Encore GC and ECU

User's Guide

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- Revision 00

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Encore GC and ECU • User's Guide

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Operators Safety Summary

The general safety information in this summary is provided for operating personnel, specifically pertaining to the hardware components of the Encore GC and ECU.

Do Not Remove Covers or Panels

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

Power Source

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

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

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

Do Not Operate in Explosive Atmospheres

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

Terms In This Manual and Equipment Marking

WARNING

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

Note | Highlights an essential operating procedure, condition or statement.

CAUTION

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

AVERTISSEMENT!

Le point d´exclamation dans un triangle equilatéral signale à alerter l´utilisateur qu´il y a des instructions d´operation et d´entretien tres importantes dans la litérature qui accompagne l´appareil.

VORSICHT

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

Change History

The table below lists the changes to the Encore GC and ECU User's Guide.

Table 0-1. Change History

Rev	Date	ECP #	Description	Approved By
00	7/30/08	560717	Encore GC and ECU User's Guide	J. Konst

Table of Contents

Table of Contents

1. Introduction

This chapter is designed to introduce you to the Encore GC and ECU (Encore Graphical Controller and Encore Control Unit). Areas to be covered are:

- **Software Version**
- **Chapter Structure**
- **How to Use This Guide**
- **Conventions**
- **Terms and Definitions**
- **System Overview**

Note

Once you have reviewed all of the sections in this chapter, please continue with Chapter 2, "**Hardware Orientation**" on page 29.

Software Version

This version of the Encore GC and ECU User's Guide is based on software version 1.00.

Chapter Structure

The following chapters provide instructions for all aspects of Encore GC and ECU operations:

- Chapter 1, "**Introduction**" provides a system overview, a list of features and basic system diagrams.
- Chapter 2, "**Hardware Orientation**" on page 29 explains the Encore GC and ECU's hardware.
- Chapter 3, "**Hardware Installation**" on page 33 provides comprehensive system hardware installation instructions.
- Chapter 4, "**Getting Started**" on page 43 provides instructions for starting up the Encore GC and ECU, installing the application and launching the system.
- Chapter 5, "**Menu Orientation**" on page 61 explains the Encore GC's user interface, and provides basic menu navigation procedures.
- Chapter 6, "**System Setup**" on page 143 outlines procedures for setting up and configuring the Encore GC and ECU.
- Chapter 7, "**Operations**" on page 163 provides basic Encore GC and ECU operating instructions.
- Appendix A, "**Specifications**" on page 191 lists the Encore GC and ECU's software and hardware specifications.
- Appendix B, "**Contact Information**" on page 195 lists important Barco contact, RMA, warranty and technical support details.
- Appendix C, "**Upgrading Software**" on page 197 provides a detailed procedure for upgrading Encore GC software.

How to Use This Guide

Following are tips for streamlining your use of this User's Guide in its electronic "PDF" form.

Navigating

Use Acrobat Reader's "bookmarks" to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat's "**Go to Previous View**" and "**Return to Next View**" buttons to trace your complete navigational path.
- Use the "**Previous Page**" and "**Next Page**" buttons to go to the previous or next page within a file.
- Use Acrobat's extensive search capabilities, such as the "**Find**" tool and "**Search Index**" tool to perform comprehensive searches as required.

Table of Contents and Index

Use the **Table of Contents** bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

General Instructions

To ensure trouble-free installation, setup and operations, please follow all procedures as listed below:

- For comprehensive hardware orientation, refer to Chapter 2, "**Hardware Orientation**" on page 29.
- For complete Encore GC and ECU installation instructions, refer to Chapter 3, "**Hardware Installation**" on page 33.
- To start up the system, refer to Chapter 4, "**Getting Started**" on page 43.
- For a comprehensive review of all Encore GC menus, refer to Chapter 5, "**Menu Orientation**" on page 61.
- For system setup instructions, refer to Chapter 6, "**System Setup**" on page 143.
- For operating instructions, refer to Chapter 7, "**Operations**" on page 163.

Should you have any questions regarding the installation or operation of the Encore GC and ECU, please consult with the factory. Refer to Appendix B, "**Contact Information**" on page 195 for contact information.

Conventions

The following conventions are used throughout this guide:

- The symbol ■ denotes an operations procedure.
- The symbol ▲ denotes an example.
- Entries written in bold-face letters denote physical buttons or connectors.

  ▲ Press **Power** to ...
- Buttons on the Encore GC interface are also shown in bold-face letters.

  ▲ Press **Source 1** to …

Terms and Definitions

The following terms and definitions are used throughout this guide:

- A "**Background**" is typically an unscaled source originating from a computer's multi-head graphics card, or a frame grab from a scaled source. The Encore VP (Video Processor) provides two background sources (**BG A** and **BG B**), each of which appears at the system's lowest priority — visually in back or underneath all other sources.
- A "**Destination**" is a location to which you can route the output of a VP. A destination can be configured as:
  - ~ a single screen (one projector)
  - ~ multiple screens (such as a wide screen application)
  - ~ an external processor (such as a **ScreenPRO-II**)
- "**GUI**" is the acronym for Graphical User Interface.
- A "**Key**" is an electronic (and visual) process whereby one image is electronically superimposed over another source or background. Keys are typically used for titles, logos, and banners.
- A "**Layer**" is an image display element (such as a PIP, Key or Background) that has an associated visual priority — either in front (or in back) of another layer.
- A "**Mixer**" is the circuitry that enables you to transition (and scale) PIPs and Keys over a background.
- "**M/E**" (Mix/Effects) is synonymous with "**mixer**." Each M/E in the VP is capable of layering either two PIPs, two keys, or one of each.
- "**Operator**" refers to the person who uses the system.
- "**PIP**" refers to Picture-in-Picture, an on-screen configuration in which one picture (typically of reduced size) is positioned over another background image — or another PIP. PIPs can be reduced, enlarged, bordered, shadowed, and mixed on and off Program. PIPs can overlap each other, depending on their visual priority.
- A "**Preset**" is a storage register in which you can store (and recall) the entire configuration or "look" of your destination(s).
- "**System**" refers to the Encore GC and ECU.

- A “**Scaler**” is the electronic circuitry that enables you to reduce or enlarge source images, thus creating PIPs and Keys that can be positioned (and transitioned).
- The Encore GC supports the following Video Processors:
  - ~ “**VP**” refers to Video Processor, the system’s full-input Video Processor.
  - ~ “**VPx**” refers to the VP chassis with a reduced set of inputs. VPx is used only for widescreen and special widescreen “preview” configurations.
  - ~ “**SP-II**” refers to the ScreenPRO-II.

System Overview

The following topics are discussed in this section:

About Encore GC and ECU

Encore GC is a graphical user interface (GUI) designed to control the Encore and ScreenPRO-II video processors — without the need for an Encore LC or SC controller. The ECU-1 (Encore Control Unit) is an advanced server that connects video processors, routers, and the PC (which runs the Encore GC) together.

Overall, the Encore GC and ECU simplify your system configuration and provide a cost effective solution for your event’s requirements.

- **A Versatile Tool** — The Encore GC runs on Windows XP or Vista, and provides the majority of functions currently available from the Encore or ScreenPRO-II controllers. Full backup and restore functions are provided.
- **Control and Configuration** — System control is achieved by configuring a closed network that consists of your PC, the Encore Control Unit (ECU), your system’s Encore or ScreenPRO-II video processors, monitoring, and the desired destination devices (e.g., projectors or monitors). In addition, for external control, third party controllers such as Crestron or AMX can be connected to the Encore GC network. In this type of setup, presets are programmed and stored using the Encore GC, downloaded to the ECU-1, and then triggered externally.

Encore GC and ECU Features

Following is a detailed list of Encore GC and ECU features:

- **Configuration**
  - ~ Encore Video Processor and VPx support
  - ~ ScreenPRO-II support
  - ~ Barco and non-Barco router support
  - ~ Windows® XP™ or Vista™ support
  - ~ Encore Control Unit (ECU) support
  - ~ Widescreen support
  - ~ Multiple destination support
  - ~ External device control via Crestron, AMX or Medialon
- Setup and Operations
  - ~ Preset control
  - ~ Automatic Preset conflict resolution
  - ~ Input, background/DSK, and output setup
  - ~ Source switching
  - ~ Background transitions
  - ~ PIP and Key control
  - ~ Layer control (size, position and moves)
  - ~ Effects (freeze, Z-order)
  - ~ Frame grab support
  - ~ Show back-up

The Encore Video Processor

As an integral part of an Encore GC and ECU system, the Encore Video Processor provides the system's input and output circuitry. Two models are available:

- The "standard" Video Processor (**VP**) is a full-featured unit that includes all input, output, genlock and link circuitry.
- The **VPx** is a VP with a reduced set of inputs (DVI only). The VPx is used for widescreen configurations. VPx includes all output and link circuitry, no genlock circuitry, and only a small subset of the standard VP's input circuitry.

Both units are housed in a 3RU rack-mount chassis that can be configured with one, two or three M/E (mixer) boards. One or two M/E systems can be upgraded with additional M/Es.

Note

For complete information on VP and VPx hardware, refer to the **Encore Presentation System User's Guide**.

Input Flexibility

Each M/E board in the Encore Video Processor provides two independent Athena scalers with universal inputs that handle both analog and digital video sources.

The figure below illustrates a block diagram of the VP's M/E.

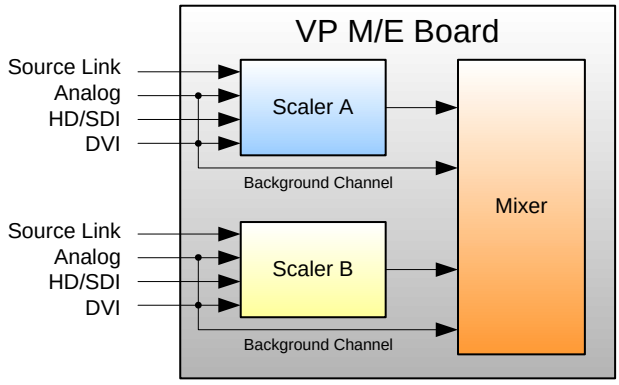


Figure 1-1. M/E Board Block Diagram, VP

The VP accepts the following inputs:

- Standard component and composite analog video formats (NTSC, PAL, SECAM)
- SDI and HD-SDI Video
- Computer input resolutions up to 1920 x 1200 (analog or digital)
- Analog HD formats including 720p, 1080I, 1080p
- 2048 x 1080p Digital Cinema video
- Plasma display resolutions

The figure below illustrates a block diagram of the VPx's M/E.

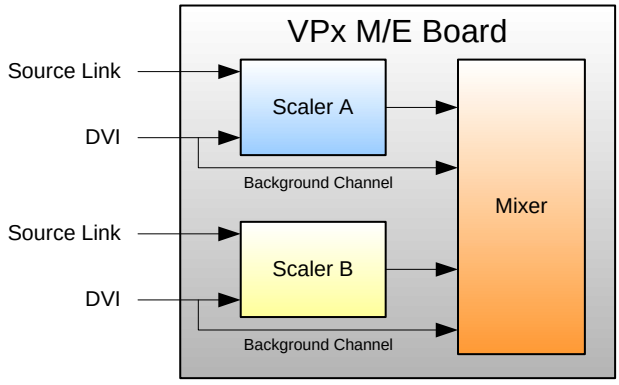


Figure 1-2. M/E Board Block Diagram, VPx

The VPx accepts the following inputs:

- Computer input resolutions up to 1920 x 1200, via DVI

Scaling and Keying

For both Video Processor models, the Athena scaler features the following:

- 1:1 pixel sampling
- Motion adaptive de-interlacing for both standard and high definition sources
- 3:2 and 2:2 pull down detection
- Aspect ratio correction and image cropping
- Real-time window resizing and positioning
- Full support for seamless transitions, window borders, drop shadows and keying

Output Flexibility

Each Encore VP and VPx incorporates one output board, which provides all output interface functions as well as the blending and data-doubling functions required to support wide screen applications. Supported output resolutions include:

- Computer output resolutions up to 1600 x 1200
- Analog HDTV resolutions including 720p, 1080I, 1080p
- HD-SDI video
- 2048 x 1080p digital cinema video
- Plasma display resolutions.

Output synchronization is supported to lock the output frame rate to an externally applied NTSC/PAL black burst signal.

A Word About Layers

Within the Encore GC system, each mixer has two layers, **A** and **B**, and each can be assigned to either **PIP** or **Key** functionality. A single mixer application is shown below.

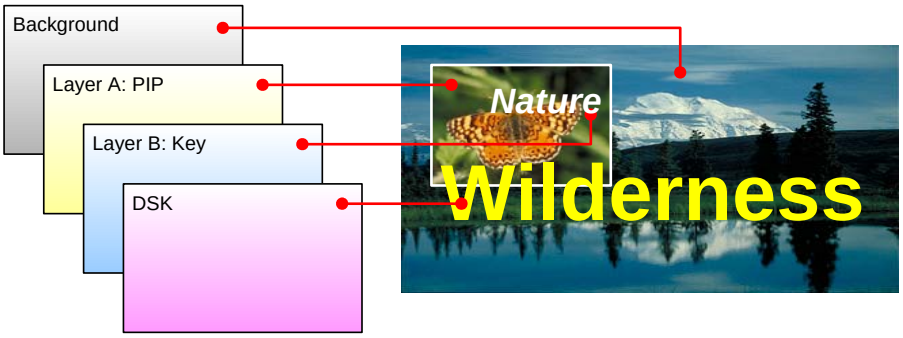


Figure 1-3. Layer Illustration — Background, Single Mixer + DSK

Please note the following important points:

- The **Downstream Key** (DSK) is the highest priority layer, using an unscaled DVI input or a scaled frame grab. The DSK visually appears over all other images (PIPs and keys) on all mixers.
- The high resolution **Background** layer has the lowest priority, using an unscaled DVI input or a scaled frame grab. This layer visually appears behind all other PIPs, keys, and the DSK. The system can transition between two background sources — both of which must be at the projector's native resolution.

- On any mixer, a **PIP** layer appears over backgrounds and under the DSK. Effects include mixes, smooth moves and resizing, adjustable aspect ratio, borders, drop shadows and soft edges.
- On any mixer, a **Key** layer also appears over backgrounds and under the DSK. Key effects include luminance keys, and split keys (key alpha and fill).
- Within a single mixer, layer **B** has priority over layer **A**, but you can change that priority as desired by using the **Swap Z-Order** function.
- On a triple mixer system, up to six inputs can be scaled to produce PIP or Key images that can be transitioned independently or in pairs.
- Between mixers, the hierarchy of priorities is easy:

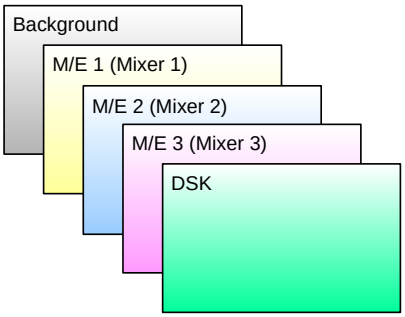


Figure 1-4. Mixer Priority

  - ~ The **Background** layer is always at the bottom.
  - ~ All effects on **Mixer 1** are visually in front of the background.
  - ~ All effects on **Mixer 2** are in front of Mixer 1.
  - ~ All effects on **Mixer 3** are in front of Mixers 1 and 2.
  - ~ The **DSK** is visually in front of Mixers 1, 2, 3 and background.

A Word About Destinations

The Encore GC system offers complete flexibility with regard to destinations. Examples of each destination “type” are listed below:

- **Single Screen Destination** — this is a “single projector” destination that takes its input from a VP. A VPx can only be used as a single destination in a special widescreen “preview” configuration.
- **Wide Screen Destination** — this is a “multiple projector” destination that takes its inputs from two (or more) VP or VPx units.
- **ScreenPRO-II Destination** — this is a standalone ScreenPRO-II that takes its inputs via direct connections or routers. When the ScreenPRO-II output is connected to a “side” projector (or monitor), it can be controlled from Encore GC as a unique destination.

Effect Combinations

A fully-loaded VP or VPx is a unit with three mixer (M/E) boards. A unit configured in this way can scale six input sources to create PIPs and/or Keys. These in turn can be sized and positioned on the screen in real-time.

This section illustrates the many (but not all) combinations of image effects that you can create on 1, 2 and 3 mixer systems. Please note:

- In the following illustrations, the specific layers used in creating each effect are labeled (e.g., **PIP 1A**, **PIP 1B**). For example, **1A** denotes the first PIP or key on Mixer 1, **1B** denotes the second PIP or key on Mixer 1, etc.
- The symbol ↔ denotes a PIP or a key that can transition. For example, PIP 2A ↔ 2B indicates that you can dissolve between sources within the PIP.

The following topics are discussed:

Single Mixer Effects

A single mixer VP provides two backgrounds, two scalable layers in the Mixer plus an unscaled DSK.

Please note:

- If the DSK is in use, the background cannot transition between A and B because of “available resources.”
- The DSK and backgrounds are unscaled, in all cases.

In Chapter 7, refer to the “**A Word About Resources**” section on page 167 for important information about system resources, as they apply to Presets.

- **Single Mixer Effect 1**

  This effect includes a non-transitioning background (either A or B), one transitioning PIP and the DSK.

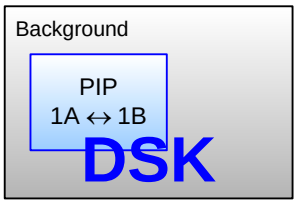


Figure 1-5. Single Mixer Effect 1 Diagram

- **Single Mixer Effect 2**

  This transition is similar to effect 1, but because the DSK is not in use, the background can transition from A to B, and the PIP can transition between layers A and B.

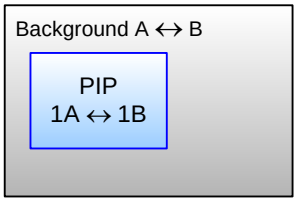


Figure 1-6. Single Mixer Effect 2 Diagram

- **Single Mixer Effect 3**

  In this effect, because the DSK is in use, the background cannot transition. Here, you can independently fade (or cut) one scaled PIP and one scaled key.

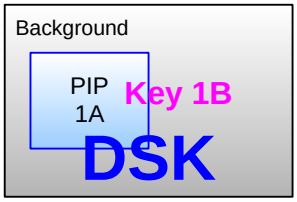


Figure 1-7. Single Mixer Effect 3 Diagram

- **Single Mixer Effect 4**

  This transition is similar to effect 3, but because the DSK is not in use, the background can transition between sources A and B. You can also independently fade, cut, size and position both the PIP and the key.

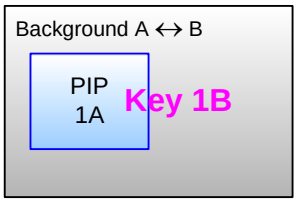


Figure 1-8. Single Mixer Effect 4 Diagram

- **Single Mixer Effect 5**

  In this effect, because the DSK is in use, the background cannot transition — you can only use background A. Here, you can independently fade two scaled PIPs up and down — with or without the DSK on screen.

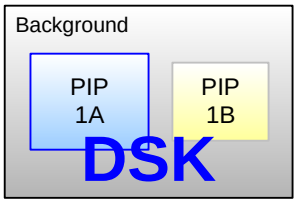


Figure 1-9. Single Mixer Effect 5 Diagram

- **Single Mixer Effect 6**

  This transition is similar to effect 5, but because the DSK is not in use, the background can transition. You can also independently fade the two PIPs.

