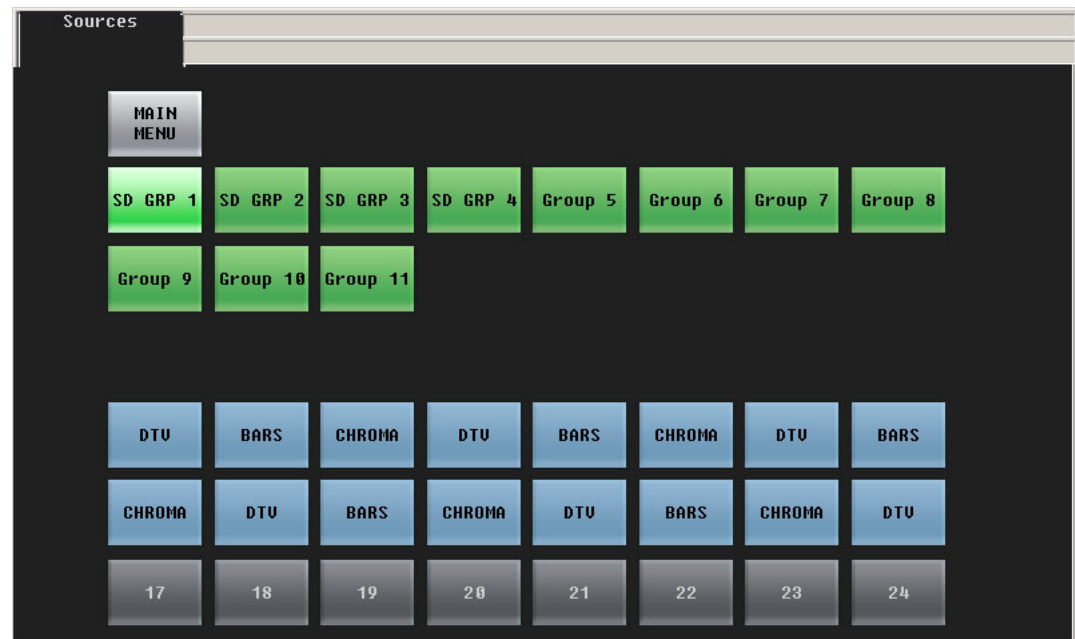


Figure 4-22. Sources Menu

This menu displays the names of source groups (on the green buttons) and displays the sources that belong to the selected source group in blue. Up to 24 sources may belong to a group. To view a different source group, press the appropriate green button.

You can

- Add sources to the selected group.
- Remove sources from the selected group.
- Change a selected source (in the selected group).

The 'Main Menu' button returns you to the main menu.

4. Menus

Sources Menu

Adding a Source to a Group

Follow these steps:

- 1 Select the source group to which you want to add a source.
- 2 Press any *grey* source button:



A dialog appears in which you can choose any router source available:



Press a source button to choose a source. Scroll, if necessary, to find the source.

Press 'Cancel' to return to the Sources menu. Press 'Show Selection' if the current selection is not visible in the window.

- 3 After you choose a source, the panel immediately returns to the 'Sources' menu. The added source selection (here, XTR206) is available:



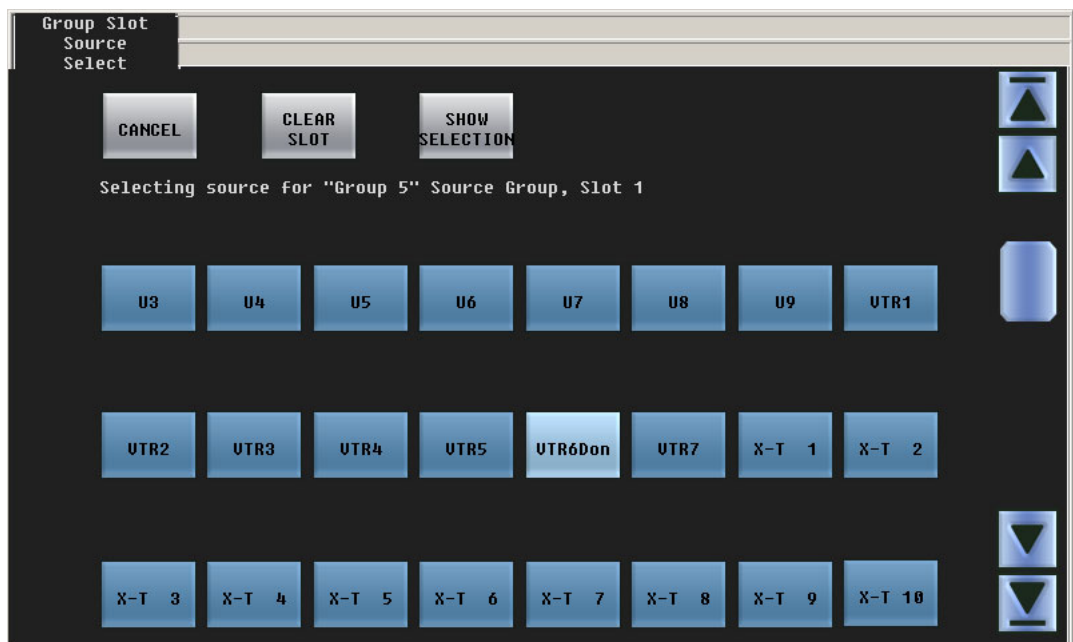
Changing a Source within a Group

Follow these steps:

- 1 Press any blue source button. In this example, the first source (IS 69) was pressed:



A dialog appears in which you can choose any router source available:



Press a source button to choose a source. Scroll, if necessary, to find the source.

Press 'Cancel' to return to the Sources menu. Press 'Show Selection' if the current selection is not visible in the window.

- 2 After you choose a source, the panel immediately returns to the Sources menu. The new source selection (here, XTR206) is available:



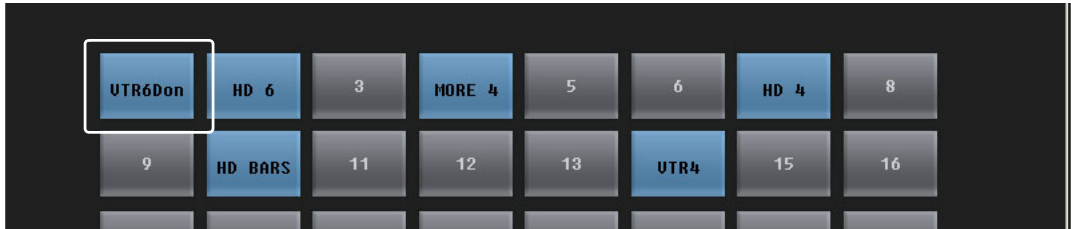
4. Menus

Sources Menu

Removing a Source from a Group

Follow these steps:

- 1 Press any blue source button. In this example, the first source (IS 69) was pressed:



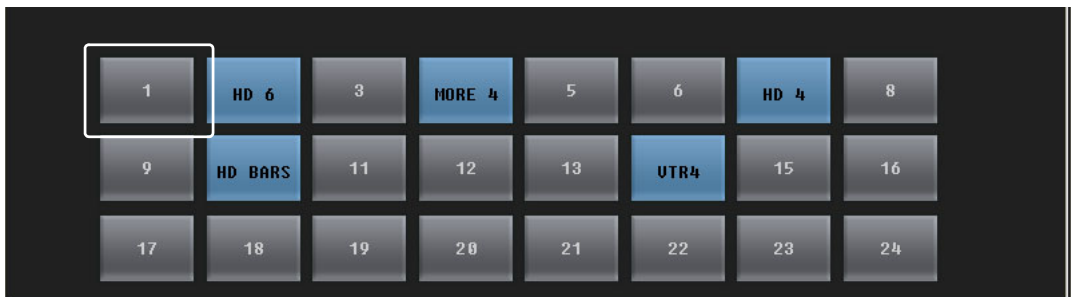
Again, a dialog appears:



Press 'Clear Slot' to remove the source.

Or, press 'Cancel' to return to the 'Sources' menu. Press 'Show Selection' if the current selection is not visible in the window.

- 2 The panel immediately returns to the 'Sources' menu. The source has been removed and an empty slot is in its place:



GUI Info Menu

From the main menu, press the 'Panel Settings' button to access the 'GUI Info' menu:

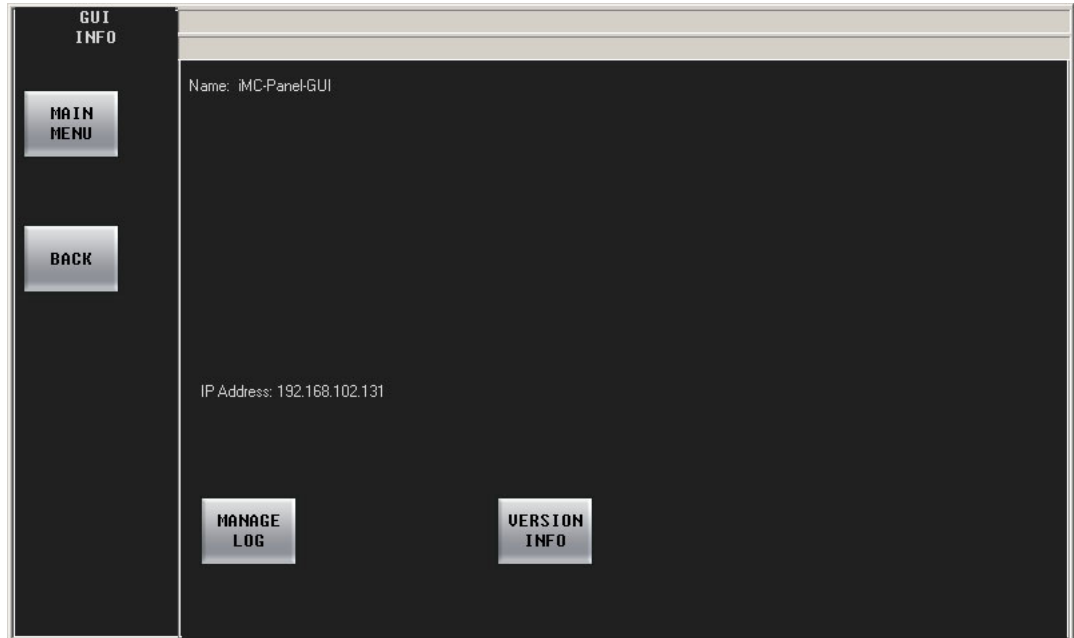


Figure 4-23. GUI Info Menu

The 'GUI Info' menu has 2 buttons that let you do the following:

- [Manage Log](#). View and clear the system log.
- [Version Info](#). Review software and firmware versions.

The 'GUI Info' menu also displays the IP address of the attached Imagestore 750.

Manage Log

From the 'GUI Info' menu, press the 'Manage Log' button to display the 'Manage Log' sub-menu:

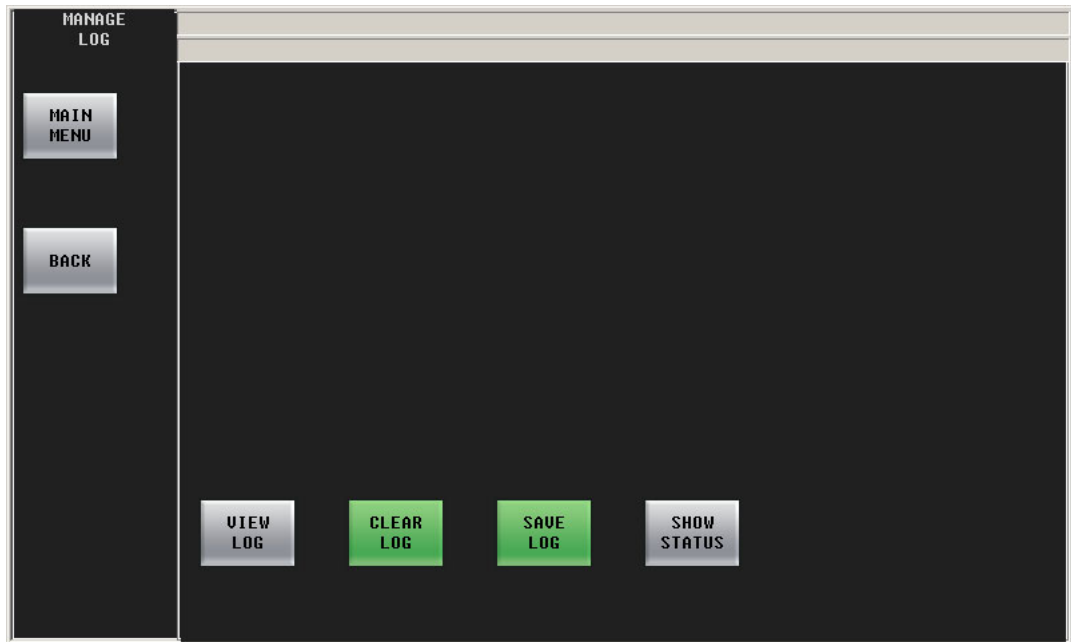


Figure 4-24. Manage Log Sub-Menu

The 'Manage Log' sub-menu allows you to view, clear, or save the system log.