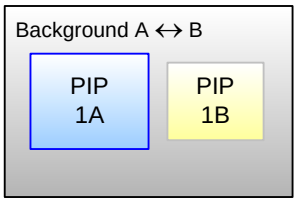


Figure 1-10. Single Mixer Effect 6 Diagram

Dual Mixer Effects

A dual mixer VP provides two backgrounds, a total of four scalable layers in the two mixers, plus an unscaled DSK.

- **Dual Mixer Effect 1**

  Using the capabilities of two mixers, this effect enables you to transition backgrounds, in addition to transitioning the PIPs on both mixer 1 and 2 — with or without the DSK on screen.

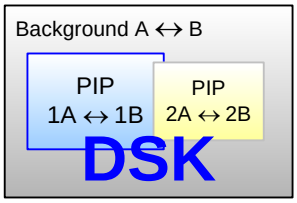


Figure 1-11. Dual Mixer Effect 1

- **Dual Mixer Effect 2**

  With this dual mixer effect, you can transition backgrounds between A and B, plus independently size, position, cut or fade a PIP and key on each Mixer. Transitions within the PIPs cannot be performed. The DSK can be used without restriction.

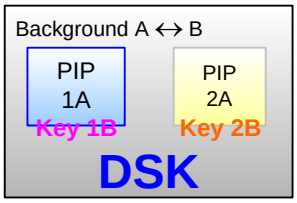


Figure 1-12. Dual Mixer Effect 2

- **Dual Mixer Effect 3**

  This effect enables you to transition between backgrounds, and size/position four PIPs on screen — with or without the DSK. In addition, any PIP could be substituted for a key, but transitions within a PIP (or transitions between keys) cannot be performed.

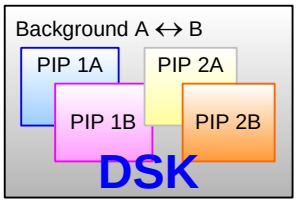


Figure 1-13. Dual Mixer Effect 3

Triple Mixer Effects

A triple mixer VP provides two backgrounds, a total of six scalable layers in the three mixers plus an unscaled DSK.

- **Triple Mixer Effect 1**

  With this three mixer effect, you can transition between backgrounds, fade or cut the DSK as desired, and independently transition within three PIPs.

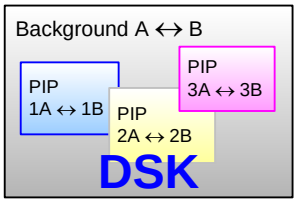


Figure 1-14. Triple Mixer Effect 1

- **Triple Mixer Effect 2**

  This effect enables you to transition between backgrounds sources, plus independently size, position, cut or fade a PIP and key on each of the three mixers. Transitions within the PIPs or transitions between keys cannot be performed.

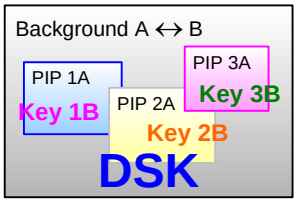


Figure 1-15. Triple Mixer Effect 2

- **Triple Mixer Effect 3**

  Here, you can transition between backgrounds, and size/position six PIPs on screen — with or without the DSK. Any PIP can be substituted for a key, but transitions within PIPs (or transitions between keys) cannot be performed.

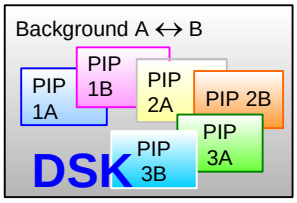


Figure 1-16. Triple Mixer Effect 3

Integration with Signal Routers

The use of routers (routing switchers) is an integral part of the Encore GC system. Barco offers a complete line of routers for use with the Encore GC, including models available in analog, SD-SDI, HD-SDI and DVI formats. All of our routers are designed and tested to ensure quality, reliability and ease of use. Encore GC is also compatible with other manufacturers' routers.

Encore GC and ECU System Configurations

This section provides two examples of Encore GC and ECU system configurations.

- **System 1** — Single Destination Encore GC and ECU system

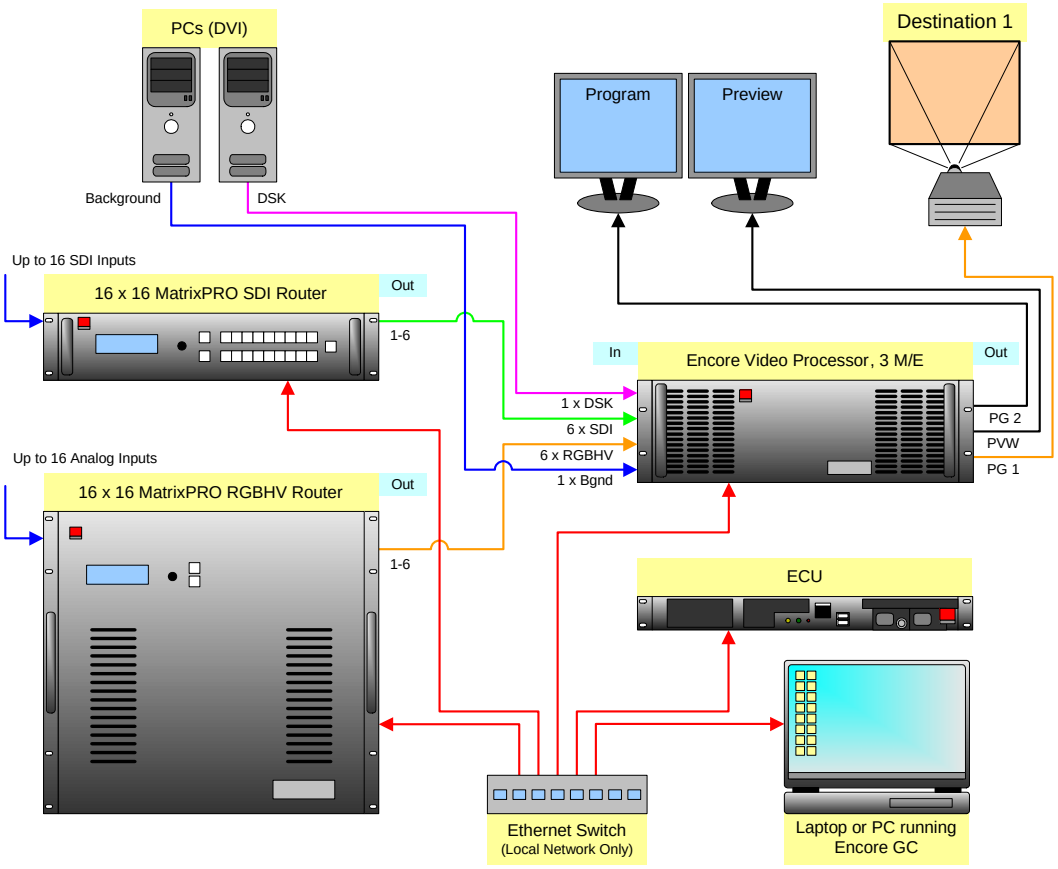


Figure 1-17. Sample single destination Encore GC and ECU system

This single destination system consists of the following components:

- 1 x ECU
- 1 x laptop, running the Encore GC application
- 1 x 3 M/E Encore Video Processor
- 1 x SDI Router
- 1 x RGBHV Router
- 1 x Destination (Projector)

In this configuration, the user programs events and stores Presets using the Encore GC (on the laptop). In this manner, Presets reside on the ECU, enabling the user to preview and edit the presentation's "look" as desired, and run the Presets from the Encore GC.

- **System 2** — Externally controlled Encore GC and ECU system

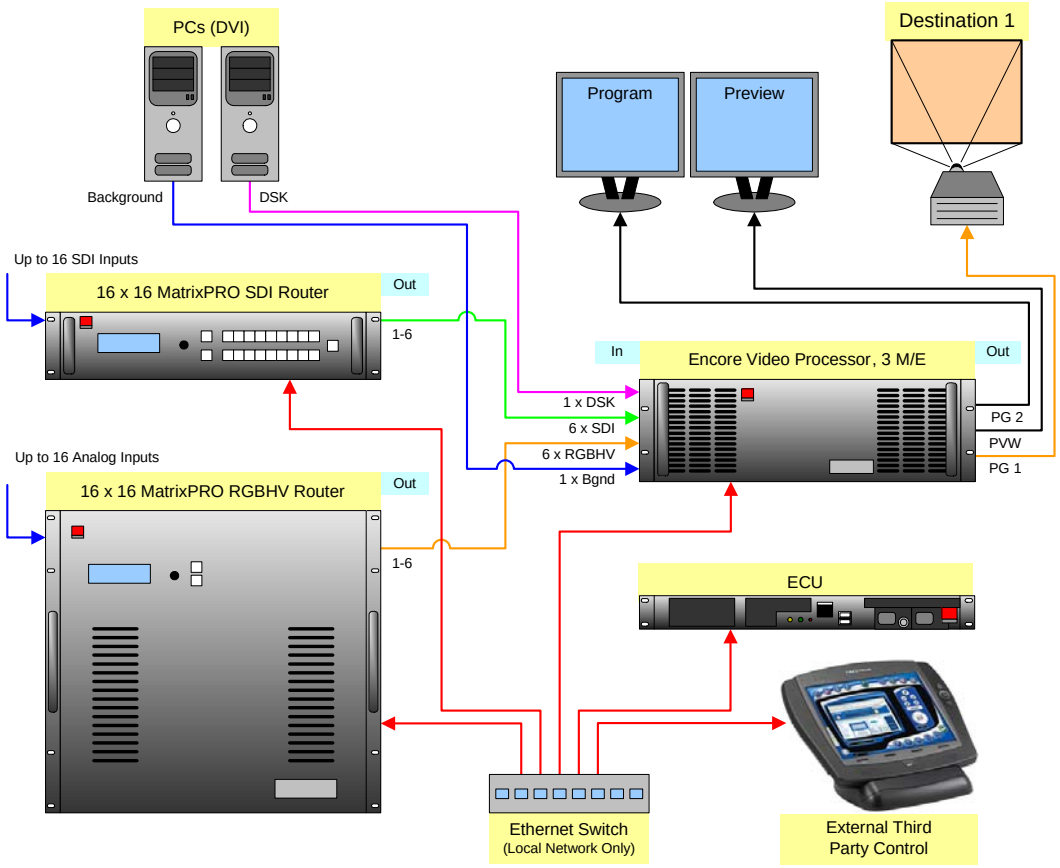


Figure 1-18. Sample externally controlled Encore GC and ECU system

This single destination system consists of the following components:

- 1 x ECU
- 1 x external third party controller
- 1 x 3 M/E Encore Video Processor
- 1 x SDI Router
- 1 x RGBHV Router
- 1 x Destination (Projector)

In this configuration, with all Presets residing on the ECU, the laptop is removed and replaced by an external third party controller. Presets are executed from the ECU using the third-party controller.

2. Hardware Orientation

In This Chapter

This chapter provides detailed information about the **ECU-1** (Encore Control Unit), also known as the **ECU** for short.

The ECU is a 19", 1 RU standalone server that runs a Linux operating system. When all components are connected to a closed network, the configured ECU enables you to run without a physical Encore controller. Using the Encore GC and ECU, you can control routers, VPs, and store all the Presets required for your event.

The following topics are discussed:

Important	For detailed information about the Encore VP and VPx, refer to the **Encore Presentation System User's Guide**.
Note	Once you have reviewed all of the sections in this chapter, please continue with Chapter 3, "**Hardware Installation**" on page 33.

ECU Front Panel

The figure below illustrates the ECU front panel:

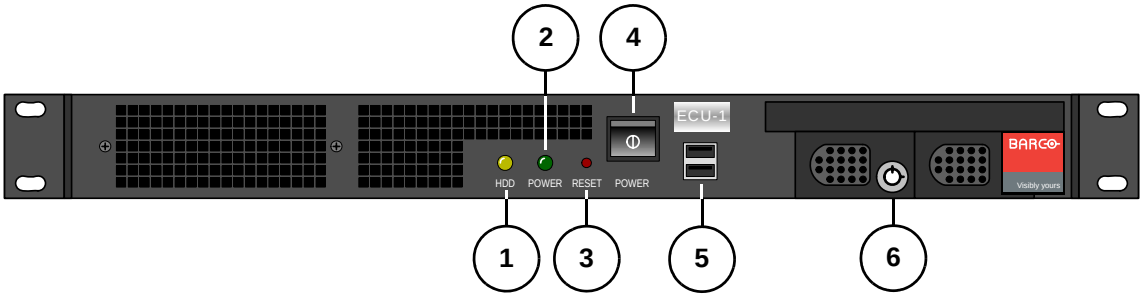


Figure 2-1. ECU front panel

1)	HDD LED	3)	Reset Switch	5)	USB Ports
2)	Power LED	4)	CPU Power Switch	6)	Hard Drive Lock

Following are descriptions of each front panel section:

1) HDD LED

The **HDD LED** indicates hard disk activity.

2) Power LED

The **Power LED** indicates when power has been applied to the ECU's motherboard.

3) Reset Switch

The **Reset Switch** is used to reboot the CPU, if required.

4) CPU Power Switch

The **CPU Power Switch** is a momentary (non-latching) switch that is used to apply power to the motherboard, after the **Main Power Switch** (on the rear panel) has been turned on. The CPU Power Switch is also used to shut down the ECU.

5) USB Ports

The two front panel **USB Ports** are not used.

6) Hard Drive Lock

The **Hard Drive Lock** prohibits user access to the ECU's hard drive. Access should only be permitted to qualified technical support personnel.

ECU Rear Panel

The figure below illustrates the ECU rear panel:

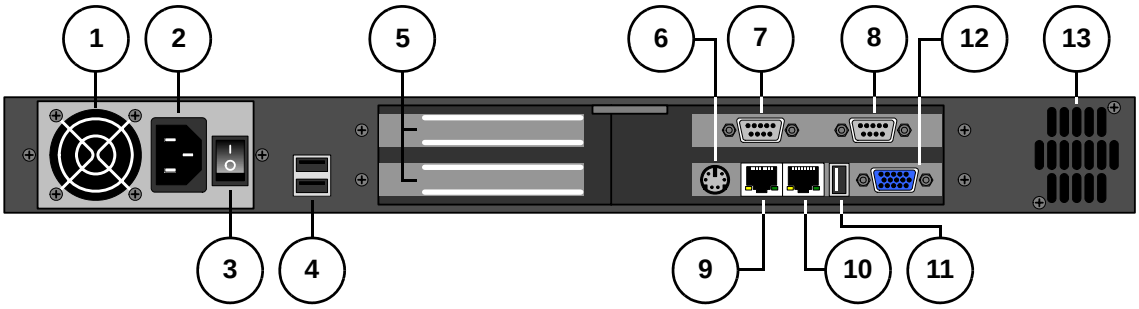


Figure 2-2. ECU rear panel

1)	Exhaust Fan	6)	PS2 Port	11)	USB Port
2)	AC	7)	COM 1	12)	VGA
3)	Main Power Switch	8)	COM 2	13)	Exhaust Fan
4)	USB Ports	9)	LAN 1		
5)	Blank Panels	10)	LAN 2		

Following are descriptions of each front panel section:

1) Exhaust Fan

To prevent chassis overheating, do not block the **Exhaust Fan** with cables or other equipment.

2) AC

One **AC Connector** is provided for connecting the ECU to AC power. The integral switch turns the chassis on and off. In Appendix A, refer to the "**Physical and Electrical Specifications**" section on page 192 for power details.

3) Main Power Switch

The **Main Power Switch** is a latching switch that turns the ECU on and off. After the switch is turned on, use the front panel **CPU Power Switch** to apply power to the motherboard.

4) USB Ports

These two rear panel **USB Ports** are not used.

5) Blank Panels

The two **Blank Panels** are not used.

6) PS2 Port

The **PS2 Port** is not used.

7) COM 1

One 9-pin D **COM 1 Port** is provided for RS-232 serial communications with an ASCII terminal. The port settings are:

~ 115200 baud, N81, no hardware handshaking

Note

This port is designed to be used by qualified service personnel only. To connect the **COM 1 Port** to a standard PC RS232 port (e.g., using ProComm), a “null modem” cable or crossover cable is required.

8) COM 2

The 9-pin D **COM 2 Port** is not used.

9) LAN 1

The **LAN 1** Ethernet port is provided for the closed network. Connect this port to an Ethernet Switch, and then to your system’s VPs, VPx units, laptop or PC, routers, and other system devices.

Important

This port functions as a **DHCP server**. Do not connect the LAN 1 port to your company network.

10) LAN 2

The **LAN 2** Ethernet port is provided for your company network, and for third-party external show control applications (e.g., Crestron, AMX, Medialon).

Note

This port functions as a **DHCP client**.

11) USB Port

This rear panel **USB Port** is not used.

12) VGA

The **VGA** connector is not used.

13) Exhaust Fan

To prevent chassis overheating, do not block the **Exhaust Fan** with cables or other equipment.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive hardware installation instructions for the Encore GC and ECU system. The following topics are discussed:

Note

Once you have reviewed the sections in this chapter, please continue with Chapter 4, "**Getting Started**" on page 43.

Safety Precautions

For all Encore GC and ECU installation procedures, observe the following important safety and handling rules to avoid damage to yourself and the equipment:

- To protect users from electric shock, ensure that the power supplies for each VP, VPx, router and other peripheral gear connects to earth via the ground wire provided in the AC power Cord.
- The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening the boxes, inspect them for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open each box, compare its contents against the packing slips. If you find any shortages, contact your Barco sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect each device to ensure that there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your Encore GC and ECU system should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

Rack-Mount Installation

When rack mounting, remember the following important points:

- The ECU is supplied with front rack-mount ears and rear rack-mount brackets. Both are required to support the unit's full weight.
- Other Encore GC and ECU equipment (e.g., VP, VPx, routers, etc.) is also supplied with front rack-mount ears and rack-mount brackets. Installation of the rear rack-mount brackets is recommended but not required.
- Leave at least one inch of space (front and rear) to ensure that the airflow through the fan and vent holes is not restricted.
- Distribute the units evenly to prevent hazardous conditions that may be created by uneven weight distribution.
- For the front rack ears, install the *lower* of the two mounting holes first.

Cable, Adapter and Accessory Information

The table below provides cable, adapter and accessory information for the ECU:

Table 3-1. ECU Cables and Adapters

Cable / Adapter / Accessory	Description	Quantity
AC Power Cord	2 meter, 10A (US Power Cord)	1
AC Power Cord	2.5 meter, 10A (European Power Cord)	1
Keys	Keys for hard drive	1 set
Rack mount rails	Required to support the unit's full weight	1 set
Screws	For rack mount rails	1 set

Installation

Detailed installation procedures are provided below for two Encore GC and ECU configurations. Select the desired configuration, and follow all procedures as listed:

- **Single Screen Encore GC and ECU Configuration**
- **Wide Screen Encore GC and ECU Configuration**

Single Screen Encore GC and ECU Configuration

The figure below illustrates a sample “single screen” Encore GC and ECU configuration. Use this diagram for reference in the following procedure.