Press 'View Log' to display the 'View Log' sub-menu, which lists all network transactions for troubleshooting purposes. Figure 4-25 shows a sample log:

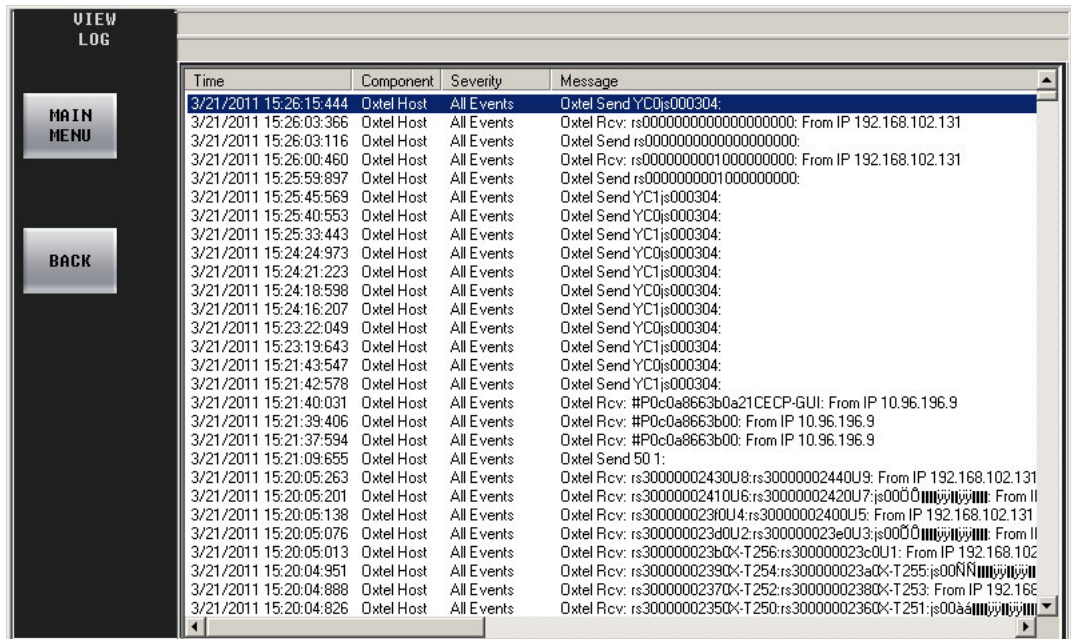


Figure 4-25. View Log Menu

A person using the MCS Panel Configuration Editor can read the GUI's log file from the GUI. Press 'Clear Log' to clear the contents of the system log.

Press 'Save Log' to save the log in a .txt file. The name of the file is CECF_GUI_Log.txt and its location is the bin folder under your master control software installation folder. (Its default path-name is C:\Program Files\Miranda\Master Control\bin.)

Press 'Show Status' to display system messages:

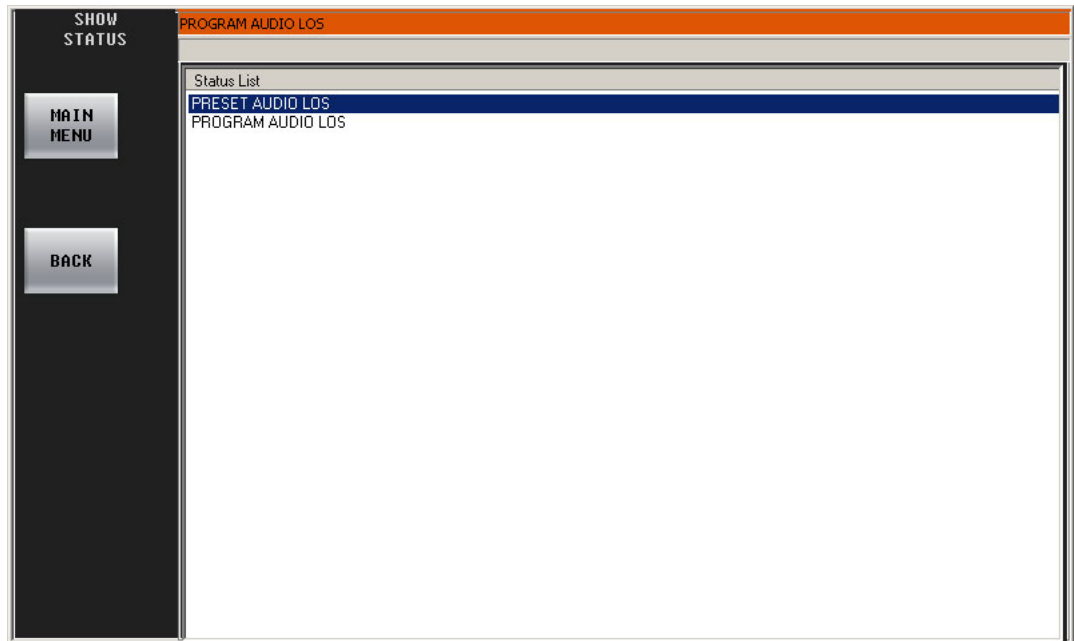


Figure 4-26. Show Status Menu

If there are no messages, the display will be blank.

4. Menus

GUI Info Menu

Version Info

From the 'Panel Info' menu, press the 'Version Info' button to display the 'Version Info' sub-menu.

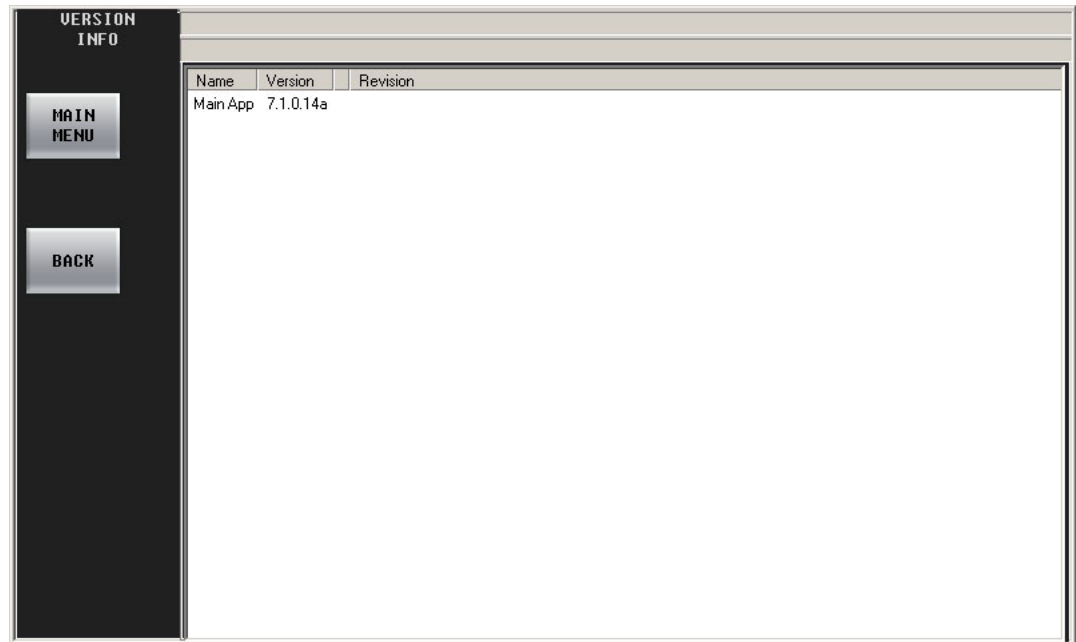


Figure 4-27. Version Info Menu

The 'Version Info' sub-menu allows you to view the GUI's software revision.

5. Operation

Chapter 5 describes many of the operating procedures and operating characteristics of the iMC-Panel-GUI when it is used to control an Imagestore 750. It presents the following topics:

- [General Information](#)
- [Performing Transitions](#)
- [Transition Options](#)
- [Working with Transition Type and Rate](#)
- [Working with DSKs](#)
- [Working with DVEs](#)
- [Working with XG Layers](#)
- [Working with Voice-Overs](#)
- [Working with Audio Preview](#)
- [Working with Audio Meters](#)
- [Working with Audio Levels](#)
- [Shuffling Audio Channels](#)
- [Working with Multiple Channels](#)
- [Working with the Aux Bus](#)
- [Working with a Monitor Wall](#)
- [Using the Panel Menu](#)
- [Fade to Black](#)
- [Fade to Silence](#)
- [Updating Configuration Settings](#)

Note

Throughout this guide, and especially in this chapter, we use *sample* source names, effect names, and menu lists for illustration. The names on your panel will differ.

General Information

About Colors

The buttons of the GUI are large and display in several colors. Each button has 3 line of text, up to 8 characters per line. The buttons fall into two classes: menu buttons and non-menu buttons. Menu buttons are slightly larger.

5. Operation

General Information

Colors on Non-Menu Buttons

The colors you are viewing here are approximate only, but reasonably close if you are viewing this document on a computer screen.



Red buttons have the following warning functions:

On the program and preset buses, red indicates that the selected source is LOS or non-sync. The error line of the menu displays the current error condition. Note that the system will put a non-sync source on air if you want it.

On the program and preset buses, red can also indicate audio LOS.

When you perform a channel change, the new channel button flashes red for a moment. That indicates that the system has acknowledged the change request. A (selected) channel that is absent, malfunctioning, or in emergency bypass mode shows red.

Panel lock, if present, is high-tally red when the panel is locked.



Amber buttons sometimes represent mild warnings, such as LOS on a video effect that is not on program output.

High-tally amber also indicates a follower channel that is “ganged” to the main channel (green). If there are multiple followers, each has an amber button.



Low-tally buttons (dark green) are *unselected* main sources, channels, or functions. Green generally indicates that there is no error.

High tally buttons (bright green) are *selected* main sources, channels, or functions.



On the program and preset buses, high tally buttons are selected main sources. Green indicates that there is no error.

High-tally green represents the active channel, the main channel in a gang, or an active function on a configurable button.



Voice-over buttons are violet, and high-tally when selected.



Video effect buttons (DVEs, DSKs, or XG keyer layers) are blue, and high-tally when selected. (Buttons for video effects that are LOS are amber.)



Buttons that are off (dark) have no function assigned or they have disabled functions.



Menu activation buttons are gray when the menu is not activated and aqua (or turquoise when the menu is activated).



Button Colors in the Menu Area

The menu buttons use color to represent different types of functions and give you visual feedback:



Some gray buttons are navigation buttons. (The ‘Main Menu’ button, for example, always takes you to the main menu. Most other navigation buttons take you to sub-menus. Some gray buttons are function buttons.



Most green buttons are function buttons. Most of these are toggles: when you press one, its function becomes active and the button turns bright green. When a button is dark green, its function is inactive.



Some green buttons are momentary functions. They turn bright green momentarily while they are performing their functions.



Dark blue buttons are *unselected* list entries.



Light blue buttons are *selected* list entries.



‘Apply’ buttons are intense red. These buttons are found in the audio channel shuffle menus. A few other buttons are brighter red because you should exercise caution when using them. (‘Load Disabled’ is an example.)



5. Operation

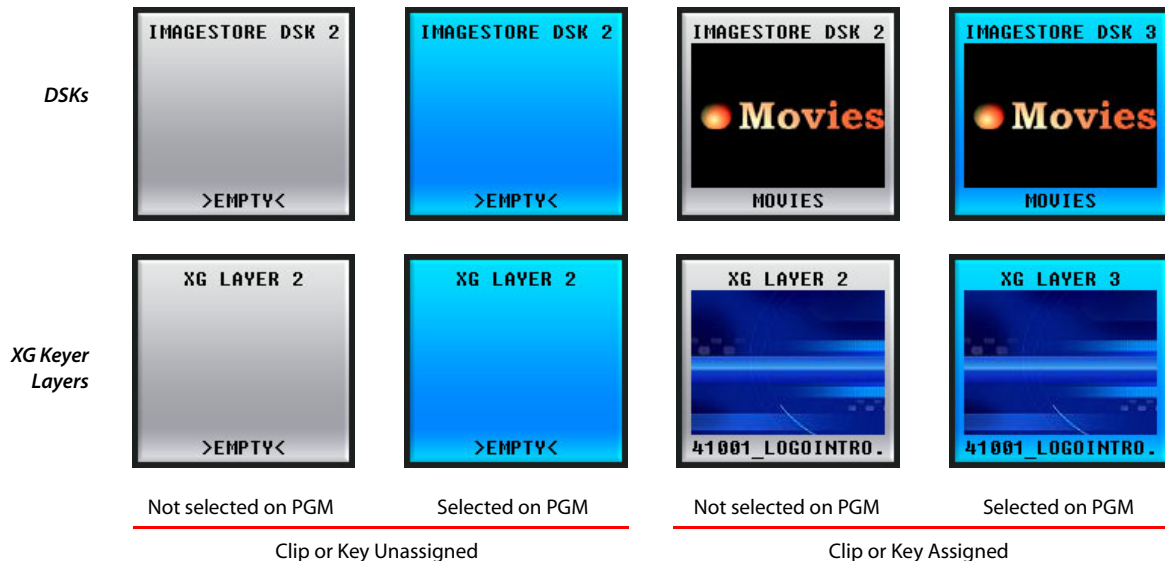
General Information

Thumbnail Color

The DSK and XG keyer layer thumbnail images in the main menu give you an indication of the state of the DSK or XG keyer layer.

The thumbnail frame is blue when the DSK or XG keyer layer is on the program bus (i.e., program output). Otherwise, the thumbnail frame is grey.

The thumbnail frame is empty when the DSK has been cleared (i.e., has no clip or key assigned). Similarly, the thumbnail frame for an XG keyer layer is empty when the layer has been cleared. Otherwise, the thumbnail frame shows an image representing the clip (or key):



About Error Messages

Error messages that appear on the menu's error line are "stacked" in order of their effect on the on-air signal—with higher priority messages taking precedence over lower priority messages. For example:

- If you experience a video non-sync error, and simultaneously lose video reference to the Imagestore 750, the system displays the video reference loss error message.
- If you fix a problem with non-sync video, yet the button still remains red, a lower-priority audio format error might still be occurring (and will have moved to the top of the error stack). Always check the menu display to obtain information about current errors.

About the Button Rows

The GUI has four button rows each comprising 16 buttons.

The preset and program rows have exactly the same button functions.

The aux/user row has the same source buttons as the preset and program rows. Buttons in the aux row that are not source buttons are configurable buttons.

The preview/user row comprises additional configurable buttons.

About “Layer” Buttons

The “layer” section of the preset and program rows can include video effect buttons and voice-over buttons. The layer section can vary from panel to panel. Video effects include up to 4 DVEs and up to 4 DSKs.

- ▲ Some Imagestore 750s do not have DVES.

About Configurable Buttons

When your GUI is controlling an Imagestore 750, there are 4 sets of buttons that provide customer-configurable buttons:

- The 4×4 array of buttons on the upper part of the panel.
- The rightmost buttons of the aux/user button row.
- The entire preview/user button row.
- The entire bottom row of buttons (except the transition button).

The buttons in these sections perform functions that are chosen by the person who configured the panel.

Panels and Channels

Several panels (and automation) can control the same channel at the same time. When someone else makes a change to a channel that you are also controlling, the changes are reflected (insofar as possible) on your control panel. Similarly, changes you make are reflected on all other panels that control the same channel.

This is not an issue if your system has been configured so that channels cannot be controlled by more than one panel.

A single panel can control multiple channels. When it does, the channels are said to be *ganged*. Further, the panel can be configured so that its default channel can be the main channel of a channel gang and when the default channel is selected (by any method) the follower channels in the gang are also selected and gang selection is enabled.

(The actions you perform on the main channel are also performed for the follower channels.)

Sharing vs. Preemption

Each control panel can be configured to share or not to share channels with other control panels.

Each control panel is configured with a priority level for access non-shared access. Panels with higher priority can preempt panels with lower priority and thereby gain access to the channel.

If your GUI is configured for sharing, it will attempt to share a channel that is already in use. If the channel is controlled by a panel that does not share and that has a higher priority than yours has, the sharing attempt will fail.

If the sharing attempt succeeds, the GUI operates normally. If it fails, you will be notified.

If your GUI is not configured for sharing, when it attempts to acquire a channel, it can preempt the other panel if yours has a higher priority. You will be asked for permission to preempt the other panel. If the other panel has higher priority, the attempt to acquire the channel will fail and you will be notified.

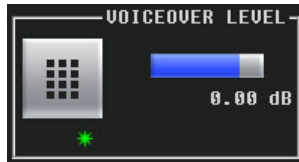
5. Operation

General Information

Using the Keypad

Follow these steps to operate a keypad:

- 1 Press the desired 'Keypad' button (within a menu) to display the keypad menu for the parameter you wish to change. A sample is shown here:



- 2 On the keypad, press the desired digits for your numeric value. The 'Entry' register shows your entry in progress:



- 3 As necessary,
 - Press 'Clear' to clear the Entry register.
 - Press 'Cancel' to return to the previous menu, without having entered a number.
 - Press 'Done' to accept the new entry and return to the previous menu.
- 4 If an error message appears, (e.g., Invalid Entry), press 'OK' to start the entry procedure again. The Entry register automatically clears.

Performing Transitions

The GUI is a master control panel that sets up and initiates program transitions in an Imagestore 750. The Imagestore 750 executes the transitions.

Setting up a transition is the primary task of the panel operator. Automation can also set up and initiate transitions but that is of little concern to panel operators, except that operators may inhibit or enable automation and must generally avoid interfering with automated transitions.

Most transition operations involve selecting a source on the preset bus, selecting a transition type and rate, and transitioning the source to program. Some transitions involve applied video effects and voice-overs.

Basic Transition

Follow these steps to perform a *basic* transition:

- 1 Select the desired source on the preset buttons.
- 2 (Optionally) select or deselect the desired video effects and voice-overs on preset.
Use the menus to choose, and possibly modify, video effect settings.
- 3 (Optionally) select the desired transition type: cut, V-fade, cross-fade, PB cut-fade, or another. Select the desired transition rate: slow, medium, or fast.
- 4 Press the transition button. At the end of the transition period, the selections on the preset bus will appear on the program bus. During the transition, the preset sources and program sources will combine according to the transition type and rate.

Please note:

- You can “hot cut” to a new source directly on the program bus *at any time*, simply by pressing the desired source on the program bus. Hot cuts are not recommended.
- Once a transition is initiated, it cannot be stopped, except by (hot) cutting to a different source directly on the program bus during the transition period.
- Automation also initiates transitions.

Transition Options

The Imagestore 750 has several configuration options that affect how transitions occur and how the preset buttons and program buttons function.

Some of the differences in behavior are subtle.

The options are identified here by their names in the configuration software. (Some of those names are cryptic.) These are the options:

- ‘Cut All from Air on Hot PGM Switch’

This option can be enabled or disabled.

When it is enabled, performing a hot cut on the program bus causes all effects (DVEs, XG keyer layers, DSKs, and voice-overs) to be removed (cut down) from the program bus.

When this option is disabled, a hot cut does not change the effects present on the program bus.

- ‘Re-arm mix on PST bus source change.’

This option can be enabled or disabled.

When it is enabled, selecting a source on the preset bus that is different from the source selected on the program bus causes the most recently selected transition type to become selected. (It does not matter why you selected that transition type—the option uses *the most recently selected transition type*.) Further, if you select a source on the preset bus that is the same as the source on the program bus, all transition types becomes de-selected.

When this option is disabled, selecting a source on the preset bus has no effect on whatever transition type is selected or not selected.

- ‘Preview Select’

Normally, this option presents the preset bus at the preset output. (Within the configuration software, this output is called either preview or preset.)

It is possible, although not likely, for the Imagestore 750 to be configured to present program output, the program A/B mixer output, the program DVE output, or the outputs of DSKs 1, 2, or 3 as the preset output.

- ‘Active Preview AB Mixer’

This option can be enabled or disabled.

When it is *enabled*, the preset (a.k.a. preview) background video depends on both the progress of the program A/B mixer and its arm state.

When you have not armed the A/B mixer (i.e., have not selected a transition type), the preset background video is the same as the program video background.

When you select a transition type, the preset background video is what you have chosen as the preset source, which will be the background video on program after the next transition (or “Take”).

When the option is *disabled*, the preset background video is independent of the A/B mixer and its arm state. The preset background video is always the preset source you have chosen.

- ‘Active Preview DVE’

When this option is activated, if you hot-cut a DVE on the program bus, it will also become active on the preset bus. And, if you hot-cut a DVE off the program bus, it will also be removed from the preset bus.

- ‘Active Preview Keyers’
Some operators like the “PresStation” method of arming DVEs, DSKs, and voice-overs on the preset bus. Other operators like the traditional method (which is used for MCEs and MCPMs). When this option—coupled with ‘Enable Traditional PST Tally’ of the MCS Panel Configuration Editor—is chosen, the panel will operate using the *traditional* method. Otherwise, the panel will use the *PresStation* method.
- ‘DSK *n* Preview Keyer Position’
This basically turns the Imagestore 750’s individual DSKs on or off.
If your panel has DSK buttons, and they are disabled in the Imagestore 750’s configuration, the buttons will be disabled on your panel. They might be enabled for another Imagestore 750.
- ‘Aux Bus Follow’
This option—although not strictly a transition option—has 3 choices: ‘none’, ‘PGM’, or ‘PST’:
When the option is ‘PGM’, the aux bus “follows” the program bus. That means that whatever source you select on the program bus is also selected on the aux bus.
When the option is ‘PST’, the aux bus “follows” the preset bus.
When the option is ‘none’, the aux bus does not “follow” either bus and operates normally.
Note that when the option is ‘PGM’ or ‘PST’, you can still use the aux buttons, normally, to switch sources to your aux output.

Working with Transition Type and Rate

It is the Imagestore 750 that stores the transition type and rate. It supports 8 transition types: cut, V-fade, cut-fade, cross-fade (or X-fade), fade-cut, U-fade, V-fade preset 1, and V-fade preset 2. (A U-fade is like a V-fade with a dwell period in the middle. The dwell period is pre-configured. The characteristics of the V-fade preset 1 and preset 2 are also pre-configured.)

Rates are ‘Slow’, ‘Medium’, and ‘Fast’. Your panel might have an ‘Automation Rate’ button which selects whatever rate is in effect in the automation system in your facility.

The Imagestore 750’s A/B mixer has its slow, medium, and fast rates. You can change these rates in the ‘A/B Mixer’ menu.

Each DSK has its own rates (slow, medium, and fast) and each voice-over has its rates. You can change a DSK’s three rates in its menu. Larger values are slower rates. The range of values is 1 to 999. You cannot change the rates of a voice-over from the panel.

By convention, transition type and rate buttons are assigned to the ‘Transition Control’ button group at the front of the panel. However, any of these functions can assigned to any configurable button.

To select a transition type, simply press one of the transition type buttons. The button will go high-tally and other transition type buttons go low-tally. To select a rate, press one of the transition rate buttons.

A “cut” transition does not involve a rate and any rate buttons on your panel become disabled.

5. Operation

Working with DSKs

Notes

- When you set a transition type, it is set within the Imagestore 750. Other panels attached to the Imagestore 750 can detect, and use, its transition type.
- The transition type in the current Imagestore 750 might not be represented on your panel. In that case, all transition type buttons on your panel will be disabled.

Changing Transition Rates

To *change* the rate of the A/B mixer, follow these steps:

- 1 From the main menu, press an 'A/B Mixer' button to access the 'A/B Mixer' menu.
- 2 Use the keypad or knob proxy adjacent to the slow, medium, or fast value to change the value. The new rate is immediately available for use.

To *change* a DSK rate, follow these steps:

- 1 From the main menu, press a DSK button or press a 'DSK Browser' menu button to access a 'DSK Browser' menu.
- 2 Use the keypad or knob proxy adjacent to the slow, medium, or fast value to change the value. The new rate is immediately available for use.
- 3 Repeat steps 1 and 2 to change the transition rates for other DSKs.

No further action is required to use the new transition rate(s). A new rate remains active until you enter another rate.

Working with DSKs

Imagestore 750s used in the master control system provide 4 DSKs (downstream keyers). A key is a video effect that usually consists of two video sources, fill and key. The keyer mixes the fill, masked by the key, with upstream program video. In some cases, key values are derived from the luminance of the key's fill values. A key can be partially or fully opaque. It is possible for an operator to control the way the key values mask the fill values.

The Imagestore 750 performs video effects in a configurable order:

DSK 1 is upstream of DSK 2, which is upstream of DSK 3, which is in turn upstream of DSK 4.

The DVE (if present) can be placed before DSK 1, before DSK 2, or before DSK 3.

The effects to the right have visual priority over effects to the left. We say the effects to the right are *downstream* and effects to the left are *upstream*. Your panel's effect buttons, if any, might occur in any order. Your panel might not have buttons for all video effects.

▲ In an Imagestore 750 configuration, some or all DSKs can be disabled.

Keys can be external or internal. The Imagestore 750 supports up to 3 external key sources. Internal keys are generally called clips, stills, or animations. The number of internal keys is potentially large and is limited only by available memory.

The use of DSKs is affected by certain transition options. See [Transition Options](#) on page 88 for more information.

Performing Key Transitions

You can transition any combination of video effects (including 4 DVE and 4 DSKs) to program output.

Follow these steps to transition one or more keyers to program output:

- 1 Use the 'DSK Browser' menus to select keys and perhaps change their settings. The names of the selected keys become visible on the associated DSK buttons. See [Changing Key Settings](#), following.
- 2 Press the desired DSK button(s) on preset. Selected DSK buttons are high-tally.
On preset, the DSK buttons have 3 states: cut, fade, and off. Press the button again to cycle it to its next state. When the state is 'cut', the DSK cuts to the program bus during the next transition and when the state is 'fade', the DSK fades (at its current rate) to the program bus.
- 3 Optionally, set up other video effects, voice-overs, and transition type and rate.
- 4 Press the Transition button.