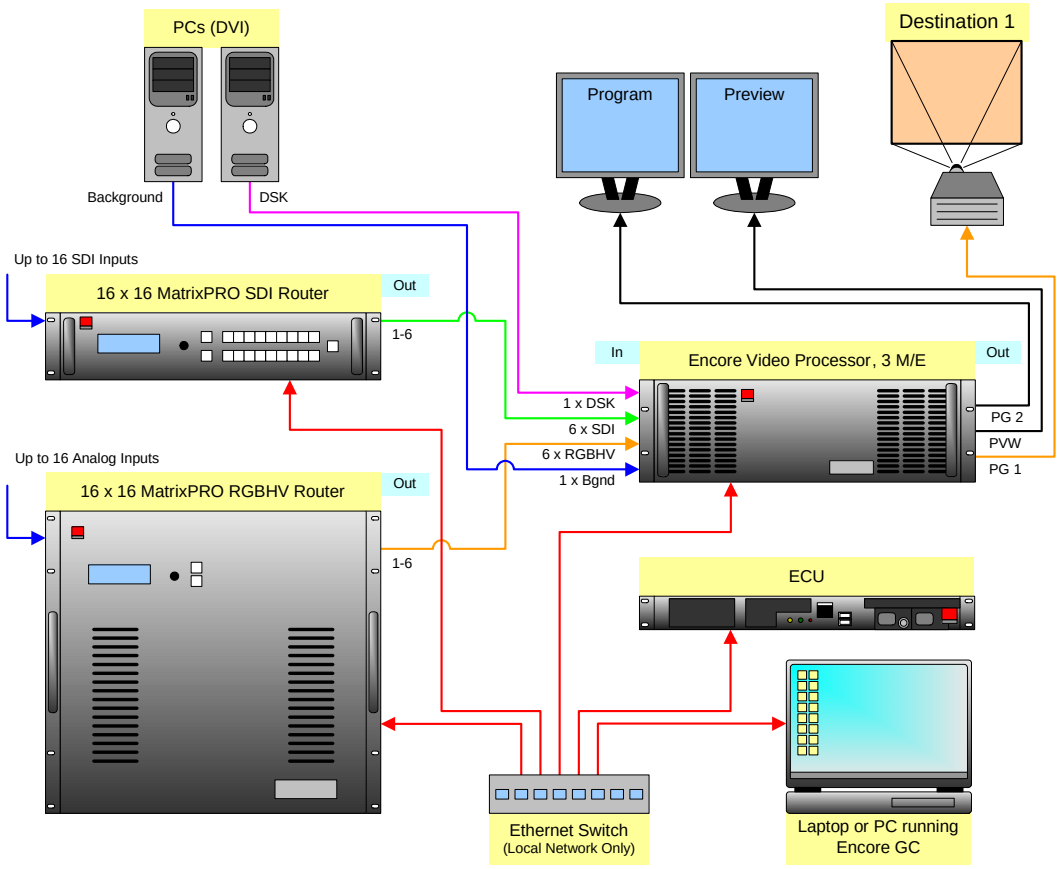


Figure 3-1. Sample Single Screen Encore GC and ECU Configuration

For this configuration, you will need:

Table 3-2. Equipment List, Single Screen Encore GC and ECU Configuration

Qty.	Item	Note
1	VP	VPx cannot be used in this example
1	ECU	
1	Video Projector	Customer supplied
2	DVI or Analog Monitors	Program and Preview (customer supplied)
1	Ethernet Switch	Customer supplied. **Note**: do not use a hub.
2	Ethernet cables	Customer supplied. Additional cables required for routers.
TBD	Sources, routers, cables	Analog, Video and/or DVI sources as required (customer supplied)

- Use the following steps to install a single screen Encore GC and ECU configuration:

1. Follow the unpacking procedures as listed in the "**Unpacking and Inspection**" section on page 34.
2. In Appendix A, refer to the "**Physical and Electrical Specifications**" section on page 192 for electrical and mechanical details.
3. In Chapter 2 of the **Encore Presentation System User's Guide**, refer to the "**Video Processor Rear Panel**" section for all VP connector locations.
4. Follow the rack mount procedures as outlined in the "**Rack-Mount Installation**" section on page 34.
5. **Ethernet Connections** — a totally "local" network connection is required. Using Ethernet cables:
    a. Connect the VP and your laptop (or PC) to the Ethernet Switch.

Note

Ensure that your laptop is configured to obtain an IP address automatically. Consult with your Network Administrator for details.

    b. Connect the ECU to the Ethernet Switch using the ECU's **LAN 1** port.

Important

The ECU is a DHCP server. If you have an Encore Controller in your system configuration, disconnect it from the Ethernet Switch. Because the Controller is also a DHCP server, it will conflict with the ECU.

    c. Connect router(s) to the Switch.
    d. As required, connect ScreenPRO-II systems to the Switch.
6. **Direct Source Connections** — if you elect to use direct connections in place of (or in addition to) router connections:
    a. On the VP, connect the desired "direct" sources to each M/E's input connectors, as required.
    b. On the VP, connect unscaled background and DSK sources, as provided from a PC's single head graphics card, as required.
7. **D/A Connections** —
    a. If your system includes analog, SDI or DVI D/As, connect video inputs to the D/As as required.
    b. On the VP, connect D/A outputs to the to the desired M/E inputs.
8. **Router Connections** — if you elect to use router connections in place of (or in addition to) direct connections:
    a. For Ethernet controlled routers, ensure that the router(s) are connected to the same Ethernet Switch as the ECU and the VPs. Ensure that each router has a unique IP address.
    b. To connect serial routers to the system, a third-party Ethernet-to-Serial converter is required, such as the **Lantronix** model **UDS2100** (**http://www.lantronix.com**). Each **UDS2100** can control two serial routers.
        - Using RS-232 cables, connect each router to the **UDS2100**.

- Set up a static IP address on the Lantronix. The recommended range is **192.168.0.191** - **192.168.0.240** — so as not to conflict with Barco devices. See the **Lantronix User's Guide**.
- Using an Ethernet cable, connect the **UDS2100** to the same Ethernet Switch as the ECU.

c. Ensure that all sources are properly connected to your router(s).

d. On the VP, connect all selected router outputs to the desired M/E inputs.

9. **ScreenPRO-II Connections** — if your system includes one (or more) destination ScreenPRO-II units, you can configure the unit for internal or external routing:

   a. When **External** routers are used, connect two outputs from an Analog router to the first two HD-15 inputs on the ScreenPRO-II. An SDI router can also be connected to BNC inputs **1** and **2**. During setup, you will define these specific patches.

   b. When **Internal** routing is used, connect Analog sources to inputs **1** - **8** on the HD-15 connectors, and SDI sources to BNC inputs **1** and **2**. During setup, you will define these specific patches.

   In Chapter 6 of the **Encore Presentation System User's Guide**, refer to the "**ScreenPRO-II Destination Setup**" section for more information.

10. **Output Connections** —

    a. Connect the VP's analog or digital **Preview Output** to the input of your Preview Monitor.

    b. Connect the VP's analog or digital **Program 2 Output** to the input of your Program Monitor.

    c. Connect the analog or digital **Program 1 Output** to the projector (or primary display) input.

    d. Connect the **Program Out HD/SDI** connector to an SDI or HDTV monitor, or to the proper video distribution equipment.

Note

This output only works if the selected output resolution is a valid SDI or HD/SDI format.

11. **Power Connection** — connect AC power cords to the AC Power Connectors on the rear of the VP and ECU, and then to AC outlets. Connect AC Power cords (or AC adapters) to all peripheral equipment. Please note:

    ~ Connect each unit only to a properly rated supply circuit.

    ~ Reliable grounding of rack-mounted equipment should be maintained.

12. **System ID** — Using the **Unit ID Selector**, set the ID of the VP to **1**.

13. **Power On** — All startup instructions are covered in Chapter 4, "**Getting Started**" on page 43.

Please continue with Chapter 4, "**Getting Started**" on page 43.

Wide Screen Encore GC and ECU Configuration

The figure below illustrates a sample “triple” wide screen configuration. Use this diagram for reference in the following procedure. Please note:

- This procedure can be used for wide screen configurations consisting of from 2 to 32 screens.
- A VP must be used as the “master” processor. Thereafter, either a VP or a VPx can be used.

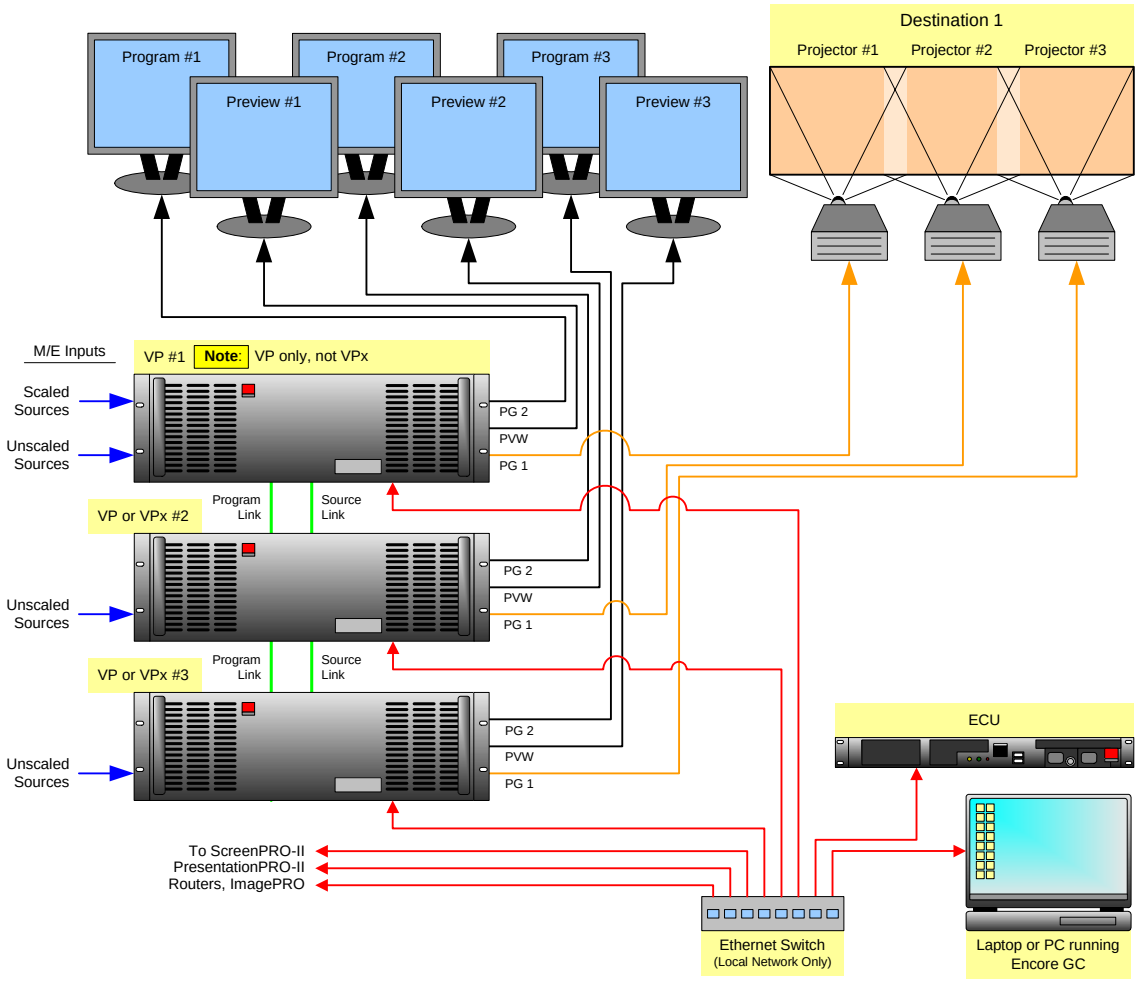


Figure 3-2. Sample Wide Screen Encore GC and ECU Configuration

For this procedure, you will need:

Table 3-3. Equipment List, Wide Screen Encore GC and ECU Configuration

Qty.	Item	Note
1	VP	VPx cannot be used as the “master” processor in this example.
2	VP or VPx	Use either processor as a “slave” unit in a widescreen configuration
1	ECU	

Table 3-3. Equipment List, Wide Screen Encore GC and ECU Configuration (Continued)

Qty.	Item	Note
3	Video Projectors	Customer supplied.
6	DVI or Analog Monitors	Program and Preview (customer supplied).
1	Ethernet Switch	Customer supplied. **Note**: do not use a hub.
4	Ethernet cables	Customer supplied. Additional cables required for routers.
TBD	Program Link Cables	Use 1 for double wide screen application, **left justification**
		Use 2 for triple wide screen application, **left justification**
		Use 2 for double wide screen application, **center justification**
		Use 3 for triple wide screen application, **center justification**
TDB	Source Link Cables	Dependent on the number of M/Es installed in the Processors
TBD	Sources, routers and cables	Analog, Video and/or DVI as required (customer supplied)

- Use the following steps to install a wide screen Encore GC and ECU configuration:

1. Follow the unpacking procedures as listed in the "**Unpacking and Inspection**" section on page 34.
2. In Appendix A, refer to the "**Physical and Electrical Specifications**" section on page 192 for electrical and mechanical details.
3. In Chapter 2 of the **Encore Presentation System User's Guide**, refer to the "**Video Processor Rear Panel**" section for all VP connector locations.
4. Follow the rack mount procedures as outlined in the "**Rack-Mount Installation**" section on page 34.
5. **Ethernet Connections** — a totally "local" network connection is required. Using Ethernet cables:
   - **a.** Connect the VP(s), VPx(s) and your laptop (or PC) to the Switch.

Note

Ensure that your laptop is configured to obtain an IP address automatically. Consult with your Network Administrator for details.

   - **b.** Connect the ECU to the Ethernet Switch using the ECU's **LAN 1** port.

Important

The ECU is a DHCP server. If you have an Encore Controller in your system configuration, disconnect it from the Ethernet Switch. Because the Controller is also a DHCP server, it will conflict with the ECU.

   - **c.** Connect router(s) to the Switch.
   - **d.** As required, connect ScreenPRO-II and ImagePRO systems to the Switch.

6. **Direct Source Connections** — if you elect to use direct connections, in place of (or in addition to) router connections:
   - **a.** On the first VP, connect the desired “direct” sources to each M/E’s input connectors. In a wide screen system, scaled sources only connect to Processor 1. “Links” carry the signals to the other VP or VPx units.
   - **b.** Unscaled **Backgrounds** must originate from computers with multi-head graphics cards, and connect to the same input on each VP or VPx.
     - ▲ To connect an unscaled background source in a triple processor system (each VP or VPx with three M/Es):
       - Connect the computer’s “head 1” to processor 1, input 3A
       - Connect the computer’s “head 2” to processor 2, input 3A
       - Connect the computer’s “head 3” to processor 3, input 3A

Note — Input 3A resides on the lowest priority M/E in a 3 M/E system. To connect an alternate background, use input 3B.

   - **c.** The **DSK** source *may* originate from a computer with a multi-head graphics card, but it is not a requirement.
     - ▲ Connecting a single-head graphics card to processor 3 only would enable a bug to be placed *only* in that screen space.

     To use a multi-head graphics card for the DSK, connect it to the same input on each VP or VPx — to the highest priority M/E (M/E 1).
     - ▲ To connect an unscaled DSK source in a triple processor system (each processor with three M/Es):
       - Connect the computer’s “head 1” to processor 1, input 1A
       - Connect the computer’s “head 2” to processor 2, input 1A
       - Connect the computer’s “head 3” to processor 3, input 1A

Note — Input 1A resides on the highest priority M/E in a 3 M/E system. To connect an alternate DSK, use input 1B.

7. **D/A Connections —**
   - **a.** If your system includes analog, SDI or DVI D/As, connect video inputs to the D/As as required.
   - **b.** On the VP, connect D/A outputs to the to the desired M/E inputs.
8. **Router Connections** — if you elect to use router connections, in place of (or in addition to) direct connections:
   - **a.** For Ethernet controlled routers, ensure that they are connected to the same Switch as the ECU and processors. Ensure that each router has an unique IP address.
   - **b.** To connect two (or more) serial routers, a third-party Ethernet-to-Serial converter is required, such as the **Lantronix** model **UDS2100** (**http://www.lantronix.com**). Each **UDS2100** can control two serial routers.
     - Using RS-232 cables, connect each router to the **UDS2100**.
     - Set up a static IP address on the Lantronix. The recommended range is **192.168.0.191 - 192.168.0.240**.

- Using an Ethernet cable, connect the **UDS2100** to the same switch as the ECU.

c. Ensure that all sources are connected to your router(s).

d. Connect all selected router outputs to the desired M/E inputs on VP 1.

9. **ScreenPRO-II Connections** — if your system includes one (or more) destination ScreenPRO-II units, you can configure them for internal or external routing:

   a. When **External** routers are used, connect two outputs from an Analog router to **any two HD-15 inputs** on the ScreenPRO-II. An SDI router can also be connected to BNC inputs **1** and **2**. During setup, you will define these specific patches.

   b. When **Internal** routing is used, connect Analog sources to inputs **1** - **8** on the HD-15 connectors, and SDI sources to BNC inputs **1** and **2**. During setup, you will define these specific patches.

   In Chapter 6 of the **Encore Presentation System User's Guide**, refer to the "**ScreenPRO-II Destination Setup**" section for more information.

10. **Output Connections** —

    a. For each VP or VPx, connect the analog or digital **Preview Output** to the input of the associated Preview Monitor.

    b. For each VP or VPx, connect the analog or digital **Program 2 Output** to the input of the associated Program Monitor.

    c. For each VP or VPx, connect the analog or digital **Program 1 Output** to the input of the associated projector.

    d. Connect the **Program Out HD/SDI** connector to an SDI or HDTV monitor as required, or to the proper video distribution equipment.

Note

This output only works if the selected output resolution is a valid SDI or HD/SDI format.

11. **Link Connections** — in a widescreen application, the **Program Link** and **Source Link** connections are used to connect processors together, and bridge inputs and outputs for the proper "overlap" between projectors. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "Program and Source Link Connections" section for details.

12. **Power Connection** — connect AC power cords to the AC Power Connectors on the rear of the VP and ECU, and then to AC outlets. Connect AC Power cords (or AC adapters) to all peripheral equipment. Please note:

    ~ Connect each unit only to a properly rated supply circuit.

    ~ Reliable grounding of rack-mounted equipment should be maintained.

13. **System ID** — Using the **Unit ID Selector**, set the ID of Processor #1 to **1**, Processor #2 to **2**, and Processor #3 to **3**. Each must have a unique ID.

14. **Power On** — All startup instructions are covered in Chapter 4, "**Getting Started**" on page 43.

Please continue with Chapter 4, "**Getting Started**" on page 43.

4. Getting Started

In This Chapter

This chapter provides instructions for installing the Encore GC application, launching the system, and preparing the system to the point that you can fully learn all tabs and menus.

Important

When you complete this chapter, all system devices (including the ECU, routers, DAs, video processors and Lantronix devices) will be detected and operational, and all tabs on the Encore GC will be active. This will enable you to fully learn all tabs and menus.

At the end of this chapter, however, source inputs and router outputs will *not* be patched. These functions will be performed in Chapter 6, "**System Setup**" on page 143.

The following topics are discussed:

Note

Once you have reviewed the sections in this chapter, please continue with Chapter 5, "**Menu Orientation**" on page 61.

Overview

To get started learning the Encore GC system, here is an overview of the steps that you will perform in the following sections. Links are provided to each individual sequence.

Important For the optimum setup, it is recommended that you follow all procedures in the order outlined below.

1. "**ID Setup and System Power-up**," page 45.
2. "**Installing Encore GC Software**," page 46.
3. "**Launching the Encore GC Application**," page 50.
4. "**Updating ECU and Processor Software**," page 52.
5. "**Resetting Software**," page 54.
6. "**Destination Setup**," page 55.
7. "**Router and DA Setup**," page 57.
8. "**Saving the System Configuration**," page 60.

Important In the following sections, descriptions of the tabs are *very* brief. All tabs will be fully explained in Chapter 5, "**Menu Orientation**" on page 61.

ID Setup and System Power-up

Encore GC startup: **Step 1**.

This section provides instructions for setting up individual Encore VP and VPx IDs and powering up your Encore GC and ECU system. If ScreenPRO-II units are used as destinations, you will also set their IDs and enable remote control. Each unit in your system must have a unique ID.

- Use the following steps to set IDs and start up your system:

1. Ensure that all Encore equipment is properly cabled, including VP and VPx units, routers, and program and preview monitors. In Chapter 3, refer to the "**Installation**" section on page 35 for instructions.

Tip

You may wish to complete a set of system connection charts. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "**Connection Charts**" section for details.

2. Ensure that all Encore equipment, the ECU and your laptop (or PC) are properly connected to an Ethernet Switch. This is the required "closed network."
3. To set Encore VP and VPx IDs:
   a. Using the **Unit ID Selector** on the rear of each processor, set the desired ID. Logical IDs **1** - **16** are available on the selector.
   b. Repeat step **3** for all other VP and VPx processors in your system.
4. Turn on power to the VP(s), VPx(s), Ethernet Switch, monitors, routers, PC (or laptop) and all additional peripheral equipment.
5. To set ScreenPRO-II IDs and enable remote control:
   a. Ensure that the ScreenPRO-II units are connected to the same Ethernet Switch as the Video Processor(s).
   b. Press {**REMOTE CONTROL**} on the **Home Menu** to access the **Remote Control Menu**.
   c. Scroll to the **Unit ID** line, and select a unique ID. The ID range is **1** to **32**.
   d. Scroll to the **Remote Control/DHCP** line, and enable remote control.
   e. Press {**SAVE**} to save the system state in non-volatile memory.
   f. Repeat step **5** for all other ScreenPRO-II units in your system.
6. Once your PC boots up, ensure that it is configured to obtain an IP address automatically. Consult with your facility's Network Administrator for details.

Note

Remember that the ECU is a DHCP server.

7. On the ECU, turn on the **Main Power Switch** on the rear panel. Then, press the **CPU Power Switch** on the front panel. After a few moments, when the **HDD LED** on the front panel stops blinking, the system is ready to be used.
8. Please continue with the "**Installing Encore GC Software**" section on page 46.

Installing Encore GC Software

2

Encore GC startup: **Step 2**.

This section provides instructions for installing (or updating) Encore GC software.

- Use the following steps to install or update Encore GC software.

1. Please note the following important preliminary steps:

~ If this is a "first time" software installation, insert the supplied Encore GC CD-ROM into your PC or laptop. Navigate to **My Computer**, open up the Encore GC CD-ROM, and then double-click the **EncoreGCInstall.exe** file.

~ If this is a re-install or a software update, uninstall the previous version of Encore GC software.

Next, locate the downloaded **EncoreGCInstall.exe** file (or insert the new Encore GC CD-ROM), and run the file.

Once the installer launches, the figure below illustrates the "**Introduction**" screen, which outlines each of the installation steps.

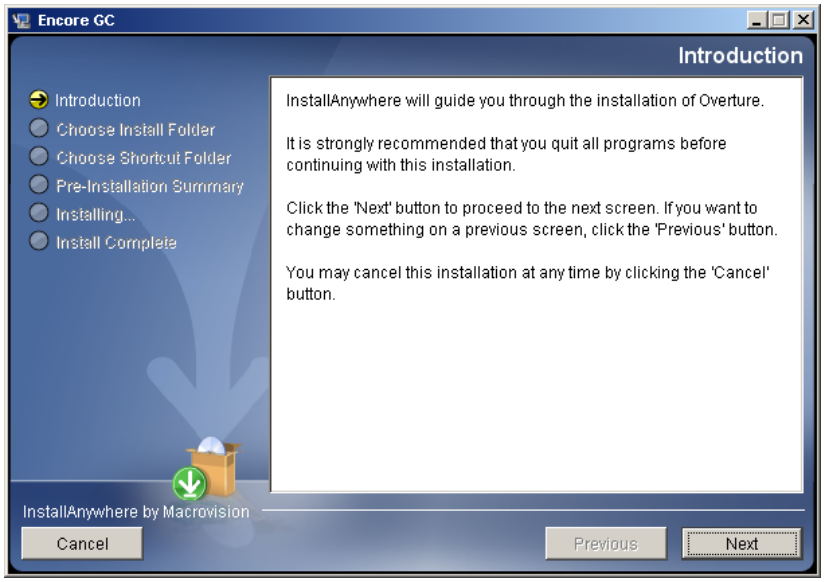


Figure 4-1. Installer Introduction screen

2. Quit all open programs as requested, and click **Next** to display the "**Choose Install Folder**" screen.

3. The figure below illustrates the "**Choose Install Folder**" screen:

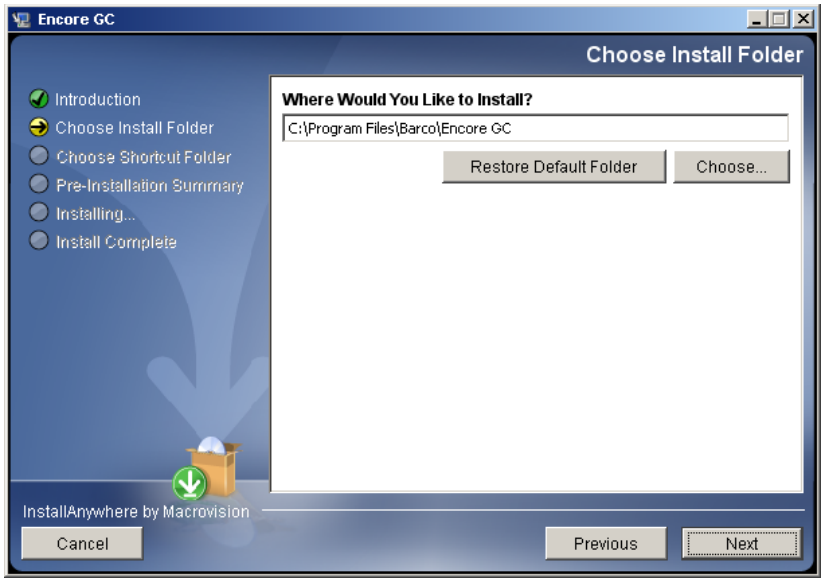


Figure 4-2. Choose Install Folder screen

Use the default installation folder (recommended), or click **Choose** to select a different folder.

4. Click **Next** to display the **Choose Shortcut Folder** screen:

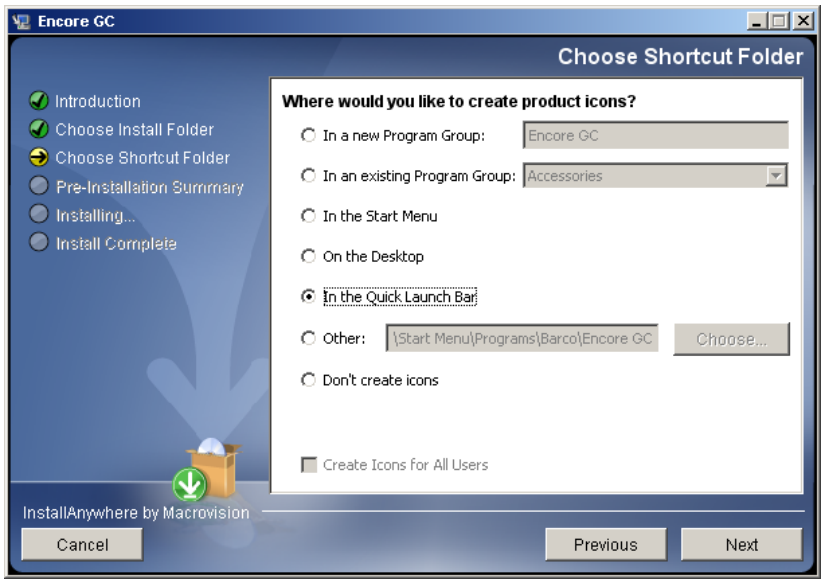


Figure 4-3. Choose Shortcut Folder screen

Select the desired location where you would like to create an Encore GC shortcut. All radio buttons are mutually exclusive. In addition, if you want to create icons for all users, check the "**Create Icons for All Users**" check box.

5. Once you have made your selection, click **Next** to display the **Pre-Installation Summary** screen:

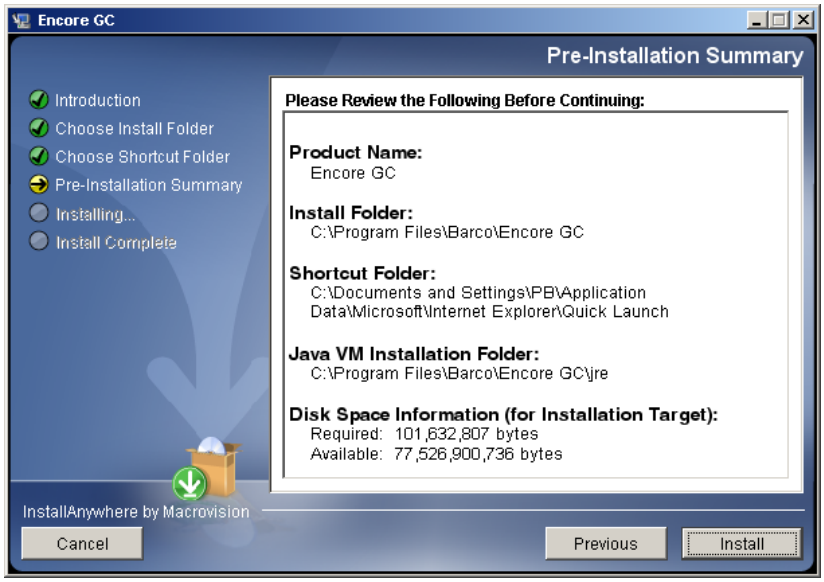


Figure 4-4. Pre-Installation Summary screen

Review all information on screen. If you wish to revise any of your choices, click **Previous** to return to the appropriate screen.

6. After reviewing all information, click **Install** to begin Encore GC installation. The **Installing** Encore GC screen appears.

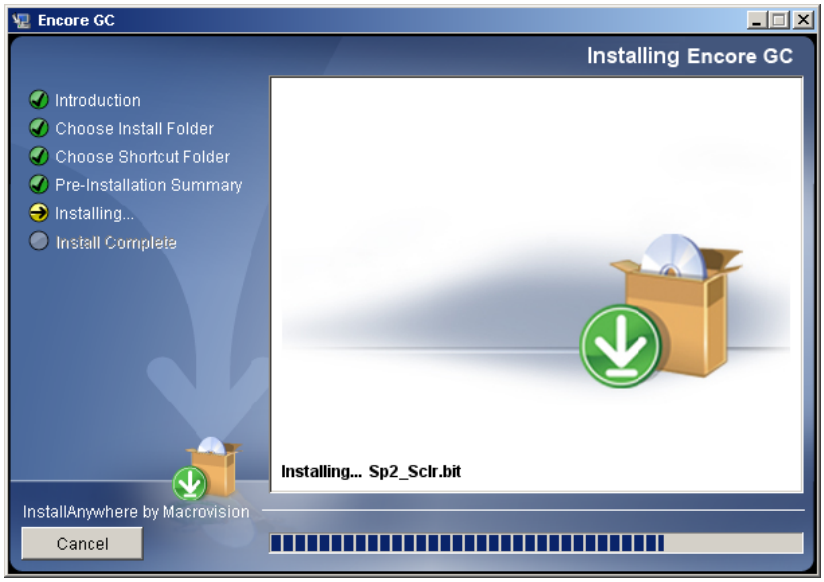


Figure 4-5. Installing Encore GC screen

Once the installation is complete, the **Install Complete** screen appears.

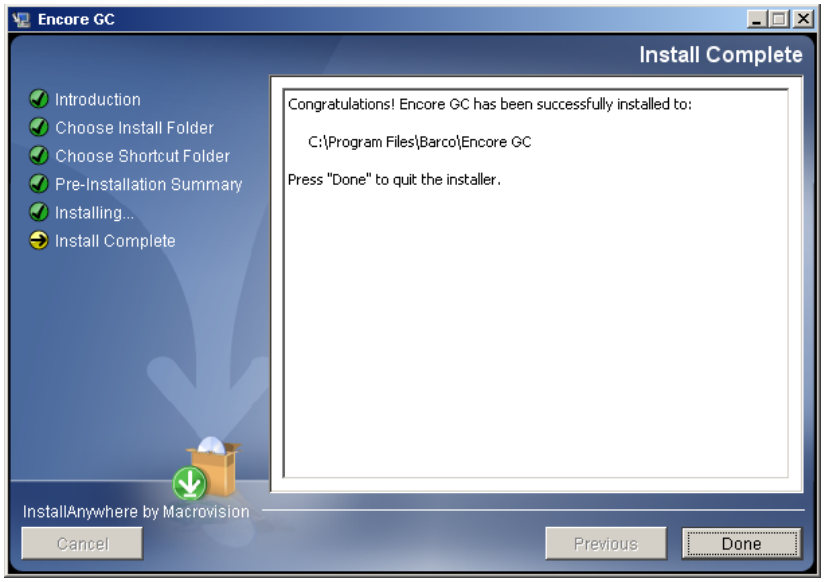


Figure 4-6. Install Complete screen

7. Click **Done** to complete the procedure, and exit the installer.
8. Please continue with the "**Launching the Encore GC Application**" section on page 50.

Launching the Encore GC Application

3

Encore GC startup: **Step 3**.

- Use the following steps to launch the Encore GC application and connect to the ECU:

1. Click the Encore GC shortcut on the desktop (or in the **Quick Launch Bar**), or, if you selected this option during installation, click **Start > Programs > Barco > Encore GC > Encore GC.**

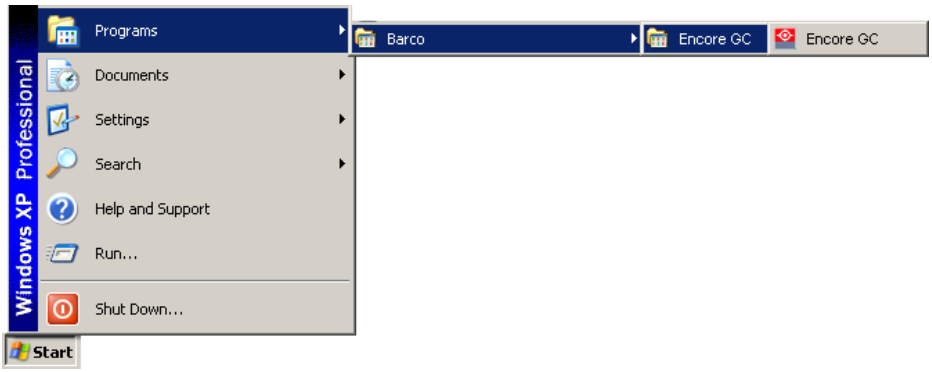


Figure 4-7. Encore GC Program File Location

The **Encore GC Splash Screen** appears briefly, after which the **System Tab** appears. By default, the **Discovery Dialog** automatically appears.

Note

If the dialog does not appear, re-check your Ethernet connections, then click **Discover ECU** in the **System Tab**.

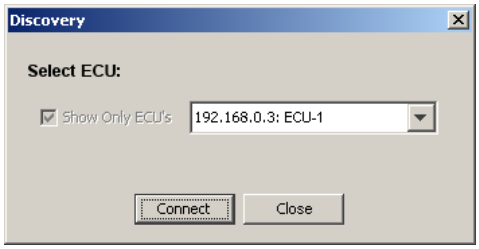


Figure 4-8. Discovery Dialog (sample)

2. The **Discovery Dialog** initiates the ECU connection process. Please note:
   - ~ The **Show Only ECU's** check box will be grayed out if only ECU devices have been discovered. To continue, click the drop-down arrow and select the ECU to which you want to connect. Continue with step **3**.
   - ~ If the **Show Only ECU** label is active and the check box is unchecked, the system has discovered both ECU and non-ECU devices (e.g., Barco projectors) on the closed network. In this case, check the box to filter the list for ECUs only, click the drop-down arrow and select the ECU to which you want to connect, and continue with step **3**.

~ If a red "**No devices found**" message appears, close the **Discovery Dialog**, re-check your Ethernet connections, and then click **Discover ECU** in the **System Tab**.

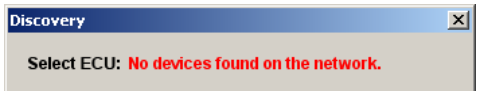


Figure 4-9. Error message: No devices found

3. Click **Connect** to display a brief connection status window. After the connection interval is complete, the **System Tab** populates with the selected ECU and all video processors that have been discovered.
4. In the **ECU** section of the tab, if the ECU line is colored pink, a software update is required.

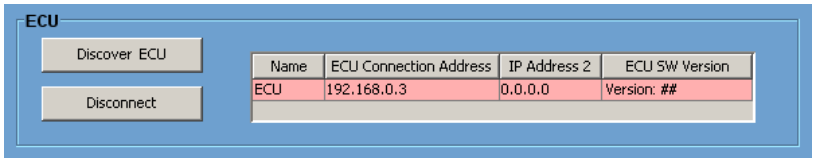


Figure 4-10. System Tab, ECU section (sample)

To update software, refer to the "**Updating ECU and Processor Software**" section on page 52 for instructions.

~ If ECU software is current, please continue with step **5** below.

5. On the **System Tab**, check the **Processors** section to ensure that all of your video processors are listed, with the correct number of M/Es. If any are not listed, check all Ethernet connections, then click **Refresh** to update the entire tab.

Important If the Encore GC does not detect any valid video processors, you will not be able to set up your destination(s).

6. Check the **Processors** section for any pink colored lines and specifically, any labels in the "**Issues**" column such as **Checksum Mismatch**.

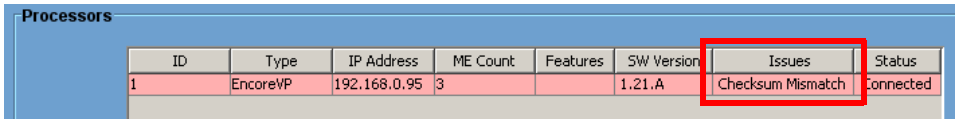


Figure 4-11. System Tab, Processors section (sample)

~ If the **Checksum Mismatch** label appears, the current version of video processor software does not match the installed version of processor software, and an update is required. Refer to the "**Updating ECU and Processor Software**" section on page 52 for instructions.

~ If processor software is current, please continue with step **7** below.

7. With ECU and processor software updated, please continue with the "**Resetting Software**" section on page 54.

Updating ECU and Processor Software

4

Encore GC startup: **Step 4**.

Because Encore GC software acts as the “master” software version in an Encore GC and ECU system, this section provides instructions for updating ECU and video processor software to match that of Encore GC. The following topics are discussed:

- Updating ECU Software
- Updating Processor Software

Updating ECU Software

On the **System Tab**, in the **ECU** section, if the ECU line is colored pink, the ECU software must be updated.

- Use the following steps to update ECU software:

1. In the **System Tab**, click **Update SW** to display the **Software Update Window**. In the left-hand section are device selection controls, plus a table that lists the software versions of all “discovered” processors (including VP, VPx and ScreenPRO-II). In the right-hand section, a status box is provided.
2. In the **Device Selection** section, click the **ECU** radio button.