To *remove* key(s) from program, press the desired DSK button(s) on the preset bus to deselect them and perform a transition in the normal way. Here too, the DSK buttons have 3 states: cut, fade, and off. When the state is 'cut', the DSK cuts from the program bus during the next transition and when the state is 'fade', the DSK fades from the program bus.

5. Operation

Working with DSKs

Please note: you can “hot cut” keys directly on and off the program bus *at any time*, as required, simply by pressing the desired keyer on the program bus. Hot cuts are not recommended.

Hot cuts have side effects on the preset bus, depending on which transition options are active in the currently selected Imagestore 750.

Changing Key Settings

Go to the ‘DSK Browser’ menu. A list of keys appears (with scroll bars if the list includes more than 12 keys). Press a list entry to select the key of your choice. The setting now appears highlighted (in blue) in the list and the setting name appears on the DSK buttons in the program and preset button rows.



Touch the list control buttons (e.g., ‘Still’, ‘Anim’) to trim the list to the types of keys in which you are interested.

Rates, CGT, Keying

Press 'Rates CGT Keying' to access a menu in which to change the DSK rate, the clip, gain, transparency parameters, or key options. The 'DSK Rates, CGT, Keying' sub-menu appears:

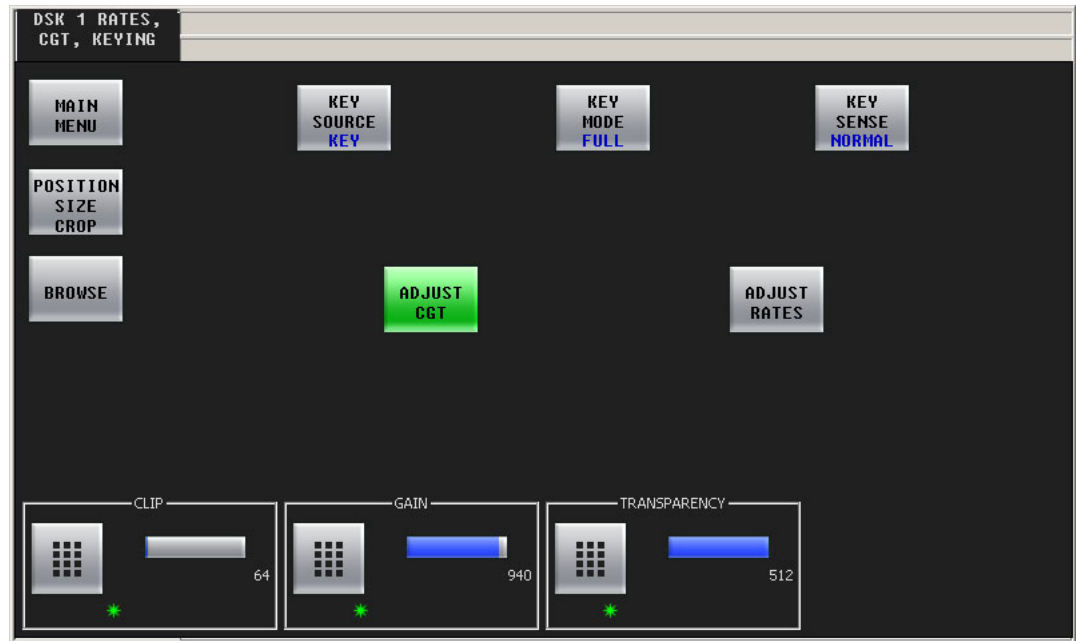


Figure 5-1. DSK Rates, CGT, Keying Settings (Sample)

This menu controls three things:

- DSK rates (slow, medium, and fast).
- Key parameters (clip, gain, and transparency).
- Key options (source, mode, and sense).

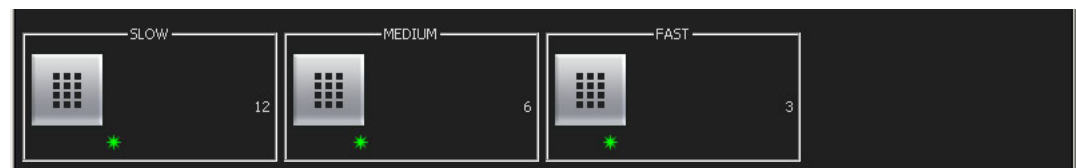
Clip, Gain, Transparency

Press the 'Adjust CGT' button to change the DSK's clip, gain, and transparency values. The menu will show a control at the bottom for each parameter (as shown in Figure 5-1 above):

Use the keypad icon or the knob proxy next to the green asterisk to change the value. (A slider will appear when you press the knob proxy.)

DSK Rates

Press the 'Adjust Rates' button to change the DSK's slow, medium, and fast rates. The menu will show a control at the bottom for each rate:



Use the keypad icon or the knob proxy next to the green asterisk to change the value. (A slider will appear when you press the knob proxy.)

5. Operation

Working with DSKs

Key Options

The top 3 buttons are toggles:

- Key source—toggles between ‘Key’ and ‘Self’. Self-keys do not use a separate key input. The key values are derived from the chroma values of the fill source.
- Key mode—full or linear.
- Key sense—normal or inverted.

Refer to the *Imagestore 750 Reference Manual* for definitions of these options.

Position, Size, and Crop

Press ‘Position Size Crop’ to change the key’s position or crop boundaries. The ‘DSK Position, Size, Crop’ sub-menu appears:

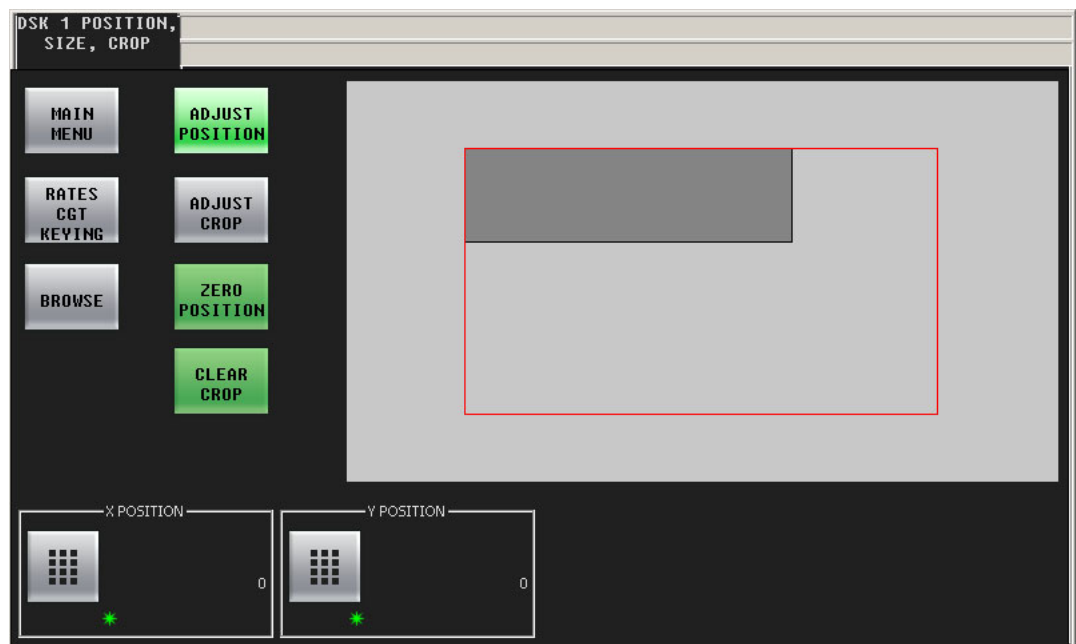


Figure 5-2. DSK Position, Size, Crop Settings (Sample)

There are 4 adjustment buttons in this sub-menu:

- Adjust position.
- Adjust crop.
- Zero position.
- Clear crop.

Position

Either (1) click ‘Adjust Position’ modify the position of the DSK on the screen, (2) click ‘Zero Position’ to reset its position to (0,0), or use the X and Y controls at the bottom of the window to enter a position. (Press the keypad icon to enter a number with a keypad or press the knob proxy to use the slider.) The coordinate you choose is of the upper left corner of the DSK.

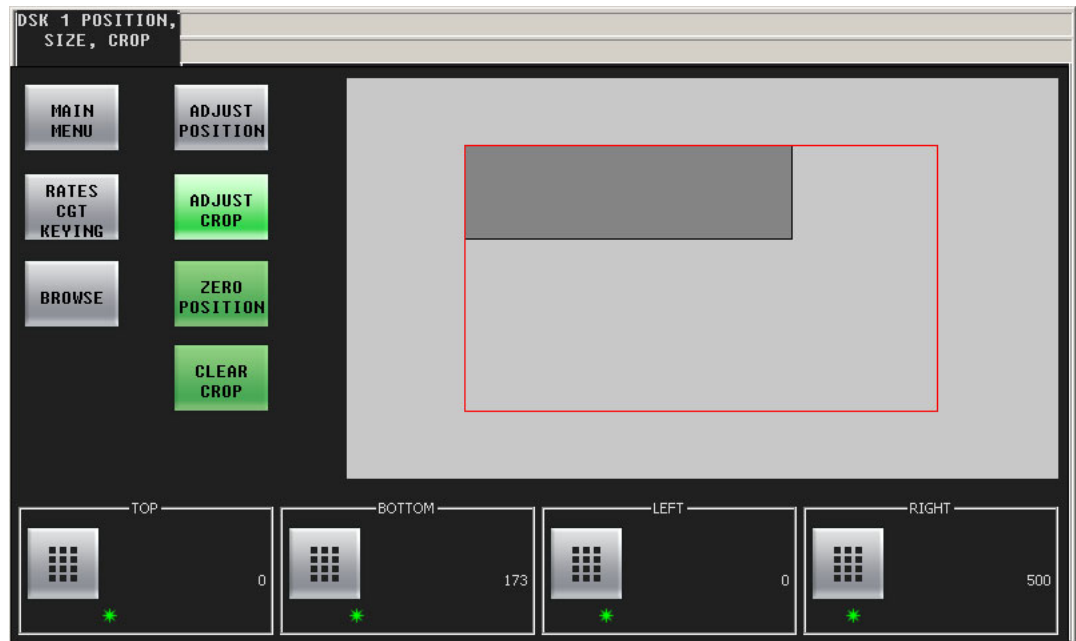
The large red outline represents the screen boundary. The darker gray rectangle represents the DSK.

Crop

Either (1) click 'Adjust Crop' modify the crop values of the DSK, (2) click 'Clear Crop' to reset its 4 crop values 0, or use the four controls at the bottom of the window to enter values. (Press the keypad icon to enter a number with a keypad or press the knob proxy to use the slider.)

The crop values do not change the position value and vice versa.

The large red outline represents the screen boundary. The darker gray rectangle represents the *cropped* DSK while the medium gray rectangle represents the *uncropped* DSK:



5. Operation

Working with DVEs

Saving DSK Settings

Press 'Options Saving' to access a sub-menu in which to save settings for the specific DSK: rate, the clip, gain, transparency parameters, or key options. The 'Options, Saving' sub-menu appears:

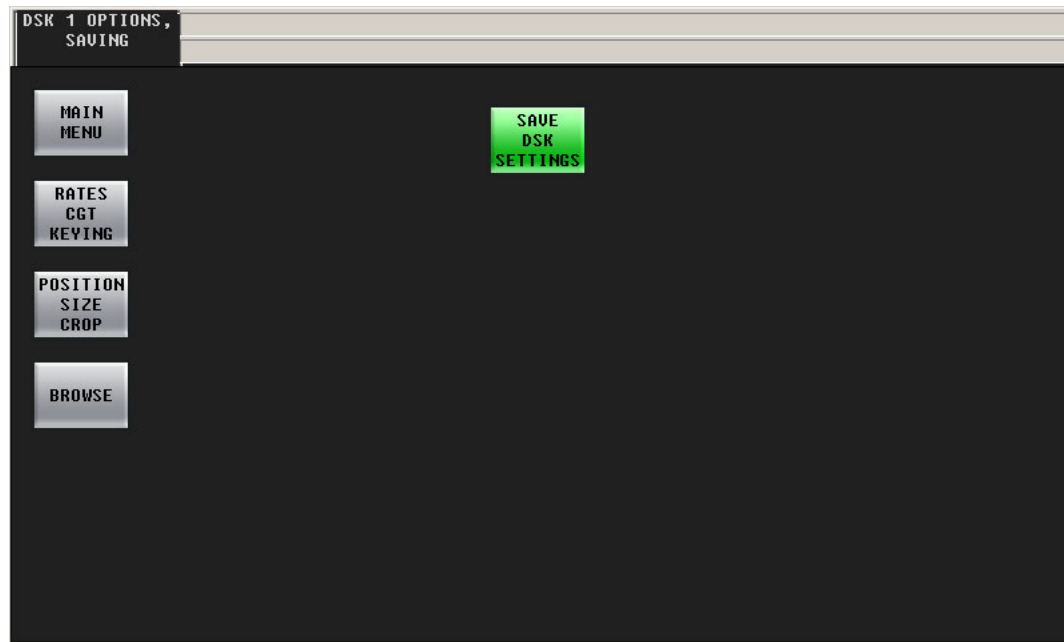


Figure 5-3. DSK Options Saving Page

Then press 'Save DSK Settings' to save the settings. Note that this button is absent if you have cleared the DSK because there are no settings to save.