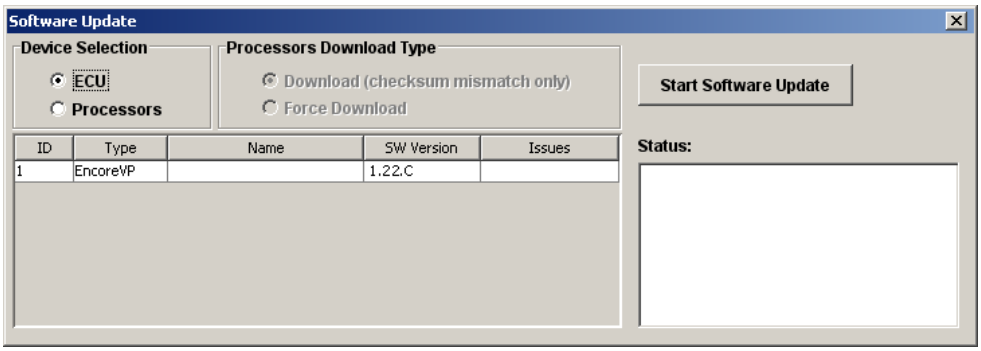


Figure 4-12. Software Update Window (sample)

3. Click **Start Software Update** to begin updating the ECU. During the update procedure, software files are transferred from Encore GC to the ECU, and all actions are reported in the **Status** box.
4. At the conclusion of the procedure, you will be asked if you want to reconnect. Click **Connect** to continue.
5. When all tables in the **System Tab** have re-populated, check the **ECU SW Version** column in the ECU section to ensure that versions match.
6. Return to the “Launching the Encore GC Application” section on page 50, and continue the startup procedure from the point at which you left off.

Updating Processor Software

If the **Checksum Mismatch** label appears (as indicated in the "**Issues**" column in the **Processors** section on the **System Tab**), the current version of software in the processor does not match the version installed in the ECU, and processor software must be updated.

- Use the following steps to update processor software:

1. In the **System Tab**, click **Update SW** to display the **Software Update Window**. In the left-hand section, the window displays device selection controls, plus a table that lists the software versions of all "discovered" processors (including VP, VPx and ScreenPRO-II). In the right-hand section, a status box is provided.
2. In the **Device Selection** section, click the **Processors** radio button.

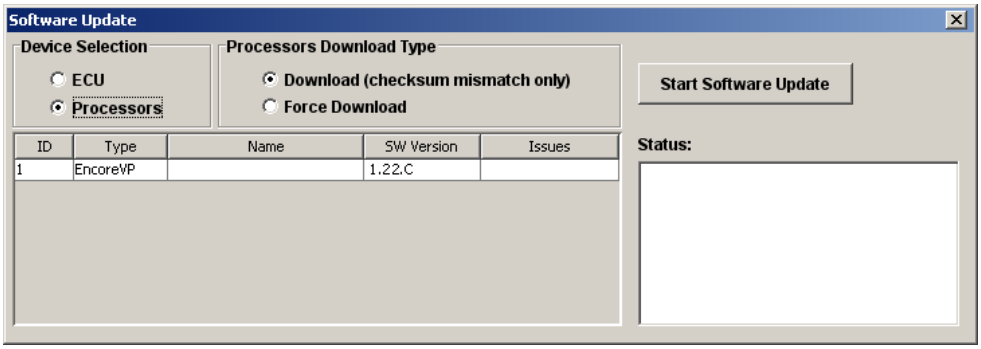


Figure 4-13. Software Update Window (sample)

3. In the **Processors Download Type** section, choose the desired option:
   - ~ Click **Download** if a software mismatch is present.
   - ~ Click **Force Download** to update processor software, whether or not a mismatch is present.
4. Click **Start Software Update** to begin updating the selected processors. During the update procedure, software files are transferred from the ECU to the processors, and all program and preview output video from the processors switches to black.

Note	This procedure can take several minutes.

   At the conclusion of the procedure, program and preview video from the selected processor(s) is restored.
5. Close the **Software Update Window**.
6. When all tables in the **System Tab** have re-populated, check the "**Issues**" column in the **Processors** section to ensure that all versions match.
7. Return to the "**Launching the Encore GC Application**" section on page 50, and continue the startup procedure from the point at which you left off.

Resetting Software

5

Encore GC startup: **Step 5**.

This procedure enables you to reset the ECU and all video processors to their factory default settings.

- Use the following steps to reset the system to factory default settings:

1. In the **System Tab**, click **Reset** to display the **Reset Window**.

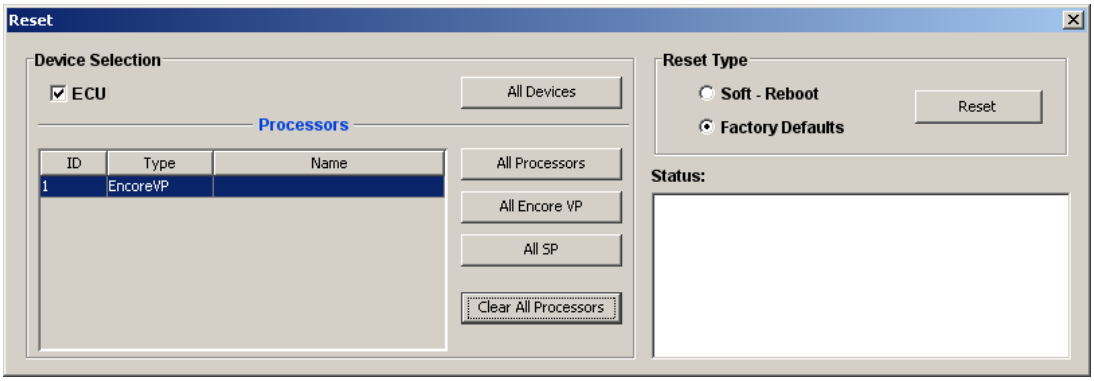


Figure 4-14. Reset Window

2. In the **Device Selection** section, click **All Devices**.
3. In the **Reset Type** section, click **Factory Defaults**.
4. Click **Reset**. A warning dialog will be displayed.
5. Click **Yes** to continue. This action causes the ECU to reset and disconnect from the Encore GC system.
6. At the conclusion of the procedure, you will be asked if you want to reconnect. Click **Connect** to continue.
7. Please continue with the "**Destination Setup**" section on page 55.

Destination Setup

6

Encore GC startup: **Step 6**.

This procedure enables you to set up your system's destinations. Please note that this is an abbreviated procedure, designed to get you to the "learning" stage in Encore GC as quickly as possible. In Chapter 6, complete destination setup steps are provided in the "**Destination Setup**" section on page 146.

- Use the following steps to set up destinations.

Note

The procedure can also be used to add destinations to your Encore GC system.

1. Click the **Destination Setup Tab**. At first startup, the left-hand **Destination Table** is completely empty.

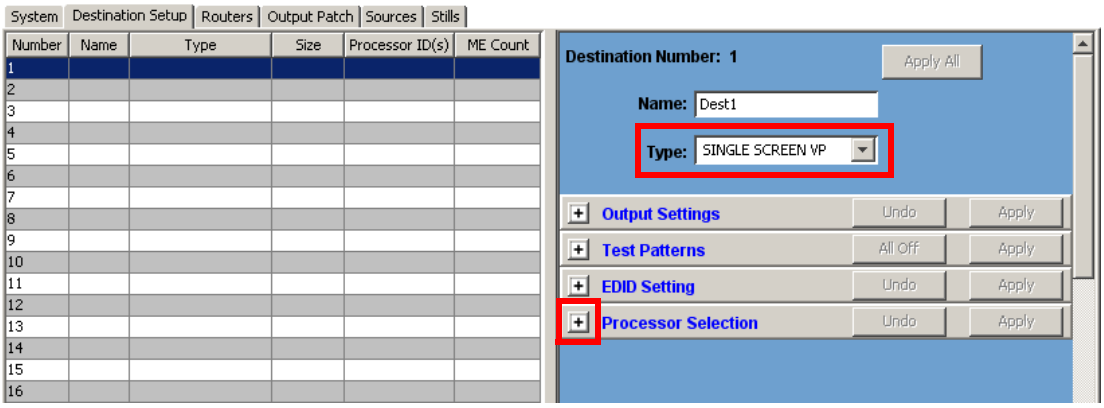


Figure 4-15. Destination Setup Tab at startup

2. In the **Destination Table**, click the row for the destination number that you wish to set up. Any row can be selected.
3. In the right-hand **Destination Settings Section**, enter a name for the new destination in the **Name** field, if desired. Otherwise, use the default name provided by the system (e.g., **Dest 1**, **Dest 2**, etc.).
4. Click the **Type** drop-down menu to choose the type of destination. The destination choices are:
   - **Single Screen VP**
   - **Single Screen SP**
   - **Wide Screen VP**

5. Click the "**+**" adjacent to the **Processor Selection** heading to expand the section.

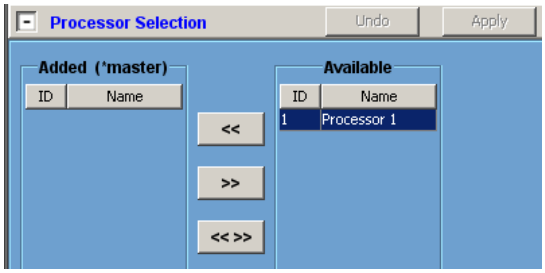


Figure 4-16. Destinations Settings - Processor Selection Section (sample)

6. To add processor(s) to the destination, highlight the desired processor(s) in the **Available** column, and then click **<<** to transfer the processor(s) to the **Added (Master)** column.
7. Click **Apply All** at the top of the **Destination Settings Section** to enter all changes, and send the parameters to the ECU.

Note

Once you click **Apply All**, the **Destination Table** fills in with the new destination. In addition, a new tab appears for the newly created destination (to the left of the **System Tab**) — indicating that a valid destination is now available.

8. Repeat the procedure from step **2** to add additional destinations, provided that video processors are available.

Note

Remember that this is an abbreviated destination setup procedure. In Chapter 6, complete destination setup steps are provided in the "**Destination Setup**" section on page 146.

9. Please continue with the "**Router and DA Setup**" section on page 57.

Router and DA Setup

7

Encore GC startup: **Step 7**.

This procedure enables you to set up your system's routers and DAs. Up to eight routers can be configured. These steps must be followed precisely, so that all routers will be properly recognized on the **System Tab**.

The following topics are discussed:

Router Setup

- Use the following steps to set up routers.

1. Click the **Routers Tab**. At first startup, the left-hand **Router Table** is empty.

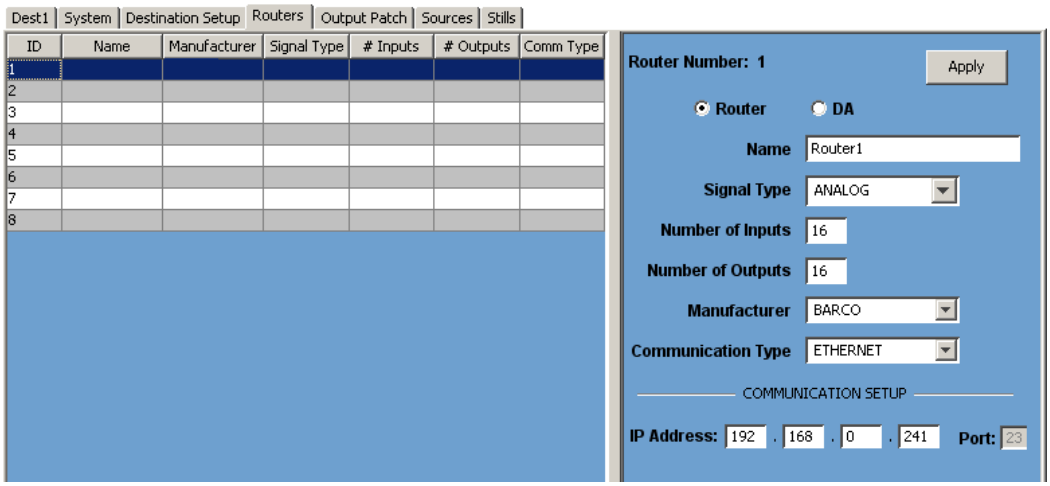


Figure 4-17. Routers Tab at startup

2. Click any blank line in the **Router Table**.

Note — The line that you select also increments the router's associated Ethernet Address.

3. In the right-hand **Router Data Section**, click the **Router Radio Button**.
4. In the **Name** field, enter a name for the router, if desired.
5. Use the **Signal Type** drop-down menu to choose the router's signal type — either analog, DVI or SDI.
6. Use the **# of Inputs** field to list the size of the router's input matrix.
7. Use the **# of Outputs** field to list the size of the router's output matrix.
8. Use the **Manufacturer** drop-down menu to choose the manufacturer.

9. Use the **Communication Type** drop-down menu to select the router's communication type, either Ethernet or Lantronix.
10. If **Ethernet** is selected, enter the router's IP address (and port, if applicable) in the **Communication Setup** section.
11. If **Lantronix** is selected, the **Communication Setup** section *changes* to display Lantronix-specific information:
    - Use the **Device** drop-down menu to choose the specific Lantronix device that is connected to Encore GC's closed Ethernet network.
    - Use the **Channel** selector to specify the Lantronix serial channel (either 1 or 2) that is connected to the router.
    - Use the **Baud Rate** drop-down menu to match the baud rate of the router connected to the Lantronix.
    - In the **Data Bits** section, specify the number of data bits.
    - In the **Stop Bits** section, specify the number of stop bits.
    - In the **Parity** section, specify the type of router parity.
12. When all fields have been entered for the router, click the **Apply** button (at the top of the section) to apply all new data. The **Router Table** updates with the new information, and the new data is sent to the ECU.
13. Repeat steps **2** through **12** to configure the next router.
14. Please continue with the "**Checking Router Status**" section on page 59.

DA Setup

- Use the following steps to set up DAs.

1. Click any blank line in the **Router Table**.
2. In the right-hand **Router Data Section**, click the **DA Radio Button**.
3. Use the **Name** field to enter a user-specified name for the DA.
4. Use the **Signal Type** drop-down menu to choose the DA's signal type.
5. For DAs, the **# of Inputs** is fixed at one.
6. Use the **# of Outputs** field to list the number of DA outputs.
7. When all fields have been entered, click the **Apply** button (at the top of the section) to apply all new data. The **Router Table** updates with the new information, and the new data is sent to the ECU.
8. Repeat steps **1** through **7** to configure the next DA.
9. Please continue with the "**Checking Router Status**" section on page 59.

Checking Router Status

- Use the following steps to check router status, and to test router communications if required.

1. Click the **System Tab**, and then click **Refresh** to update the entire table.
2. Check the **Routers** section to ensure that all routers and DAs are properly listed.
3. Under the **Status** column, if the label "**Connected**" does not appear for a router, right-click the router in question to display the **Test Router Comm Button**.

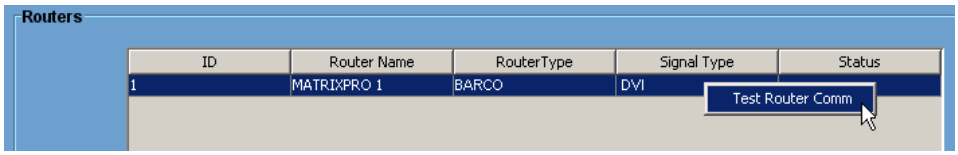


Figure 4-18. Test Router Comm Button

Note

Router status can also be checked on the **Routers Tab**, using the same method.

4. Click the **Test Router Comm Button** to display the **Testing Comm Window**, which tests communications with the selected router.

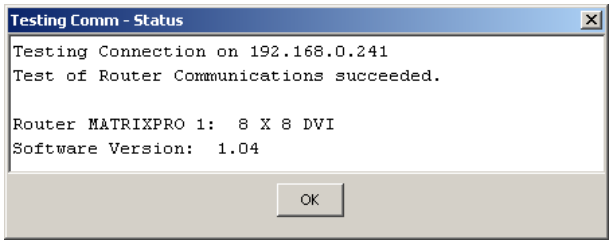


Figure 4-19. Testing Comm Window (sample)

5. Click **OK** to close the **Testing Comm Window**.
6. Click **Refresh**. The router should now appear connected.
7. Repeat steps **3** through **6** for each router that does not appear connected. If connection problems persist, re-check all Ethernet connections to the router(s), verify all entries on the **Routers Tab**, and repeat from step **1**.
8. Please continue with the "**Saving the System Configuration**" section on page 60.

Saving the System Configuration

This procedure enables you to save the current Encore GC configuration in the ECU, so that you can shut down and power-up again with the identical system setup.

- Use the following steps to save the system configuration:

  1. In the **Menu Bar**, click **ECU > Save Configuration**. This action saves the configuration of equipment, all setup parameters, and all of the Presets that you have created.

To Continue

At this point, your system has a connected ECU, valid destinations, and connected DAs and routers — and is "ready" to the point that you can fully learn all tabs and menus. Note that inputs and router outputs are *not* patched yet.

To continue, please refer to Chapter 5, "**Menu Orientation**" on page 61 for a complete review of all Encore GC menus.

System Shutdown

- As required, use the following steps to shut down the Encore GC application:

  1. Ensure that you have saved the system configuration.
  2. In the **Menu Bar**, click **File > Exit** to quit the application.
  3. On the ECU, press the **CPU Power Switch** on the front panel. After a few moments, when the **POWER LED** on the front panel turns off, the system is shut down. If desired, turn off the **Main Power Switch** on the rear panel.
  4. Turn off all peripheral equipment, including your laptop (or PC), the VP(s), VPx(s), the Ethernet Switch, monitors, routers, etc.

5. Menu Orientation

In This Chapter

This chapter describes all Encore GC menus and tabs, including how they are accessed and the functions that are available. Before you start using the Encore GC system for your next event, it is recommended that you review this section completely.

The following topics are discussed:

Note

Once you have reviewed all of the sections in this chapter, please continue with Chapter 6, "System Setup" on page 143.

GUI Overview

The Encore GC consists of a **Menu Bar** plus **Tabs** that enable you to set up your system's routers, patches, destinations, sources and your presentation's overall "look." The figure below illustrates the layout when Encore GC is on line and connected to VPs.

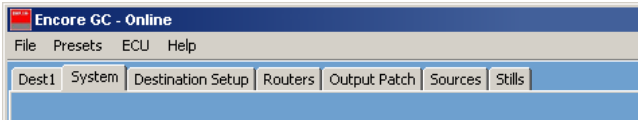


Figure 5-1. Encore GC layout

- Use the **Menu Bar** for quick access to important Encore GC functions. Refer to the "**Menu Bar**" section on page 63 for details.
- Select a **Destination Control Tab** to configure the "look" on your screen(s), including all PIP and Key effects, image placement and source selection. Refer to the "**Destination Control Tabs**" section on page 100 for details.
- Select the **System Tab** to detect and identify your ECU(s), Processor(s), Router(s) and Lantronix devices. This tab also enables you to update software and reset devices. Refer to the "**System Tab**" section on page 71 for details.

Note

If the system does not detect any valid video processors, no **Destination Control Tabs** will appear.

- Select the **Destination Setup Tab** to set up each of your destination's parameters, including destination type (e.g., single screen, wide screen), output settings, test patterns, EDID settings and processor selection. Refer to the "**Destination Setup Tab**" section on page 76 for details.
- Select the **Routers Tab** to set up each of your system's routers, including name, manufacturer, signal type, matrix size, communication type and IP address. Refer to the "**Routers Tab**" section on page 86 for details.
- Select the **Output Patch Tab** to patch router outputs to various video processor inputs. Refer to the "**Output Patch Tab**" section on page 91 for details.
- Select the **Sources Tab** to set up all inputs, either via router or direct connection to the processor(s). Selections on this tab directly determine the active inputs on the **Destination Control Tab**(s). Refer to the "**Sources Tab**" section on page 93.
- Select the **Stills Tab** to name, save, recall, erase and delete still frames. Refer to the "**Stills Tab**" section on page 97 for details.
- If two or more destinations are configured, select the **Multiple Destinations Tab** to configure multiple destination Presets.