Working with DVEs

There are up to 4 DVE buttons on the panel. The Imagestore 750 configuration permits the association of one DVE (of a possible 97 stored DVEs) with each button.

To use a DVE:

- 1 Press the appropriate DVE button on the preset row.
- 2 Carry out other presets as required.
- 3 Press the transition button.

You can "hot cut" DVEs to the program bus. Hot cuts are not recommended.

If your panel has a 'PGM DVE Enable' button, you can use it to enable or disable DVEs on the program bus.

If your panel has a 'PST DVE Enable' button, you can use it to enable or disable DVEs on the preset bus.

The use of DVEs is affected by certain transition options. See [Transition Options](#) on page 88 for more information.

Working with XG Layers

There are up to 8 XG layer accessible at your panel. Your panel can have some number of XG layer buttons. You can choose XG clips in the XG layer sub-menu. You can also turn the layers on and off in that menu.

XG layers are peculiar. First, XG layers are processed by one of the Imagestore 750's DSKs. If you are using XG layers, only 3 of the 4 DSKs are available to process keys.

Second, you cannot view an XG layer merely by selecting it on PST. Doing so only arms the XG layer for transition. However, you can view XG layers by selecting XG layers on PGM and then selecting the DSK that carries it, either on PGM or on PST. If you select the DSK on PGM, the XG layer appears on air. If you select the DSK on PST, it does not.

The Imagestore 750 has several options that relate to this phenomenon and which affect the way you work with that Imagestore 750. These are the options:

- 'Slave keyer assign'.

This option designates one of the DSKs as the default carrier for XG layer content. When you select an XG layer (on PST or PGM) the default DSK is also selected. You can always override this default.

The option can also specify that none of the DSKs is the default. In this case, you must choose a DSK carrier manually.

- 'Slave keyer follow up'.

This option can be enabled or disabled. When it is enabled, the default DSK turns on automatically when you have selected one or more XG layers.

When this option is disabled, the default DSK is not affected by XG layer selections.

Note that when this option is *enabled* and you select XG layers on PGM, the DSK is also selected on PGM. Consequently, the XG layers appear on air. When this option is *disabled* and you select XG layers on PGM, you can select a DSK on PST to view the XG layers.

- 'Slave keyer follow down'.

This option can be enabled or disabled.

When it is enabled, the default DSK turns off automatically when no XG layers are selected.

When this option is disabled, the default DSK is not affected by XG layer selections.

Consult your system administrator to determine how your Imagestore 750s are configured.

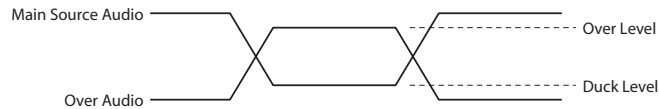
5. Operation

Working with Voice-Overs

Working with Voice-Overs

Imagestore 750s have two voice-over mixers: Over 1 and Over 2. The “layer” section of the program and preset button rows can include 0, 1, or 2 voice-over buttons.

There are two parameters that govern the use of voice-overs: the “duck” level and the over level:



Both of these values are expressed in decibels (in the range -99.9 dB to $+28.0$ dB).

Each voice-over has its own set of levels. You can change the voice-over’s levels in the ‘Voice-over’ menus.

Voice-over sources are defined in the Imagestore 750 configuration. When voice-over accepts EasyPlay clips, you can select different clips using the EasyPlay menus.

The voice-over mixers can also accept input from the Imagestore 750’s AES inputs. Choosing audio clips from external media is outside the scope of this manual, but it will probably involve loading, cueing, and pre-rolling different media.

The use of voice-overs is affected by certain transition options. See [Transition Options](#) on page 88 for more information.

Performing Transitions with Voice-Over

You can transition voice-overs to (or from) program output.

Follow these steps to transition one or more voice-overs to program output:

- 1 Press the desired VO button(s) on preset. Selected VO buttons are high-tally.
On preset, the VO buttons have 3 states: cut, fade, and off. Press the button again to cycle it to its next state. When the state is ‘cut’, the VO cuts to the program bus during the next transition and when the state is ‘fade’, the VO fades (at its current rate) to the program bus.
- 2 Optionally, set up other video effects, and transition type and rate.
- 3 Press the Transition button.

To *remove* voice-over(s) from program, press the desired VO button(s) on the preset bus to deselect them and perform a transition in the normal way. Here too, the VO buttons have 3 states: cut, fade, and off. When the state is ‘cut’, the VO cuts from the program bus during the next transition and when the state is ‘fade’, the VO fades from the program bus.

Please note: you can “hot cut” VOs directly on and off the program bus *at any time*, as required, simply by pressing the desired VO on the program bus. Hot cuts are not recommended.

Hot cuts have side effects on the preset bus, depending on which transition options are active in the currently selected Imagestore 750.

Voice-Over Menu

You can exercise detailed control of an over’s audio levels in the voice-over menu. Choose the menu for voice-over 1 or voice-over 2 by pressing the large voice-over button in the main menu or press a voice-over menu button. This is the ‘Voice-Over 1’ menu:



The ‘Voice-Over 2’ menu is just like it.

The controls at the bottom of the screen adjusts the “duck” level and the voice-over level of program output. To adjust these parameter, either press the keypad icon to enter a number in the keypad or press the knob proxy associated with the green asterisk, and then adjust the value with the slider.

The ‘Main Menu’ button returns you to the main menu. The ‘Set All Levels to Unity’ button sets all 16 audio channels of the voice over to unity gain. The ‘EasyPlay’ button takes you to the ‘Easy-Play’ menu. The other 3 buttons access the sub-menus.

5. Operation

Working with Voice-Overs

Gains and Mutes

This is the ‘Gains and Mutes’ sub-menu:



Each of the 16 audio channels has a mute button. Touch a mute button to mute or un-mute the audio channel. The mute button is amber if the channel is muted.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value for the channel’s gain.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB.

Touch the ‘Shuffles’ button to go to the ‘Audio Channel Shuffle’ sub-menu.

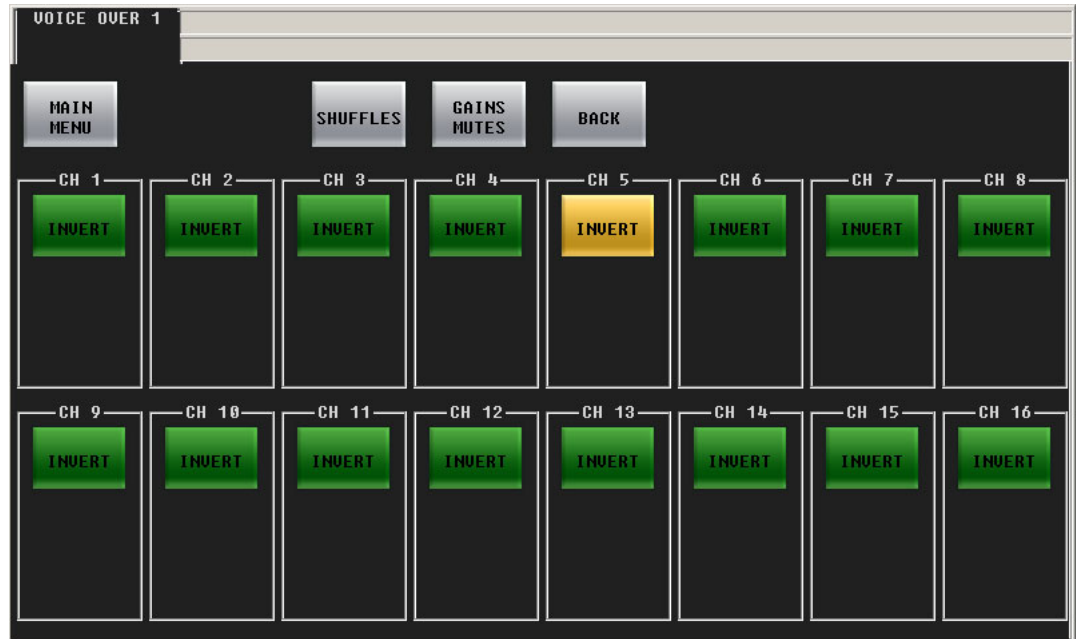
Touch the ‘Phase Inverts’ button to go to the ‘Phase Inverts’ sub-menu.

Touch the ‘Back’ button to return to the voice-over menu.

Touch the ‘Main Menu’ button to return to the main menu.

“Phase Inverts”

This is the ‘Phase Inverts’ sub-menu:



▲ The term *phase* is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1 .

Touching an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

Touch the ‘Shuffles’ button to go to the ‘Audio Channel Shuffle’ sub-menu.

Touch the ‘Gains Mutes’ button to go to the ‘Gains and Mutes’ sub-menu.

Touch the ‘Back’ button to return to the voice-over menu.

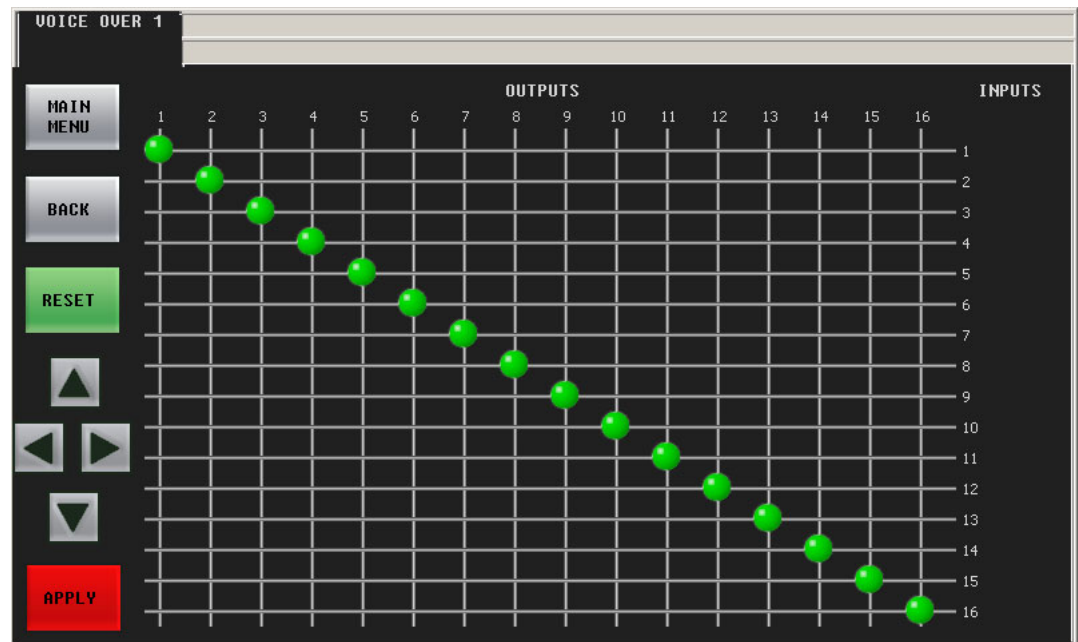
Touch the ‘Main Menu’ button to return to the main menu.

5. Operation

Working with Voice-Overs

Audio Channel Shuffle

This is the 'Audio Channel Shuffle' sub-menu:



See [Shuffling Audio Channels](#) on page 108.

Touch the 'Back' button to return to the voice-over menu.

Touch the 'Main Menu' button to return to the main menu.

Performing Over Transitions

Follow these steps to transition a voice-over to program output. (This assumes that your panel is configured with at least one voice-over button.)

- 1 Press the desired over button on the preset bus. A selected over button is high-tally violet. It is possible to select both available overs.
The over buttons, like DSK buttons, have 3 states: cut, fade, and off. Press the button again to cycle it to its next state. When the state is 'cut', the over cuts to the program bus during the next transition and when the state is 'fade', the over fades (at its pre-configured rate) to the program bus.
- 2 If necessary, adjust the duck level, over level, and any individual audio channel parameters.
- 3 Carry out other presets as needed.
- 4 Press the Transition button.

To *remove* over(s) from program, press the desired over(s) on the preset bus to deselect them (they now appear low tally)—and perform a transition in the normal way.

Please note: you can “hot cut” overs directly on and off the program bus *at any time*, as required, simply by pressing the desired keyer on the program bus. Hot cuts are not recommended.

- ▲ When a voice-over button is selected on the program button row, the corresponding voice-over button in the main menu becomes highlighted. The voice-over buttons in the main menu also select a voice-over menu.
- ▲ You cannot change the over source. There is one source for each VO and it is preconfigured.