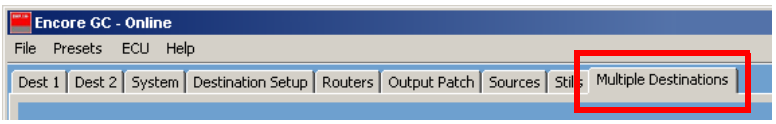


Figure 5-2. Multiple Destinations Tab

Refer to the "**Multiple Destinations Tab**" section on page 139 for details.

The **Menu Bar** and all **Tabs** are discussed in the following sections.

Menu Bar

The **Menu Bar** provides quick access to important Encore GC functions. There are three ways to use the menus:

- Click a menu item directly.
- Press **ALT** (on your keyboard), then use the keyboard's arrow keys to navigate.
- Use "**CTRL**" shortcut combinations as listed in the menus (e.g., **CTRL + E**).

The **Menu Bar** changes form, depending on which tabs are selected.

- **Menu Bar Form 1**
- **Menu Bar Form 2**

Menu Bar Form 1

When the **System**, **Routers**, **Output Patch**, **Destination Setup** and **Sources** tabs are selected, the **Menu Bar** takes the following form:

Figure 5-3. Menu Bar (form 1)

- The **New**, **Open**, **Save**, **Save As**, and **Close** functions are currently not implemented.
- Click **File** to display the **File Menu**:

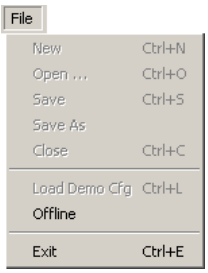


Figure 5-4. File Menu

~ Click **Offline** to use Encore GC in an offline mode. When selected, Encore GC is disconnected from the ECU, processors and routers. To reconnect all devices, click **Connect** on the **System Tab**.

~ When the system is offline, the **Load Demo Cfg** function appears in the **File Menu**:

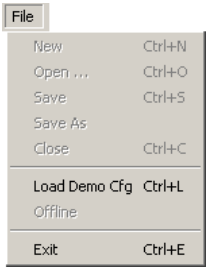


Figure 5-5. File Menu in Offline mode

Click **Load Demo Cfg** to load a demonstration version of Encore GC. Refer to the "**Demo Mode**" section on page 141 for more information. To exit the mode, click **Connect** on the **System Tab**.

~ Click **Exit** to exit the Encore GC application. Ensure that you have performed a "**System Save**" prior to exiting.

- Click **Presets** to display the **Presets Menu**:

Figure 5-6. Presets menu

~ Click **Preset Recall Options** to display the **Preset Recall Options Dialog**.

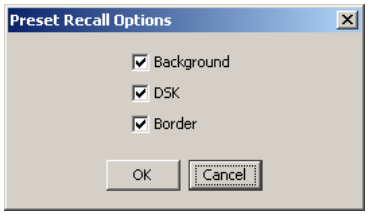


Figure 5-7. Preset Recall Options Dialog

When recalling Presets, this dialog provides three options that determine which portions of the stored Preset data is recalled. Any combination of options can be enabled:

- Check **Background** to include background sources in the recall. If un-checked, current backgrounds will be retained.
- Check **DSK** to include the DSK sources in the recall operation. If un-checked, the current DSK sources will be retained.
- Check **Border** to include stored border parameters in the recall. If un-checked, current border parameters are retained.

- Click **ECU** to display the **ECU Menu**:

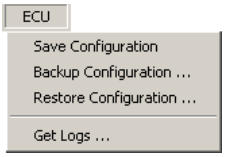


Figure 5-8. System Menu

  - ~ Click **Save Configuration** to save the current Encore GC configuration in the ECU, enabling you to shut down and power-up with the identical configuration. If you change your system configuration in any way, always click **Save Configuration** prior to exiting the application.
  - ~ Click **Backup Configuration** to back the current configuration up to a local or offline storage device (e.g., a thumb drive).
  - ~ Click **Restore Configuration** restore a configuration from a local or offline storage device back to the system.
  - ~ Click **Get Logs** to save ECU system logs. The **Save Remote Log Files** dialog appears, in which you can select a location to save the logs. This feature is designed for technical support use only. Once you specify a location, a **Log Files Transfer Status Window** confirms the procedure.

  In Chapter 7, refer to the "**Backing Up and Restoring Configurations**" section on page 189 for backup and restore instructions.

- Click **Help** to display the **Help Menu**:

Figure 5-9. Help Menu

  - ~ Click **About Encore GC** to display the **About Encore GC Dialog**.

Figure 5-10. About Encore GC Dialog

The dialog lists the current software version, the Barco website and the technical support email address. Click **OK** to close the dialog.

Menu Bar Form 2

When a **Destination Control Tab** is selected, the **Menu Bar** takes the following form:

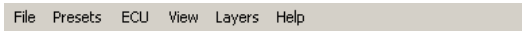


Figure 5-11. Menu Bar (form 2)

- The **File**, **Presets**, **ECU** and **Help** menus are identical to those in "**Form 1**." Refer to the "**Menu Bar Form 1**" section on page 63 for details.
- Click **View** to display the **View Menu**.

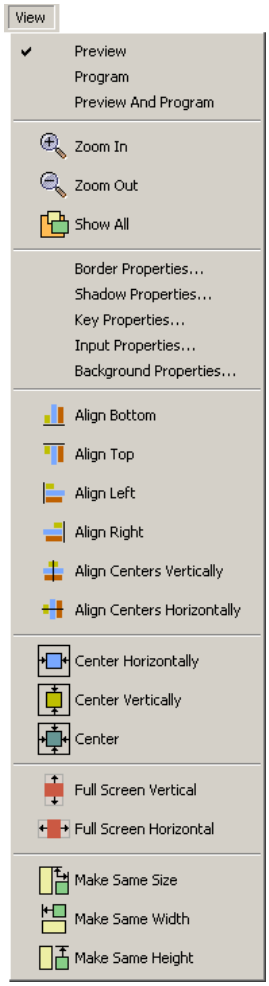
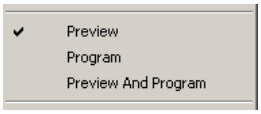


Figure 5-12. View Menu (sample)

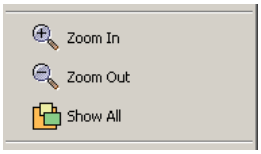
Note

Different sets of icons are active or grayed out, based on which PIP(s) are selected in the Palette (your work surface in the **Destination Control Tabs**). In the sample above, *all* icons are active for discussion purposes only.



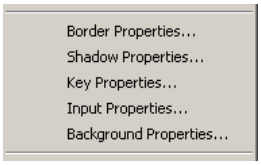
- Click **Preview** to view only the destination's preview output in the Palette (for the selected destination).
- Click **Program** to view only the destinations's program output in the Palette.
- Click **Preview and Program** to create a split screen in the Palette, with the program output above and the preview output below.

The following three menu items control your "view" of the Palette:



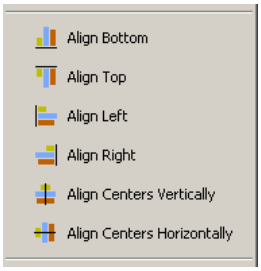
- Click **Zoom In** to zoom the view closer to PIPs on the Palette.
- Click **Zoom Out** to zoom the view farther away from PIPs.
- Click **Show All** to adjust the view to ensure that the entire destination screen is visible on the Palette.

In the next section, the first four menu items are only enabled when a PIP is selected. **Background Properties** can be selected at any time.



- Click **Border Properties** to display the **Border Properties Dialog**, which allows you to manipulate PIP borders, styles and colors. This dialog can also be accessed by right-clicking a PIP, and selecting **Border Properties** in the pop-up. Refer to the "**Border Properties Dialog**" section on page 111 for details.
- Click **Shadow Properties** to display the **Shadow Properties Dialog**, which allows you to manipulate the size, position and transparency of the shadow. This dialog can also be accessed by right-clicking a PIP, and selecting **Shadow Properties** in the pop-up. Refer to the "**Shadow Properties Dialog**" section on page 112 for details.
- Click **Key Properties** to display the **Key Properties Dialog**, which allows you to adjust key parameters. This dialog can also be accessed by right-clicking a PIP, and selecting **Key Properties** in the pop-up. See the "**Key Properties Dialog**" section on page 113 for details.
- Click **Input Properties** to display the **Input Properties Dialog**, which allows you to adjust all input parameters. This dialog can also be accessed by right-clicking a PIP, and selecting **Input Properties** in the pop-up. See the "**Input Properties Dialog**" section on page 114.
- Click **Background Properties** to display the **Background Properties Dialog**, which allows you to adjust background video parameters. A background must be enabled in the Palette first. This dialog can also be accessed by right-clicking the background layer and selecting the **Background Properties Pop-up**. Refer to the "**Background Properties Dialog**" section on page 118 for details.

The following six menu items are only enabled when two or more PIPs are selected simultaneously (using the standard **SHIFT + click** technique). If only one PIP is selected, the items are grayed out.



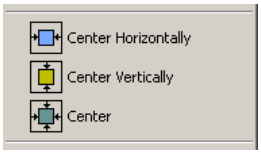
- Click **Align Bottom** to align the bottom edges of all selected PIPs.
- Click **Align Top** to align the top edges of all selected PIPs.
- Click **Align Left** to align the left edges of all selected PIPs.
- Click **Align Right** to align the right edges of all selected PIPs.
- Click **Align Centers Vertically** to align the vertical axes of all selected PIPs.

~ Click **Align Centers Horizontally** to align the horizontal axes of all selected PIPs.

Note

In each case, the PIP selected *first* is the master for the selected function. For example, given two PIPs in the Palette, one screen left and one screen right, you can align to either one — provided that you click it first, and then **SHIFT + click** the second PIP.

The following three menu items are only enabled when one (or more) PIPs are selected in the Palette. If the background is clicked, the items are grayed out. Note that if two or more PIPs are selected, the PIP selected *first* is the master for the selected function.

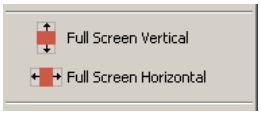


~ Click **Center Horizontally** to center all selected PIPs horizontally, along the destinations's vertical axis. PIPs do not change vertical position.

~ Click **Center Vertically** to center all selected PIPs vertically, along the destination's horizontal axis. PIPs do not change horizontal position.

~ Click **Center** to center all selected PIPs vertically and horizontally, along the destination's horizontal and vertical axes.

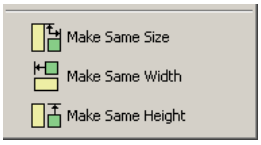
The following two menu items are only enabled when one (or more) PIPs are selected in the Palette. If the background is clicked, the items are grayed out.



~ Click **Full Screen Vertical** to take the selected PIP(s) to full screen, using the source's height as the guide. If borders are on, they will be taken into account so that they are visible.

~ Click **Full Screen Horizontal** to take the selected PIP(s) to full screen, using the source's width as the guide. If borders are on, they will be taken into account.

The last three menu items are only enabled when two (or more) PIPs are selected in the Palette. If the background is clicked, or if only one PIP is selected, the items are grayed out. Note that if two or more PIPs are selected, the PIP selected *first* is the master for the selected function.



~ Click **Make Same Size** to make the second (and subsequent) PIPs that you select the same size as the first selected PIP.

~ Click **Make Same Width** to make the second (and subsequent) PIPs that you select the same width as the first selected PIP.

~ Click **Make Same Height** to make the second (and subsequent) PIPs that you select the same height as the first selected PIP.

- Click **Layers** to display the **Layers Menu**.

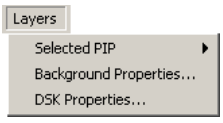


Figure 5-13. Layers Menu

~ Click **Selected PIP** to display the **Selected PIP Menu**. Please note:

- If a PIP is not selected in the Palette, you will be prompted to select one.

- If two (or more) PIPs are selected in the Palette, all menu items will be grayed out.
- If only one PIP is selected in the Palette, the menu is active.

The figure below illustrates the **Selected PIP Menu**:

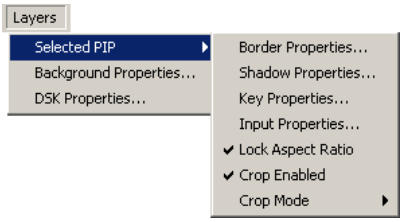


Figure 5-14. Selected PIP Menu

- Click **Border Properties** to display the **Border Properties Dialog**. Refer to the "**Border Properties Dialog**" section on page 111 for details.
- Click **Shadow Properties** to display the **Shadow Properties Dialog**. Refer to the "**Shadow Properties Dialog**" section on page 112 for details.
- Click **Key Properties** to display the **Key Properties Dialog**. Refer to the "**Key Properties Dialog**" section on page 113.
- Click **Input Properties** to display the **Input Properties Dialog**. Refer to the "**Input Properties Dialog**" section on page 114.
- Check (or uncheck) **Lock Aspect Ratio** to lock or unlock the PIP's aspect ratio. The checkmark indicates "locked." When locked, a PIP's H and V size tracks proportionally. When unlocked, H and V size can be adjusted individually.

The figure below illustrates the **Crop Menu**:

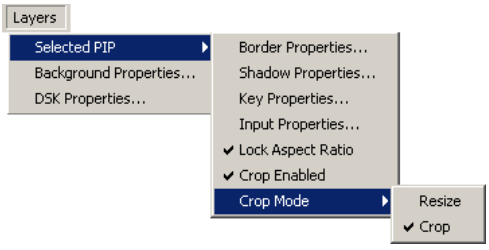


Figure 5-15. Crop Mode Menu

~ Check **Crop Enabled** to crop the edges of a PIP. When enabled, several **Crop Mode** functions are available:

- Enable **Crop**. Place your cursor over the edge of a PIP, and then click and drag to crop the image.
- In **Crop** mode, place your cursor over the *inside* of the image, and then click and drag to move the image around — inside the cropped region.
- In **Crop** mode, place your cursor over the *inside* of the image hold down **CTRL**, and then click and drag to move the cropped region around the Palette, leaving the image in place.

- Enable **Resize** to move the cropped image around the Palette, or resize the cropped image by clicking and dragging an edge.

Note

If you un-check **Crop Enabled**, the image returns to full size, and all cropped edges are cleared.

~ Click **Background Properties** to display the **Background Properties Dialog**. Refer to the "**Background Properties Dialog**" section on page 118 for details.

~ Click **DSK Properties** to display the **DSK Properties Dialog**. Refer to the "**DSK Properties Dialog**" section on page 124 for details.

System Tab

The **System Tab** enables you to detect and identify your ECU(s), Processor(s), Router(s) and Lantronix devices. This tab also enables you to update software and reset various devices. The figure below illustrates the **System Tab**.

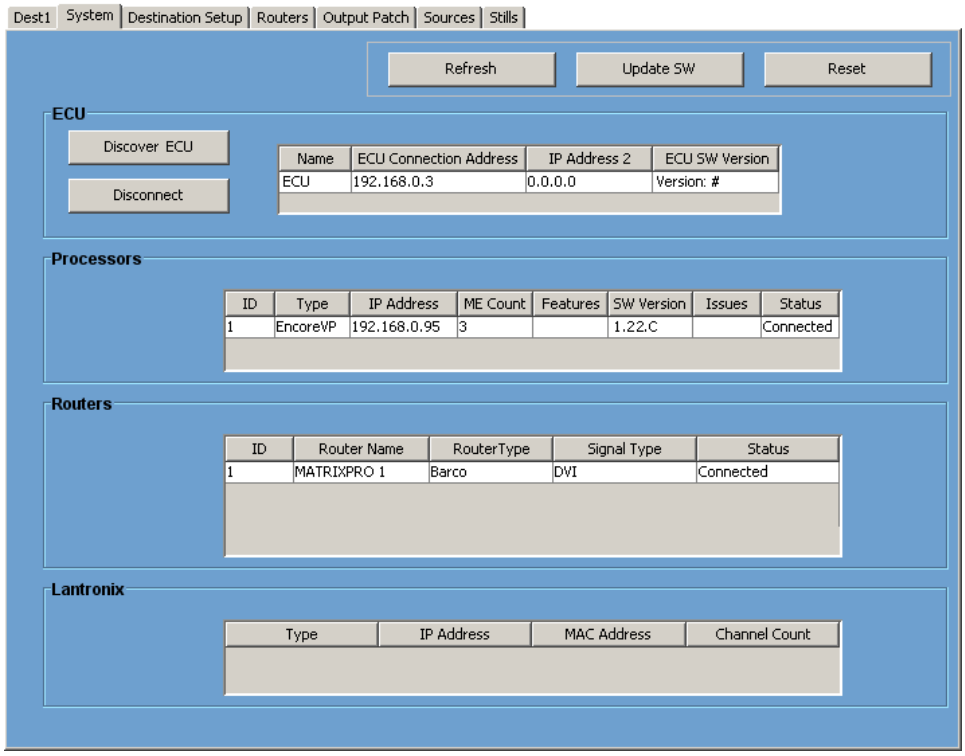


Figure 5-16. System Tab (sample)

The tab is divided into five sections:

- **Functions Section**
- **ECU Section**
- **Processors Section**
- **Routers Section**
- **Lantronix Section**

Note

Within the tables in each section, you can change the order of the columns by clicking and dragging a column heading to a new location.

Functions Section

At the top of the **System Tab**, three buttons are provided:

- Click **Refresh** to re-synchronize the active Encore GC configuration with the ECU. Use this function in case a device is not recognized, or if another device is connected. All tables will be re-populated.

- Click **Update SW** to display the **Software Update Window**. Because the Encore GC software acts as the "master" software version in an Encore GC system, this function enables you to update ECU and video processor software to match that of the Encore GC. In Chapter 4, refer to the "**System Shutdown**" section on page 60 for details.

- Click **Reset** to display the **Reset Window**. A software reset is recommended, for example, after the Encore GC system has returned from an event or other presentation. In Chapter 7, see the "**Resetting Software**" section on page 182.

ECU Section

The figure below illustrates the **ECU Section** on the **System Tab**:

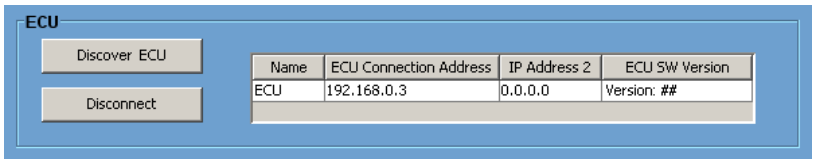
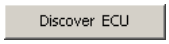


Figure 5-17. System Tab - ECU Section (sample)

In the table, the following information is provided:

- The **Name** column lists the ECU that is connected to the Encore GC.
- The **ECU Connection Address** column lists the ECU's IP address.
- The **IP Address 2** column is provided for future use.
- The **ECU SW Version** column lists the version of the connected ECU.

The following functions are provided in the **ECU Section**:



- Click **Discover ECU** to initiate the procedure whereby Encore GC searches the local network for available ECU(s). The **Discovery Dialog** appears:

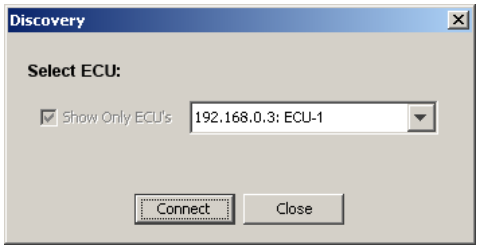


Figure 5-18. Discovery Dialog (sample)

Please note the following important points:

~ The **Show Only ECUs** check box will be grayed out if only ECUs have been discovered.

~ If a red error message appears (e.g., No devices found), close the dialog, re-check your Ethernet connections, then click **Discover ECU** in the **System Tab**.