Working with Audio Preview

Figure 5-4 shows the GUI’s ‘Audio Preview’ menu:

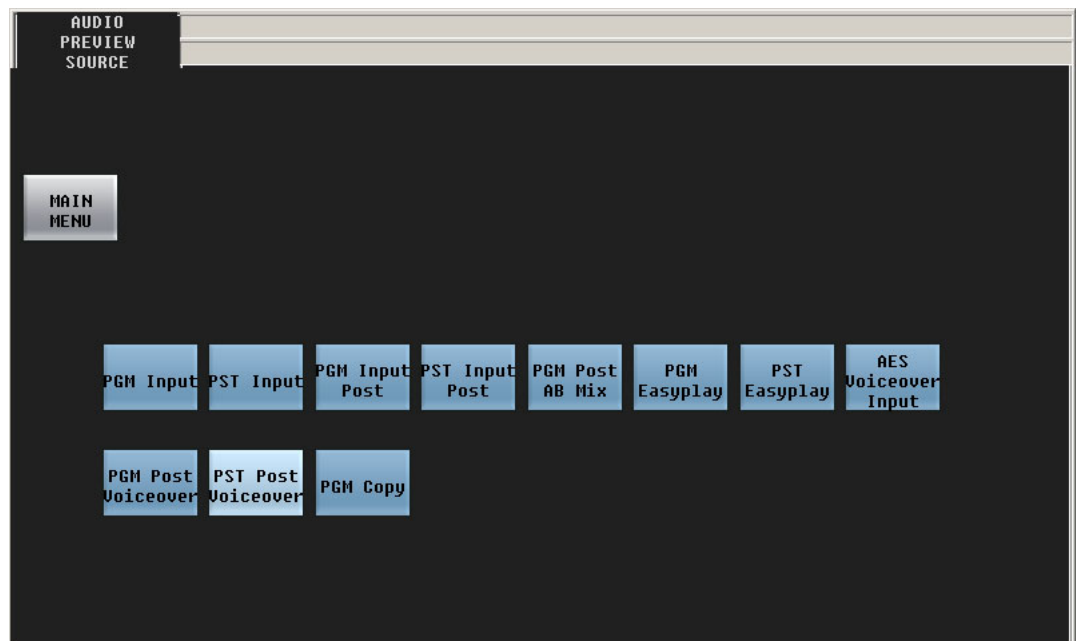


Figure 5-4. Audio Preview Menu

The ‘Audio Preview’ menu allows you to change the audio source for the preset monitor.

There are 11 source choices illustrated here:

PGM Input	PGM Input Post	PGM Easyplay	PGM Post Voiceover
PST Input	PST Input Post	PST Easyplay	PST Post Voiceover
PGM Copy	PGM Post AB Mix	AES Voiceover Input	

The number of sources and the names of the sources are determined by the person who configured the Imagestore 750. Consult your management if you need to know what the sources mean.

The ‘Main Menu’ button returns you to the main menu.

5. Operation

Working with Audio Meters

Working with Audio Meters

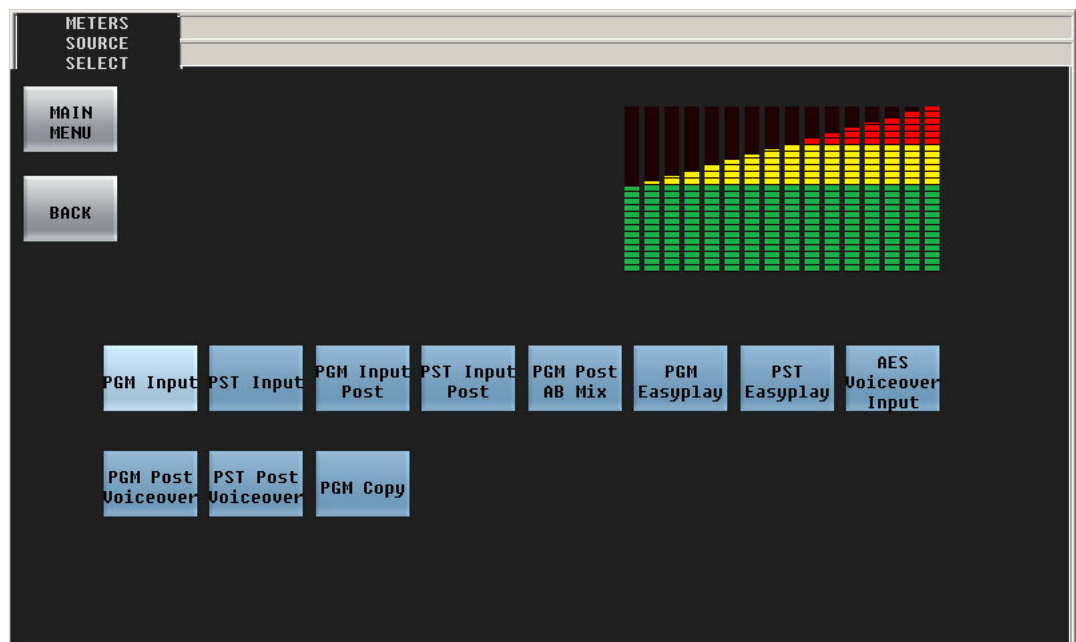
The GUI provides an audio metering display. It shows the 16 levels of the selected audio metering source in real time:



The name of the selected audio source is displayed at the upper right.

Click the 'Main Menu' button to return to the main menu.

Click the 'Meters Source Select' button to access the 'Meters Source Select' menu:



There are 11 sources illustrated here. The number of sources and the names of the sources are determined by the person who configured the Imagestore 750. Consult your management if you need to know what the sources mean.

Click the ‘Back’ button to return to the ‘Audio Meters’ menu.

Working with Audio Levels

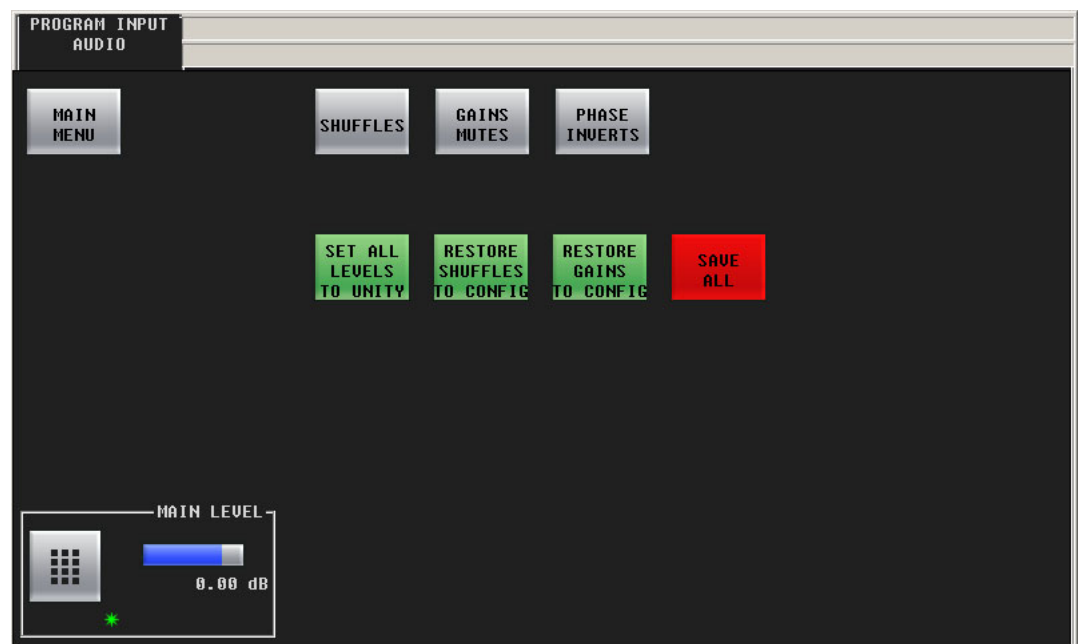
There are 5 menus for working with audio levels:

- Program input audio and preset input audio—the Imagestore 750’s audio *inputs*.
- Program output audio—the Imagestore 750’s audio *outputs*.
- Voice-over audio (1 and 2)—the Imagestore 750’s voice-over *inputs*.

The menus all function the same way, although they affect different parts of the Imagestore 750.

- ▲ The program and preset audio inputs apply individually to main sources. You can save and restore audio settings for each source.

This is the ‘Program Input Audio’ menu:



The control at the bottom of the screen adjusts the master audio level. The 16 individual audio channels are affected by the master level.

To adjust the main level, either press the “knob” associated with the green asterisk, and use the slider that appears, or touch the keypad icon to access a large keypad with which to enter a number.

The ‘Main Menu’ button returns you to the main menu. The ‘Set All Levels to Unity’ button sets all 16 audio channels to unity gain. The other 3 buttons in the upper row access other sub-menus.

The ‘Restore...’ buttons restore your audio settings (shuffle or gain) to what was in the Imagestore 750’s configuration. The ‘Save All’ button saves your current audio settings—for the currently

5. Operation

Working with Audio Levels

selected main source—to the Imagestore 750. (These buttons are not present in the ‘Program Output Audio’ menu or the voice-over menus.)

Gains and Mutes

This is the ‘Gains and Mutes’ sub-menu:



Each of the 16 audio channels has a mute button. Touch a mute button to mute or un-mute the audio channel. The mute button is amber if the channel is muted.

Each of the 16 audio channels has a keypad icon. Touch the keypad icon to access a keypad in which you can enter a numerical value for the channel’s gain.

Either the top row of 8 buttons or the bottom row of 8 buttons can be associated with the 8 knobs. To choose the top row, touch the top row. To choose the bottom row, touch the bottom row. You can thus adjust the gain of each channel by turning its knob.

The gain range is -99.5 dB to $+28.0$ dB.

Touch the ‘Shuffles’ button to go to the ‘Audio Channel Shuffle’ sub-menu.

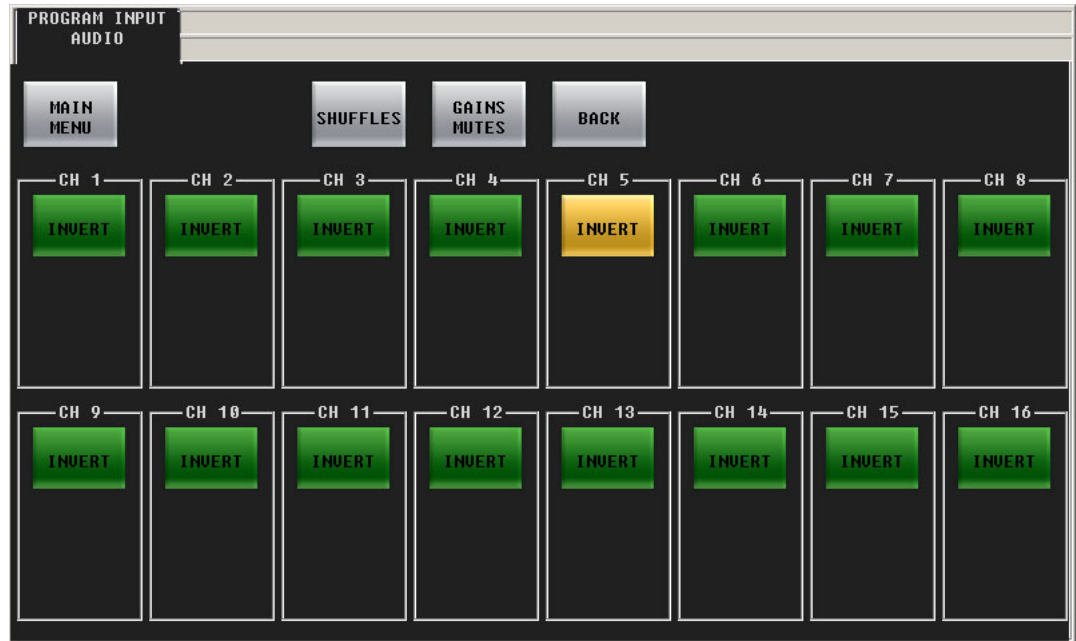
Touch the ‘Phase Inverts’ button to go to the ‘Phase Inverts’ sub-menu.

Touch the ‘Back’ button to return to the parent-level menu.

Touch the ‘Main Menu’ button to return to the main menu.

“Phase Inverts”

This is the ‘Phase Inverts’ sub-menu:



▲ The term *phase* is a misnomer. Phase has nothing to do with signal inversion.

When the audio channel is inverted, its PCM values are multiplied by -1 .

Touching an invert button either inverts or un-inverts the audio samples. When the button is amber, the samples are inverted. When the button is green, the samples are normal.

Touch the ‘Gains Mutes’ button to go to the ‘Gains and Mutes’ menu.

Touch the ‘Back’ button to return to the voice-over menu.

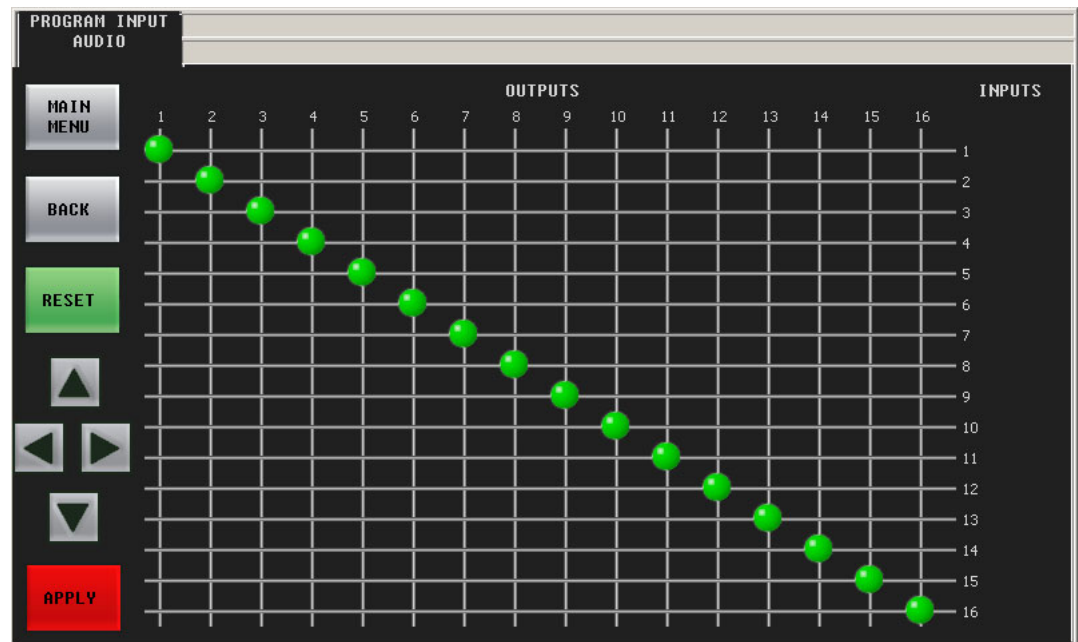
Touch the ‘Main Menu’ button to return to the main menu.

5. Operation

Shuffling Audio Channels

Audio Channel Shuffle

This is the 'Audio Channel Shuffle' sub-menu:



See [Shuffling Audio Channels](#), next, for information.

Click the 'Bus Audio' button to return to the audio menu.

Shuffling Audio Channels

There is an 'Audio Channel Shuffle' button in the following menus:

- PGM Input Audio.
- PST Input Audio.
- Voice-Over 1.
- Voice-Over 2.

Clicking the 'Shuffles' button in any of those menus takes you to a shuffle menu. The 4 shuffle menus are functionally identical, but affect different parts of the Imagestore 750.

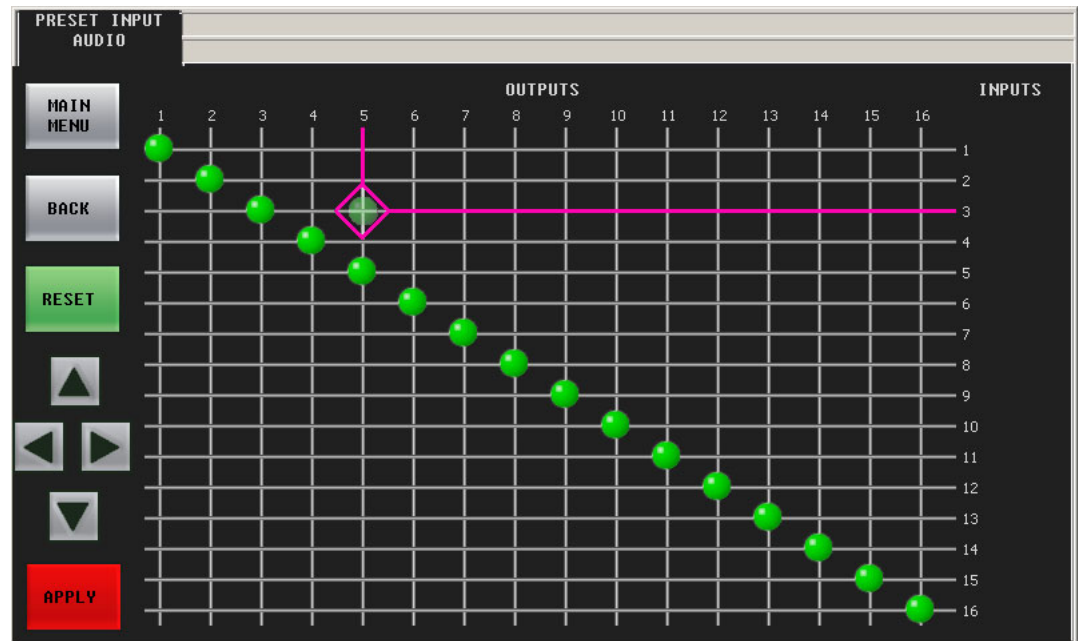
The shuffle menu presents a 16×16 crosspoint matrix. Inputs (rows) are mapped to outputs (columns) with a green circle.

Performing a Shuffle

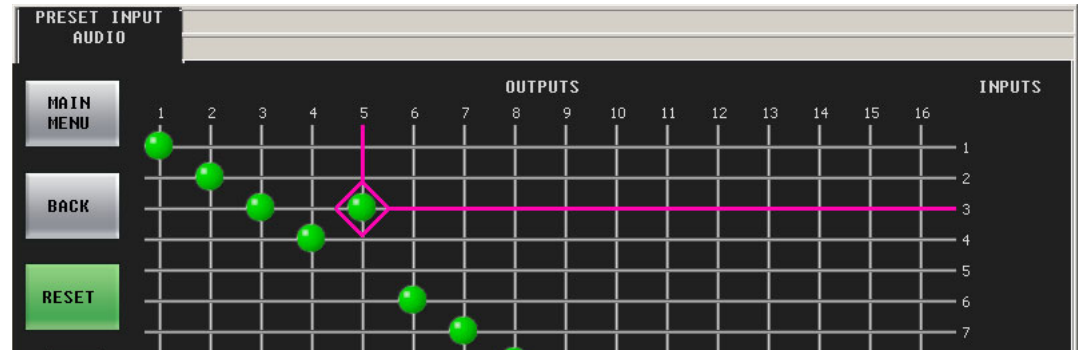
Although it is not immediately evident how to perform a channel shuffle, it is not difficult. You can use either the joystick or the arrow buttons in the lower left part of the menu.

To initiate a shuffle (when the shuffle menu is displayed), press one of the arrow buttons at the left. A red reticle (or crosshair or cursor) appears. You can position it with the arrow buttons.

Position the reticle on the crosspoint you want. In this illustration, the reticle is on the column for output 5 and will change the input for that column from 5 to 3. A faint circle appears at the new location:



Now press the red 'Apply' button (or press the left button on the joystick):



The faint circle turns solid.

You can now move the reticle to select another crosspoint to change.

It is possible to route a single input to multiple outputs. It is not possible to route multiple inputs to a single output. Keep in mind that inputs are rows and outputs are columns.

Press 'Reset' to restore the default channel configuration (which is diagonal).

Press 'Back' to return to the audio menu.

Please note:

- Shuffle changes occur immediately, letting you “hot swap” audio assignments directly on program output.
- The Imagestore 750 remembers the audio channel mapping until the Imagestore 750 is reset or until you change the mapping.

5. Operation

Working with Multiple Channels

Working with Multiple Channels

You will probably find one or more channel buttons among the configurable buttons of your iMC-Panel-GUI. (A channel is an Imagestore 750, an MCE or an MCPM.)

There are 5 types of channel buttons:

- Channel selection.
- No channel.

Channel selection can also be performed in the 'Channel Select' menu. However, selecting *no channels* or ganging channels requires the use of channel buttons. Channel selection is affected by "automatic gang mode." See the discussion of automatic gang mode, following.

You can access the 'Channel Select' menu either by pressing a 'Channel Select' menu button or by touching the 'Channel' button in the main menu.

When channels are ganged, one channel is the "main" channel and other channels are "followers." The operations you perform on the main channel are replicated on the followers.

▲ Ganged channels must either be all Imagestore 750s or a combination of MCEs and MCPMs.

A 'No Channel' button can be used to take the iMC-Panel-GUI out of service for maintenance.

A 'Channel Status' button (normally white) displays the name of the currently selected channel and turns red when the channel is malfunctioning.

A 'Channel Control' button re-acquires the currently selected channel.

When you select a channel, all status and configuration parameters for the newly selected channel are downloaded to the panel. A channel change takes approximately one second. Buttons, main sources, video effect sources, transitions rates, and salvos can *all* change according to your specific channel configuration.

Channel changes can be programmed to trigger an NV9000 salvo. Consult your system administrator if you need to determine whether your channel selection buttons trigger salvos.

Automatic Gang Mode

Your GUI might be configured for "automatic gang mode." In this mode, the default channel is the main channel of a channel gang. Whenever the default channel is selected (by any method), all the channels in the automatic channel gang are selected and gang selection is enabled.

If your GUI allows ganged channels, and has the appropriate channel buttons, the button for the main channel of the gang tallies green; the buttons for the follower channels of the gang tally amber. Whatever actions you take for the main channel are applied also to the follower channels. (Your panel might not have buttons for all of the channels in the automatic channel gang.)

The 'Gang Channels' button (if you have one) tallies bright green when gang selection is enabled. You can enable or disable gang selection with the 'Gang Channels' button. When gang selection is enabled, you can add follower channels to, or remove follower channels from, the current channel gang, whether that gang is the automatic channel gang or some other gang.

You cannot restore a gang using the 'Gang Channels' button. If you have the default channel selected, you can press a 'Gang Control' button to restore the automatic channel gang after you have disabled gang selection.

Channel Selection with Buttons

To change channels, press the button for the channel that you want to control.

When you perform a channel change, the *new* channel button flashes red for an moment, indicating that the system has acknowledged the change request. When the channel is ready, the button goes high tally green, unless there is a problem in which case the button stays red.

If the channel you select is the default channel under automatic gang mode, the panel selects all the channels in the automatic channel gang. The multiple channel selection takes a few seconds.

Channel Selection in the Menu

Follow these steps to change channels in the ‘Channel Select’ menu:

- 1 Press the ‘Channel’ button in the main menu to display the ‘Channel Select’ menu. The menu displays a list of channels. The currently selected channel is highlighted.
- 2 To select a channel, touch a list entry. You might have to scroll the list to find the entry you want. The channel change executes *immediately* although it takes approximately a second to complete.

When you perform a channel change, the *new* channel button flashes red for an moment, indicating that the system has acknowledged the change request. However, if the channel is in use by a panel that does not share channels, you will see additional messages regarding preemption. See [Preemption](#), following.

If the channel you select is the default channel under automatic gang mode, the panel selects all the channels in the automatic channel gang. The multiple channel selection takes a few seconds.

No Channel Selection

To disconnect your GUI from all channels, press a ‘No Channel’ button (in one of the configurable button sections). If you do not have a ‘No Channel’ button, you cannot do this.

The GUI becomes partially “inert”—any button that controls a channel becomes disabled. Other buttons remain active, in particular, any channel selection buttons you have. The menus and menus also remains active.

To resume normal operations following a “no channel” period, select any channel.

Sharing Channels

Your GUI can be configured to share—or not to share—channels with other panels.

If your GUI is not configured to share, an attempt to acquire the channel at an other panel can preempt your use of the channel. If the other panel has a higher priority than yours has, it will preempt you and take over the channel, and you will be notified of the fact.

Conversely, if you wish to preempt another panel, and have a higher priority than that panel, you can preempt the other panel.

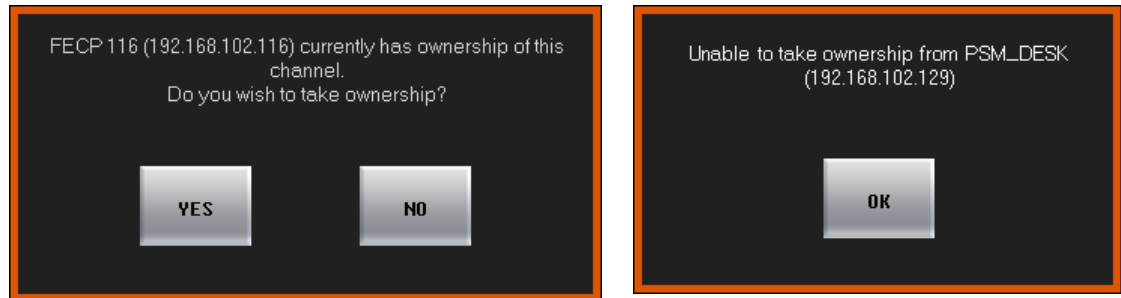
If your GUI is configured for sharing, it is possible for you to share a channel with other panels, unless some channel that is not configured for sharing controls that channel.