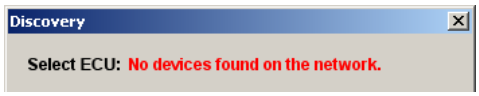


Figure 5-19. Error message: No devices found

~ If the **Show Only ECUs** label is active and the check box is unchecked, the system has discovered both ECU and non-ECU devices on the network (e.g., Barco projectors). In this case, check the box to filter the list for ECUs only.

Use the drop-down menu and select the single ECU to which you want to connect. Click **Connect** to display a status window, which appears briefly while all devices are being discovered. Once the procedure is complete, all tables on the **System Tab** will be repopulated.

- Click **Disconnect** to disconnect the Encore GC from the ECU. In this mode, the system is offline. Once disconnected, all tables on the **System Tab** are cleared.

Processors Section

The figure below illustrates the **Processors Section** on the **System Tab**:

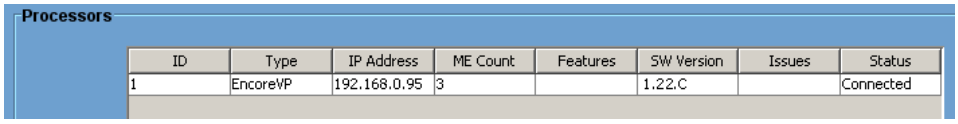


Figure 5-20. System Tab - Processors Section (sample)

The table in the **Processors Section** lists all VP(s) discovered and/or configured by the system, including ScreenPRO-IIs, VPs and VPxs. The following information is provided:

- The **ID** column lists the VP's physical ID, as set with the **ID Selector Switch** on the rear of each VP.
- The **Type** column lists the type of VP (e.g., VP, ScreenPRO-II).
- The **IP Address** column lists each processor's IP address.
- The **ME Count** column lists the number of ME's (Mix Effects banks) within the video processor.
- The **Features** column lists optional features installed in the processor (e.g., the EOC option on ScreenPRO-II).
- The **SW Version** column lists the software version that the processor is currently running.
- The **Issues** column lists any problems present in the processor. For example, if the **Checksum Mismatch** label appears in the column, the current version of

Encore GC software does not match the installed version of video processor software, and an update is required.

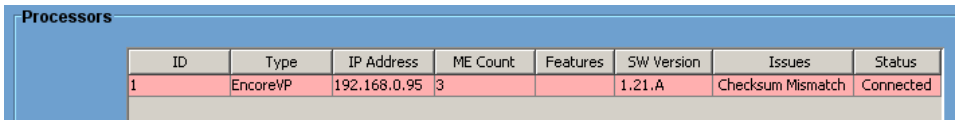


Figure 5-21. Checksum mismatch (sample)

If any issues are present, the specific processor row (in the table) will be colored pink, as shown in the sample above. In this condition, it is recommended that you update your processor software. In Chapter 4, refer to the "**System Shutdown**" section on page 60 for details.

- The **Status** column lists the current status of the processor (e.g., **Connected**).

Note — If the system does not detect any valid video processors, you will not be able to configure destinations.

If the **Status** column is blank and a specific processor row in the table is yellow, the processor is configured but not connected.

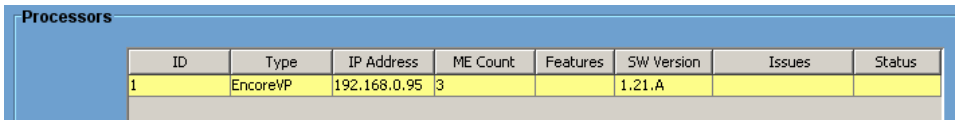


Figure 5-22. Disconnected processor (sample)

In this situation, check your Ethernet cables, connections and the Switch, and then click **Refresh**.

Routers Section

The figure below illustrates the **Routers Section** on the **System Tab**:

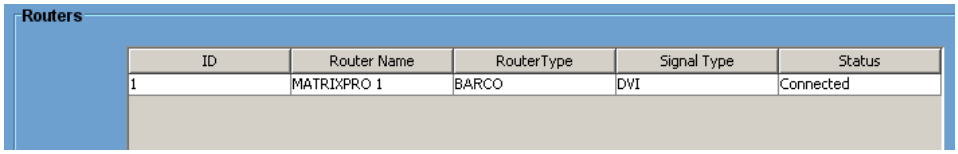


Figure 5-23. System Tab - Routers Section (sample)

The table in the **Routers Section** lists all routing switchers discovered and/or configured by the system, including Barco routers and those made by other manufacturers. The following information is provided:

- The **ID** column lists a unique system-assigned ID number to the router.
- The **Router Name** column lists the user name, as entered on the **Routers Tab**.
- The **Router Type** column lists the manufacturer (e.g., Barco, Extron, Sierra, etc.).
- The **Signal Type** column lists the router's signal type (e.g., Analog, SDI, DVI).
- The **Status** column lists the current status of the router (e.g., **Connected**.)

Please note the following important points:

- If a router does not appear “connected” after it is assigned on the **Routers Tab**, right-click the router in question to display the **Test Router Comm Button**.

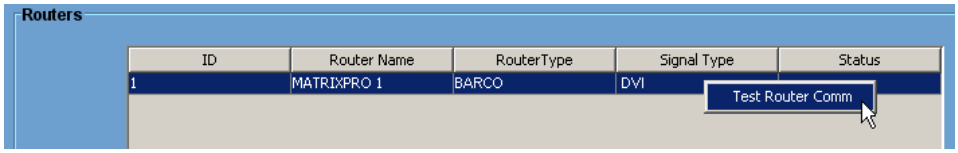


Figure 5-24. Test Router Comm Button

Click the **Test Router Comm Button** to display the **Testing Comm Window**, which tests communications with the selected router.

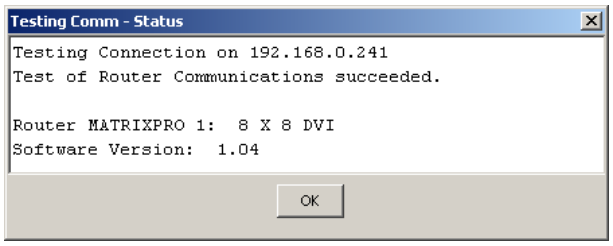


Figure 5-25. Testing Comm Window (sample)

When you click **OK**, the router should appear “connected.” If connection problems persist, re-check all Ethernet connections to the router(s), verify all entries on the **Routers Tab**, and re-test communications.

Lantronix Section

The figure below illustrates the **Lantronix Section** on the **System Tab**:

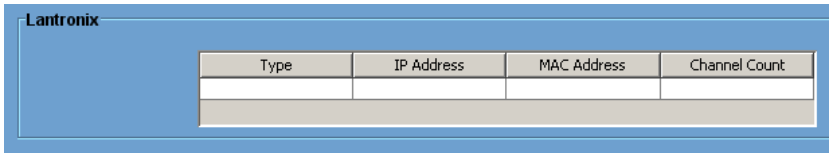


Figure 5-26. System Tab - Lantronix Section (sample)

The table in the **Lantronix Section** lists all discovered Lantronix devices. A Lantronix device is a third-party Ethernet-to-serial converter that enables you to control serial protocol routers via an Ethernet connection. Devices such as the **Lantronix** model **UDS100**, **UDS200** or **UDS2100** can be successfully controlled, and each Lantronix device typically controls two serial routers. For more information, visit **http://www.lantronix.com**.

The following information is provided in the table:

- The **Type** column lists the specific type of Lantronix device (e.g., UDS100, UDS2100, etc.).
- The **IP Address** column lists the Lantronix device’s IP address.
- The **MAC Address** column lists the Lantronix device’s MAC address.
- The **Channel Count** column lists the number of serial channels which the Lantronix device controls.

Destination Setup Tab

The figure below illustrates the **Destination Setup Tab**:

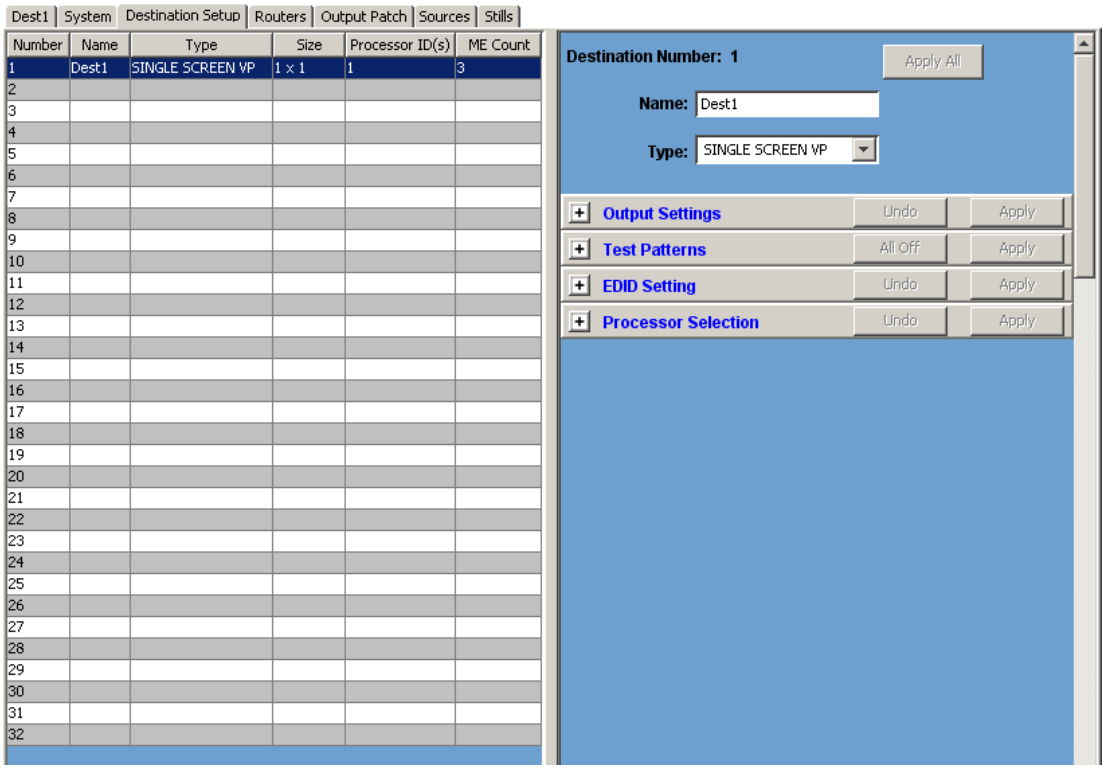


Figure 5-27. Destination Setup Tab (sample)

The **Destination Setup Tab** is used to set up parameters for each of your destinations. Parameters include destination type (e.g., single screen, wide screen), output settings, test patterns, EDID settings and processor selection. In the row of tabs, one **Destination Control Tab** appears for each destination configured on the **Destination Setup Tab**.

The tab is divided in half:

- On the left, the **Destination Table** lists parameters for up to 32 destinations. Refer to the "**Destination Table**" section on page 77 for details.
- On the right, the **Destination Settings Section** provides expandable sections that enable you to configure the specific settings for each destination. Refer to the "**Destination Settings Section**" section on page 78 for details.

Note that you can resize the two sections by clicking and dragging the dividing bar.

Destination Table

The figure below illustrates a portion of the **Destination Table**.

Number	Name	Type	Size	Processor ID(s)	ME Count
1	Dest1	SINGLE SCREEN VP	1 x 1	1	3
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Figure 5-28. Destination Table (sample)

The **Destination Table** lists the parameters for up to 32 destinations — one destination per row. The columns in the table can be resized by clicking and dragging the boundary between headings, and you can change the order of the columns by clicking and dragging a column heading to a new location.

When you click on a destination row, its settings appear in the **Destination Settings Section** to the right, enabling you to enter new information, or modify existing information.

Descriptions of each column are provided below:

- The **Number** column lists the destination's number, from 1 to 32.
- The **Name** column lists a user-specified name for the selected destination, as entered in the **Name** field in the **Destination Settings Section**. Note that this name also appears on the tab itself, as shown in the example below:

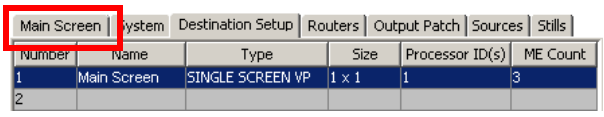


Figure 5-29. Tab label (example)

- The **Type** column lists the specific type of destination (e.g., Single Screen or Wide Screen VP), as entered in the **Type** field in the **Destination Settings Section**.
- The **Size** column lists the size of the destination's projector array, using the formula H (# horizontal projectors) x V (# vertical projectors).
  - ~ For a single screen VP, the array is always 1 x 1.
  - ~ For a wide screen VP, the array size is set in the Widescreen Settings section — in the **Destination Settings Section**.
- The **Processor ID(s)** column lists the physical IDs of each processor, along with the number of processors assigned to the selected destination.
- The **ME Count** column lists the absolute number of M/Es available for use in the selected destination.
- To delete a destination, click the desired row, and then press **Delete** on your keyboard. You can also right-click the row and select **Delete**.

Destination Settings Section

The figure below illustrates the **Destination Settings Section** when a Single Screen VP destination is selected.

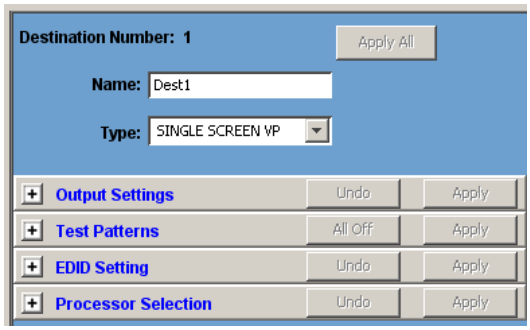


Figure 5-30. Destination Settings Section (sample)

The **Destination Settings Section** provides several expandable sections, within which you can configure the settings for each destination.

- To expand a section, click the "**+**."
- To shrink a section, click the "**-**."

The entire group of sections pertains to the selected destination row in the **Destination Table**. Different sections appear and disappear, depending on the destination type:

- If a wide screen VP is selected, the **Widescreen Settings** section appears.
- If a single screen SP is selected, the **Routing Modes** section appears.
- If a single screen VP destination is selected, the **Widescreen Settings** and **Routing Modes** sections are not shown.

Information can only be entered for destinations that have a physical processor. For example, if you only have one processor, you can not configure a second destination. If you attempt to do so, an error message appears.

At the top of the section:

- The **Destination Number** field shows the destination that you are configuring, as selected in the **Destination Table**.
- The **Name** field enables you to enter a custom name for the selected destination.
- The **Type** drop-down menu enables you to choose the type of destination. Choices include **Single Screen VP**, **Single Screen SP** and **Wide Screen VP**.
- Click **Apply All** to apply and save all changes, then in the **Menu Bar**, click **ECU > Save Configuration**.

The following sections are discussed below:

- **Output Settings Section**
- **Test Patterns Section**
- **EDID Setting Section**
- **Processor Selection Section**
- **Widescreen Settings Section**
- **Routing Modes Section**

Output Settings Section

The figure below illustrates the **Output Settings Section**:

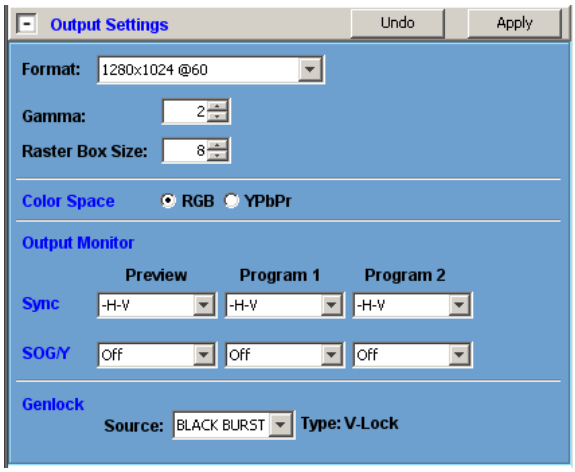


Figure 5-31. Destinations Settings - Output Settings Section

The **Output Settings Section** enables you to set up the destination's output parameters.

- **Format** — sets the resolution and frame rate at which you want to drive your projector. To minimize synchronization problems, select a frame rate that is consistent with your input sources.

  ▲ If you are using 59.94 NTSC video inputs, run the output at the same rate in order to reduce jutter artifacts.

- **Gamma** — sets the output gamma.
- **Raster Box Size** — sets the size of the raster box that appears around PIPs and Keys.

  ~ **Adjustment range** (in pixels): 0 to 8

- **Color Space** — sets the output's color space to either **RGB** or **YP_bP_r**.

In the **Output Monitor** section, individual sync controls are provided for your Preview, Program 1 and Program 2 monitors.

- **Sync** — sets the sync value. Choose between **+H+V**, **-H-V**, **+H-V**, **-H+V** or **CSync**.
- **SOG / Y** — selects a specific "sync on green" signal. Choose between **Off**, **Standard** or **Tri-Level** (for certain HD devices).

In the **Genlock** section, select the type of analog genlock signal that is connected to the Processor's **Genlock** connector.

- **Source** — sets the genlock source, either **Black Burst**, **CSync** or **None**.

  ~ When Source = **None**, Type = **Free-Run**

  ~ When Source = **Black Burst**, Type = **V Lock**

  ~ When Source = **CSync**, Type = **V Lock**

Please note the following important points regarding genlock:

- PAL or NTSC black burst or composite sync signals are recommended.

- In wide screen applications, all Processors must be locked together. If you provide genlock to the first Processor in your configuration, genlock is automatically distributed to the other Processors via **Program Link** connections.
- If you do not use genlock in a wide screen application, Encore GC automatically makes the first Processor in your configuration the master.
- In single screen applications, each Processor requires its own genlock signal.
- Genlock is highly recommended in configurations that utilize camera sources.

Once all changes have been entered in the **Output Settings Section**:

- Click **Apply** to enter all changes, and send the new parameters to the ECU.

- If required, prior to clicking **Apply**, click **Undo** to revert all changes in the section back to the last set of “applied” output parameters.

Test Patterns Section

The figure below illustrates the **Test Patterns Section**:

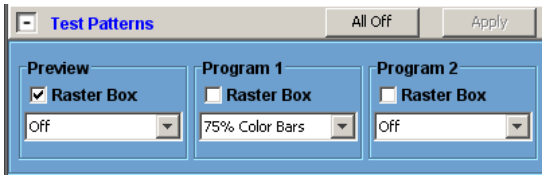


Figure 5-32. Destinations Settings - Test Patterns Section

The **Test Patterns Section** lets you control test patterns and raster boxes for a VP’s three outputs. Controls are similar for each output:

- **Raster Box** — when enabled, the selected output displays a raster box defined by the exact outer edges of the output resolution.

  ▲ If the output is 1024 x 768, the raster box encapsulates that format.

  Please note:

  ~ The **Burst** test pattern is the only pattern that is smaller than the selected output resolution. When the **Raster Box** is enabled, the Burst pattern will appear within its boundaries.

  ~ The **Raster Box** can be enabled when the test pattern is **Off**.

- **Test Pattern** — use the drop-down menu to set the test pattern. Changes do not occur until you click **Apply**. Choose between the following patterns:

  ~ **H Ramp**
  ~ **V Ramp**
  ~ **100% Color Bars**
  ~ **16x16 Grid**
  ~ **32x32 Grid**
  ~ **Burst**
  ~ **75% Color Bars**
  ~ **50% Gray**
  ~ **Gray Steps 1**
  ~ **Gray Steps 2**
  ~ **White**
  ~ **Black**
  ~ **Red**
  ~ **Green**
  ~ **Blue**
  ~ **Gray Bars**

In addition, when a wide screen destination is chosen, the following additional test patterns are available:

- **H Align**
- **V Align**
- **H and V Align**

These three alignment test patterns are used for performing projector lens shift and registration adjustments.