5. Operation

Working with Multiple Channels

Preemption

When your GUI is not configured for sharing, if the channel (or one of the ganged channels) you want to control is in use, you will see either a permission message or a denial of access message:



If you see a permission message, and you wish to preempt the other panel, click 'OK'. Otherwise click 'Cancel'.

If you see a denial of access message, click 'OK'. You may not acquire the channel. You can try again later, choose another channel, or negotiate with the other panel operator.

- ▲ If someone preempts you, your panel will immediately appear to "go dead." What actually happens is the same thing that would happen if you pressed a 'No Channel' button. You will have to wait for the channel to become available again or switch to another channel.
- ▲ A panel can preempt another panel if it has been configured with a higher priority or in some cases, with the same or higher priority.

Sharing

When your GUI is configured for sharing, if the channel (or one of the ganged channels) you want to control is in *exclusive* use (at a panel that does not share), you will see a failure message:



If the sharing attempt failed, your panel will revert to its previous state, controlling the channel it controlled prior to the sharing attempt.

Monitor Wall Re-Layout

Your panel can be configured so that a channel change triggers a monitor wall re-layout. Some or all of your channels (whether Imagestore 750s, MCEs, or MCPMs) can be set so that when they are selected, they cause the Kaleido-X multi-viewer driving the monitor wall to use a particular *room* and *layout* (defined for that Kaleido-X multi-viewer).

(Your panel might also have buttons that also trigger monitor wall changes.)

Working with a Monitor Wall

The master control system you are using can be set up to work with a monitor wall or a portion of a monitor wall. A monitor wall can display up to 24 sources from the master control system. The monitor can display the sources of the source group currently selected at your panel.

There are several points you should keep in mind:

- If you change the sources in a source group, those changes will be reflected at the monitor wall.
- The monitor wall can also display the program, preset, clean-feed, and monitor outputs of the currently selected Imagestore 750, and can display the aux output associated with that Imagestore 750.
- Your panel can be configured so that when you switch to a different channel, the monitor wall switches to the layout associated with the channel. Your panel can also have buttons with which you can change the monitor wall layout manually.

Different Imagestore 750s can be configured (and connected) differently and so can behave differently.

Working with the Aux Bus

The aux/user button row comprises a number of main source buttons and some number of configurable function buttons. The main source buttons are exactly identical to the sources of the preset and program button rows. They control the router sources that can be routed to an auxiliary device such as a waveform monitor.

The auxiliary device is optional.

If your master control system has an auxiliary device, simply press any main source button of the aux/user row to direct the source signal to the device.

'Aux Bus Follow'

Imagestore 750s in the master control system have an 'Aux Bus Follow' option. This option has 3 choices: 'none', 'PGM', or 'PST':

When the option is 'PGM', the aux bus "follows" the program bus. That means that whatever source you select on the program bus is also selected on the aux bus.

When the option is 'PST', the aux bus "follows" the preset bus and whatever source you select on the preset bus is also selected on the aux bus.

When the option is 'none', the aux bus does not "follow" either bus and operates normally.

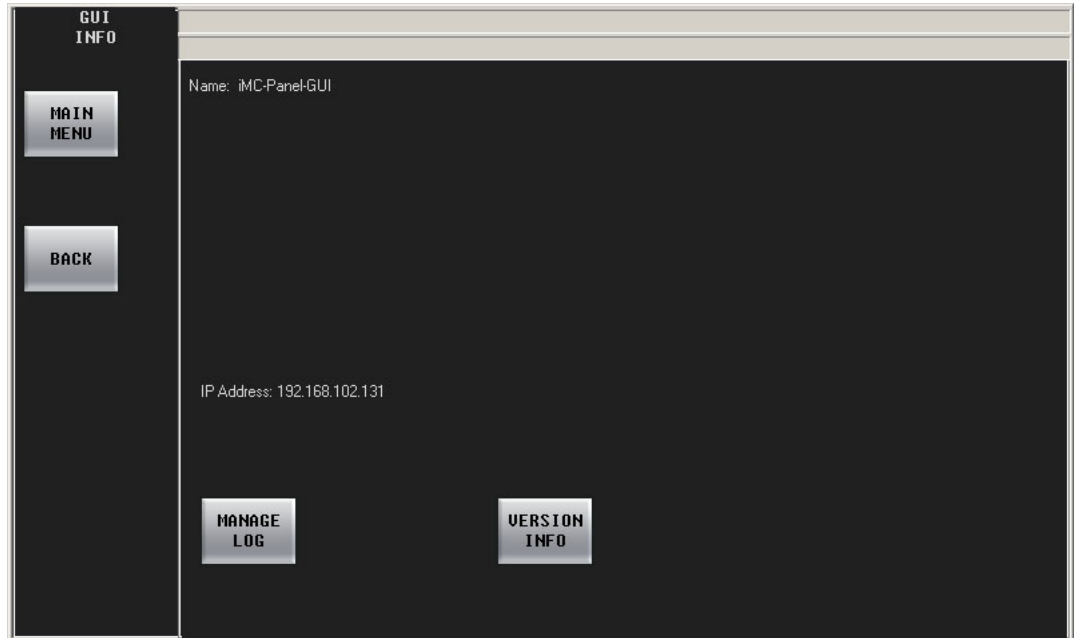
Note that when the option is 'PGM' or 'PST', you can still use the aux buttons, normally, to switch sources to your aux output.

5. Operation

Using the Panel Menu

Using the Panel Menu

From the main menu, press 'Panel Settings' to display the 'GUI Info' menu.

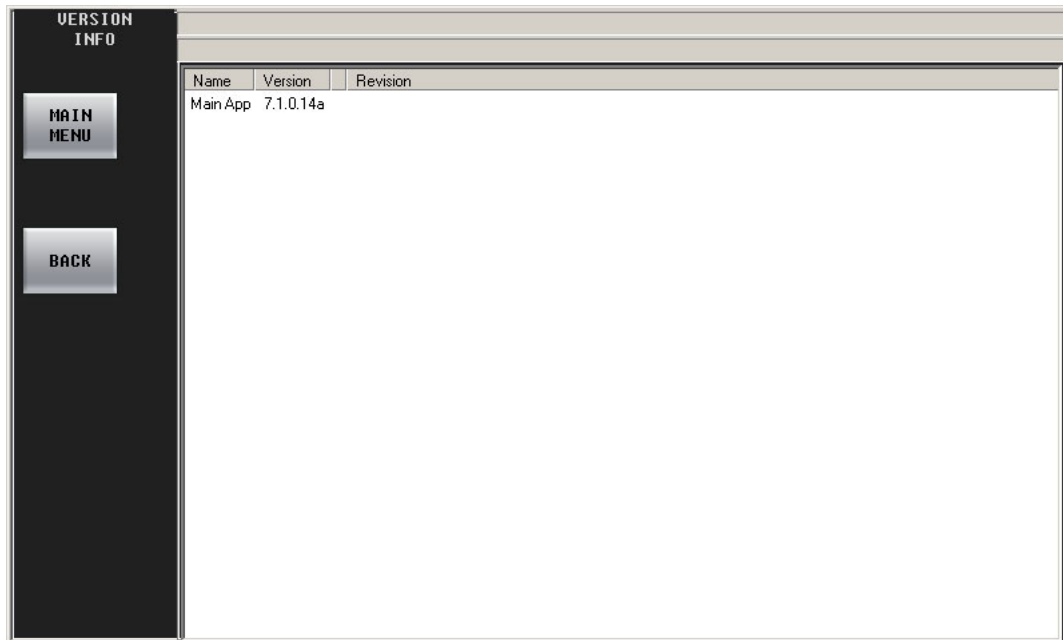


The GUI menu provides the following functions:

- Display the IP address of the currently selected Imagestore 750.
- View or clear the panel's log file.
- Display the versions of internal software and firmware.

View Version Information

From the main menu, press 'Panel Settings' to display the 'GUI Info' menu. Then press 'Version Info'.



View, Clear, or Save the Panel's Log File

From the main menu, press 'Panel Settings' to display the 'GUI Info' menu. Then press 'Manage Log'.



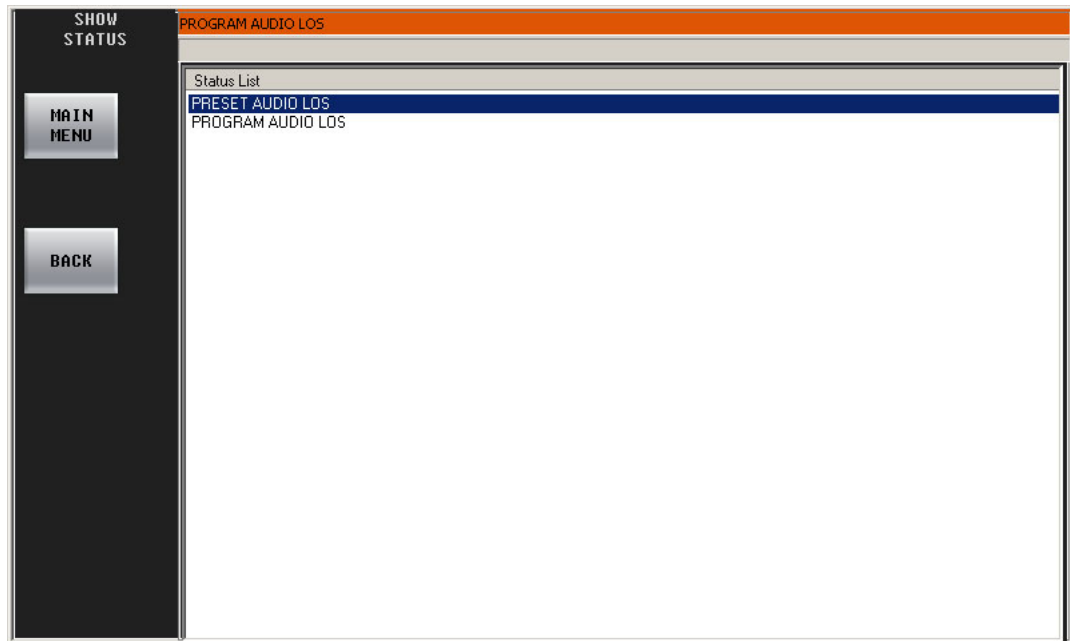
Press 'View Log' to see the log file or press 'Clear Log' to erase the log file.

5. Operation

Fade to Black

Press 'Save Log' to save the log in a .txt file. The name of the file is CECF_GUI_Log.txt and its location is the bin folder under your master control software installation folder. (Its default path-name is C:\Program Files\Miranda\Master Control\bin.)

Press 'Show Status' to view system messages:



The display will be empty if there are no messages.

Fade to Black

A 'Fade to Black' button is a toggle: press it once to fade program video to black and program audio to silence. Press the button again to fade up from black/silence to normal program output.

The FTB and FTS rates are pre-configured in the Imagestore 750. You cannot change them.

- ▲ When the Imagestore 750 has faded to black/silence, the FTB and FTS buttons of the main menu are highlighted in red.

Fade to Silence

A 'Fade to Silence' button is a toggle: press it once to fade program audio to silence. Press the button again to fade up from silence to normal program output.

The FTS rate is pre-configured in the Imagestore 750. You cannot change it.

- ▲ When the Imagestore 750 has faded to silence, the FTS button of the main menu is highlighted in red.

Updating Configuration Settings

You (or your system administrator) can create new GUI configurations and then *update* the GUI accordingly. The configuration software is the *MCS Panel Configuration Editor*.

Refer to the *MCS Panel Configuration Editor User's Guide* for configuration instructions.

5. Operation

Updating Configuration Settings

6. Misc. Topics

Chapter 6 provides the following glossary.

Glossary

Channel	Definition 1: A single Imagestore 750, MCE or MCPM (and, specifically, its program output). Definition 2: One of 16 audio channels.
GPI	General-purpose interface. The iMC-Panel-GUI has 2 GPI inputs and 2 GPI outputs. You can assign a panel-specific GPI output to a configurable control panel button. (GUIs do not have panel-specific GPIs.)
Intuition XG	Intuition XG is a combination of a graphics processor and Xmedia software.
Key, Keyer	A process that overlays a masked image—the <i>key</i> —on the program. A key comprises one or two video sources: fill and (usually) a key. The key image masks the fill image. If the keyer uses only a fill source, the key is derived from the luminance of the fill image.
Self key	A process in which a keyer uses the fill to generate its own key (mask).
XG clip, XG media clip	A term used in this document to refer to one of the video and audio sequences stored in, and played by, the Intuition XG processor. An XG clip is a programmed composition of video, static and animated graphics, audio, and text (which can be derived from live data).
XG Dashboard	Configuration tool for Intuition XG.
XMedia	A collection of configuration and creative software used with Intuition XG.
Xbuilder	“Template population” and “promo timeline control” software for Intuition XG.
XPlay	A “media event sequencer” used to configure the Intuition XG and to manage clips. Xplay must be running on the Intuition XG processor for correct operation under master control.
Xstudio	“Template creation” software for Intuition XG.

6. Misc. Topics

Glossary



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