Apply

- Click **Apply** to enable/disable all changes to the output(s), and send the new parameters to the ECU.

All Off

- Click **All Off** to turn off all test patterns and raster boxes simultaneously.

EDID Setting Section

The figure below illustrates the **EDID Setting Section**:

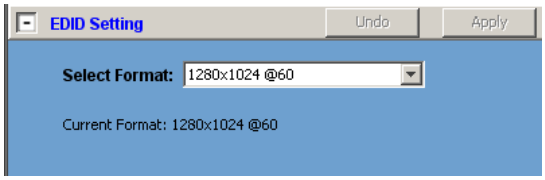


Figure 5-33. Destinations Settings - EDID Setting Section

The **EDID Setting Section** enables you to update the system's preferred EDID resolution for the processor's DVI inputs — for the selected destination bus.

Note

This function is designed for advanced users only. Do not program EDID unless it is necessary.

Extended Display Identification Data (EDID) is a VESA standard data format that contains information about a display device and its resolution. The system's EDID file is stored in non-volatile memory. This file is read by an external computer's DVI graphic card when the computer's DVI output is connected to a Video Processor via the DVI-I connector during boot-up. The Processor must be powered on first for the EDID information to be read.

The following functions are provided:

- **Select Format** — the drop-down menu selects the preferred DVI video format with which you want to program the system's EDID non-volatile memory.
- **Current Format** — displays the current EDID video format in memory.

Undo

- Prior to clicking **Apply**, click **Undo** to return to the previously selected format.

Apply

- Click **Apply** to apply the new EDID format, and send the parameters to the ECU. When you click **Apply**, an alert is shown:

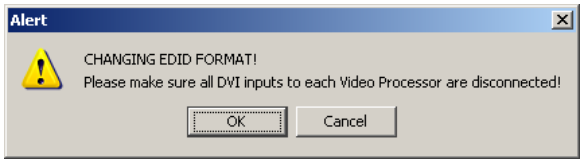


Figure 5-34. EDID Change Format Alert

- ~ If required, click **Cancel** to stop the procedure without changing the current format.
- ~ To proceed, ensure that all DVI inputs to each VP are disconnected, then click **OK** to apply the new EDID format.
- ~ After a minute, when EDID programming is complete, re-connect DVI inputs to the VP, then reboot the external computer(s).

Please note that the Processor's EDID PROM is *not* reset to any default during a factory reset. To change the EDID, you must use the **EDID Setting Section**.

Processor Selection Section

The figure below illustrates the **Processor Selection Section**:

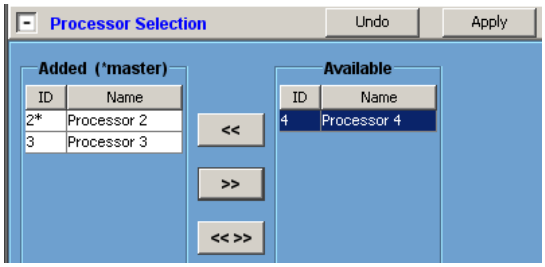


Figure 5-35. Destinations Settings - Processor Selection Section

The **Processor Selection Section** enables you to add and remove Processors from the selected destination.

- The **Added** column shows the Processors that are currently assigned to the destination, and which can also be removed. In the table, Processors are identified by ID, and the Processor with the asterisk (*) is the master.
- The **Available** column shows the Processors that are available to be assigned to the destination. If a Processor is currently assigned to another destination, it will not appear in the list. Processors are identified by ID.
- Highlight a Processor in the **Available** column, then click **<<** to add it to the destination.
- Highlight a Processor in the **Added** (**Master**) column, then click **>>** to remove it from the destination.
- Highlight a Processor in the **Available** column and a Processor in the **Added (Master)** column, then click **<< >>** to swap their positions.

- If required, prior to clicking **Apply**, click **Undo** to revert all changes in the section back to the last set of "applied" parameters.

- Click **Apply** to enter all changes, and send the new parameters to the ECU.

Widescreen Settings Section

The figure below illustrates the **Widescreen Settings Section**:

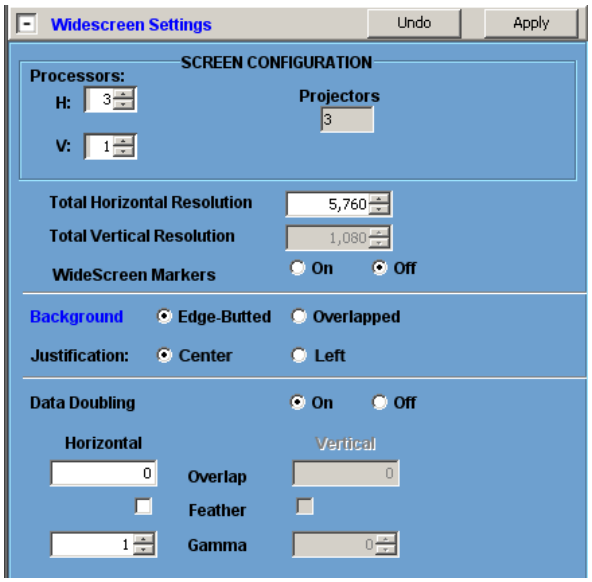


Figure 5-36. Destinations Settings - Widescreen Settings Section (sample)

The **Widescreen Settings Section** enables you to define the parameters for widescreen destinations. This section only appears when a widescreen destination is set up and selected in the **Destination Table**.

- **Processors** — When two or more Processors are added to a destination, the size fields enable you to select any combination of the available units, and lay them out in a horizontal only, vertical only, or horizontal plus vertical array. Fields are provided for **H** (horizontal) and **V** (vertical) array size. At the right, the **Projectors** field indicates the total number of projectors used in the array. This field is for information only.
- **Total Horizontal Resolution** — this field sets the total number of horizontal pixels in the overall wide screen display. The formula is:

  ```
  # screens * horizontal output resolution -
  (overlap width * (# screens - 1))
  ```

  ▲ If two screens are used, each with an output resolution of 1024 x 768 and an overlap of 200 pixels, the **Total H Res** is:

  ```
  2 * 1024 - (200 * 1) = 1848
  ```

  As you adjust the **Total Horizontal Resolution**, the **Overlap** value tracks and the wide screen markers (if enabled) adjust accordingly.
- **Total Vertical Resolution** — This field displays the array's vertical resolution. In an array that is exclusively horizontal, this field is fixed.
- **Widescreen Markers** — the radio buttons enable or disable the wide screen markers, which when enabled, show the boundaries of active data.

- **Background** — the radio buttons in this section select the method by which your background graphics were originally produced:
  - ~ **Edge-butted** — choose this option if background graphics were produced without pre-data doubling (from a multi-head graphics card).
  - ~ **Overlapped** — choose this option if backgrounds were produced using pre-data doubling (e.g., from a Dataton® Watchout system).
- **Justification** — sets the desired wide screen justification, either **Center** or **Left**. Once set, wide screen markers adjust accordingly.
- **Data Doubling** — use the radio buttons to enable or disable data doubling. Typically, the function is only disabled when unscaled background sources are pre-data doubled. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "**Overview of Edge-Blending Technology**" section for details.
- For a destination that includes a horizontal blend, the following adjustments can be made:
  - ~ **Horizontal Overlap** — sets the horizontal overlap between projectors. As you adjust, the **Total Horizontal Resolution** value tracks, and wide screen markers adjust.
  - ~ **Feather** — the check box enables or disables edge feathering between projectors. If the array does not include a horizontal blend, this function is grayed out.
  - ~ **Gamma** — sets gamma for the feathered regions in a horizontal blend. If the array does not include a horizontal blend, this is grayed out.
    - **Adjustment range**: 1.0 to 5.0
- For a destination that includes a vertical blend, the following adjustments can be made:
  - ~ **Vertical Overlap** — sets the vertical overlap between projectors. As you adjust, the **Total Vertical Resolution** value tracks.
  - ~ **Feather** — the check box enables or disables edge feathering between projectors. If the array does not include a vertical blend, this function is grayed out.
  - ~ **Gamma** — sets gamma for the feathered regions in a vertical blend. If the array does not include a vertical blend, this is grayed out.
    - **Adjustment range**: 1.0 to 5.0
- **Test Links** — For wide screen destinations only, click **Test Links** to test the program and source link cables that are required for wide screen operation. This button only appears when a defined wide screen destination is active. When clicked, you will be asked to confirm your selection.

Note	This test affects the Program output.

When the test is complete, Preview and Program outputs are fully restored and the test results are displayed. If any cables fail, the complete connection list will be shown in the display for reference when troubleshooting the cable connections.

Routing Modes Section

The figure below illustrates the **Routing Modes Section**, which only appears when a single screen SP destination is set up and selected in the **Destination Table**.

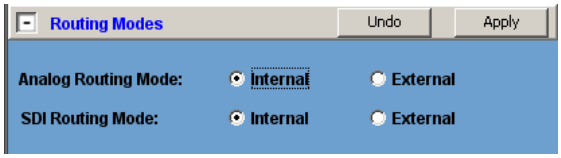


Figure 5-37. Routing Modes Section (sample)

The **Routing Modes Section** defines the routing parameters for a single screen ScreenPRO-II destination. The radio buttons set the routing mode for the ScreenPRO-II's analog and SDI inputs — either **Internal** or **External**. Your selection instructs the Encore GC on how sources are used on the ScreenPRO-II.

- The **Analog Routing Mode** line provides two mutually exclusive radio buttons, which affect the use of the ScreenPRO-II's eight analog inputs.
  - ~ Select **Internal** to patch individual analog inputs to the ScreenPRO-II. On the **Sources Tab**, two patching options are available:
    - Select **SP2** as the connection type, then select inputs and processors in the normal manner.
    - Select **All SP** as the connection type, then select inputs only. This choice enables you to use the same input for all ScreenPRO-II's, eliminating the need to select processors.
  - ~ Select **External** to patch an external analog router output to either analog input 1 or analog 2 on the ScreenPRO-II. Use the **Output Patch Tab** for patching.
- The **SDI Routing Mode** line provides two mutually exclusive radio buttons, which affect the use of the ScreenPRO-II's two SDI inputs. Note that this line is only enabled if the ScreenPRO-II has SDI inputs.
  - ~ Select **Internal** to patch individual SDI inputs to the ScreenPRO-II. On the **Sources Tab**, two patching options are available:
    - Select **SP2** as the connection type, then select inputs and processors in the normal manner.
    - Select **All SP** as the connection type, then select inputs only. This choice enables you to use the same input for all ScreenPRO-II's, eliminating the need to select processors.
  - ~ Select **External** to patch an external SDI router output to either SDI input 1 or 2 on the ScreenPRO-II. Use the **Output Patch Tab** for patching.

- If required, prior to clicking **Apply**, click **Undo** to revert all changes in the section back to the last set of "applied" parameters.

- Click **Apply** to enter all changes, and send the new parameters to the ECU.

Routers Tab

The **Routers Tab** is used to set up your system's routers and DAs, including name, manufacturer, signal type, matrix size, communication type and IP address. A maximum of eight routers can be controlled, either via Ethernet or Lantronix.

Note

Encore GC is designed to *only* discover routers that have been configured on the **Routers Tab**. Therefore, at startup, routers will not appear on the **System Tab** until they are configured in the **Routers Tab**.

The figure below illustrates the **Routers Tab**:

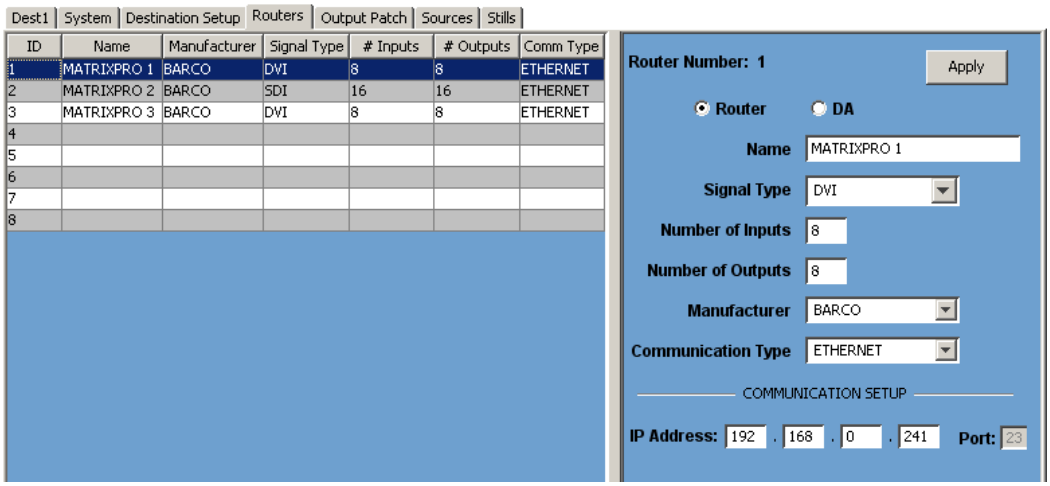


Figure 5-38. Routers Tab (sample)

The **Routers Tab** is divided into two sections:

- The **Routers Table** on the left lists the parameters of each router in your system. Refer to the "**Routers Table**" section on page 87 for details.
- The **Router Data Section** on the right enables you to configure (or change) parameters for each router in your system. Refer to the "**Router Data Section**" heading on page 87 for details.

Note that you can resize the two sections by clicking and dragging the dividing bar.

Routers Table

The **Routers Table** lists the parameters of each router. Columns can be resized by clicking and dragging the boundary between the column headings. You can also change the order of the columns by clicking and dragging a column heading to a new location in the table.

- The **ID** column provides a numeric ID of the selected router, from 1-8. The number is *not* tied to a physical or electronic ID on the router itself. A maximum of eight routers can be controlled.

Note — When you click on any field in the table, information from that line populates the **Router Data** section to the right.

- The **Name** column lists a user-specified name for the selected router.
- The **Manufacturer** column lists the router's manufacturer.
- The **Signal Type** column lists the router's signal type, either Analog, SDI or DVI.
- The **# Inputs** column lists the size of the router's input matrix.
- The **# Outputs** column lists the size of the router's output matrix.
- The **Comm Type** column lists the router's communication type.

Note — IP addresses for routers and Lantronix devices are not listed in the table. To view a specific IP address, click the desired line in the table, then look in the **Router Data** section.

- To delete a router, click the desired line then press **Delete** on your keyboard.

Router Data Section

Use the **Router Data Section** to enter data for all routers and DAs. At the top of the section, the **Router Number** field shows the line that is selected in the table. Please note:

- To configure a *new* router, click any blank line in the **Routers Table**, and use the **Router Data Section** to enter all information. To modify an *existing* router, click on that specific line in the table, then use the **Router Data Section** to change information. Refer to the "**Router Configuration**" section on page 88 for details.
- To configure a *new* DA, click any blank line in the table, and use the **Router Data Section** to enter all information. To modify an *existing* DA, click on that specific line in the table, then use the **Router Data Section** to change information. Refer to the "**DA Configuration**" section on page 89 for details.

Router Configuration

Click the **Router Radio Button** to configure (or change) a router — either via Ethernet or Lantronix. The following fields are available:

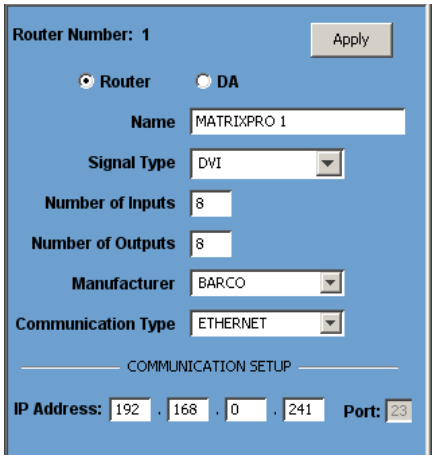


Figure 5-39. Router Data section

- Use the **Name** field to enter a user-specified name for the router.
- Use the **Signal Type** drop-down menu to choose the router's signal type.
- Use the **# of Inputs** field to list the size of the router's input matrix.
- Use the **# of Outputs** field to list the size of the router's output matrix.
- Use the **Manufacturer** drop-down menu to choose the router's manufacturer.
- Use the **Communication Type** drop-down menu to select the router's communication type, either Ethernet or Lantronix.
  - ~ If **Ethernet** is selected, enter the router's IP address (and port, if applicable) in the **Communication Setup** section.
  - ~ If **Lantronix** is selected, the **Communication Setup** section *changes* to display the following information:

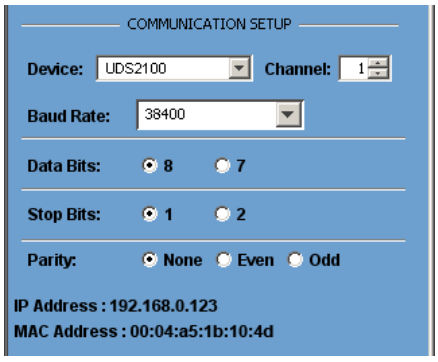


Figure 5-40. Communication Setup section, for Lantronix devices

- Use the **Device** drop-down menu to choose the Lantronix device that is connected to Encore GC's closed network.
- Use the **Channel** selector to specify the Lantronix serial channel (either 1 or 2) that is connected to the router.

- Use the **Baud Rate** drop-down menu to match the baud rate of the router connected to the Lantronix.
- In the **Data Bits** section, specify the number of data bits.
- In the **Stop Bits** section, specify the number of stop bits.
- In the **Parity** section, specify the type of router parity.
- At the bottom of the section, the Lantronix device's **IP Address** and **MAC Address** are listed. The Lantronix IP address must be set at the device itself.

Apply

- When all fields have been entered:
  - ~ Click the **Apply** button (at the top of the section) to apply all new data (or all changes). The **Routers Table** updates with the new information, and the new data is immediately sent to the ECU.
  - ~ In the **Menu Bar**, click **ECU > Save Configuration**.
  - ~ Configure the next router.

Important

When you add a new router or DA, the **Output Patch Tab** changes to reflect the new hardware, and the new router is added to the **Router** drop-down menu on the **Sources Tab**.

DA Configuration

Click the **DA Radio Button** to configure or change a DA. The section changes as follows:

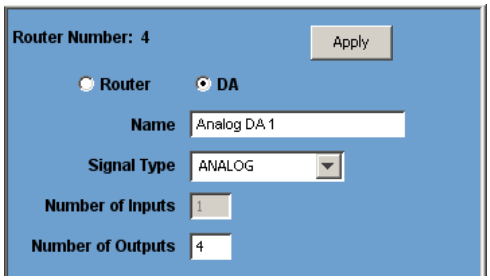


Figure 5-41. DA Data section

- Use the **Name** field to enter a user-specified name for the DA.
- Use the **Signal Type** drop-down menu to choose the DA's signal type.
- For DAs, the **# of Inputs** is fixed at one.
- Use the **# of Outputs** field to list the number of DA outputs.

Apply

- When all fields have been entered:
  - ~ Click the **Apply** button (at the top of the section) to apply all new data (or all changes). The **Routers Table** updates with the new information, and the new data is immediately sent to the ECU.
  - ~ In the **Menu Bar**, click **ECU > Save Configuration**.

~ Configure the next DA.

Important

When you add a new router or DA, the **Output Patch Tab** changes to reflect the new hardware, and the new router is added to the **Router** drop-down menu on the **Sources Tab**.

In Chapter 6, refer to the "**Router and DA Setup**" section on page 149 for step-by-step router configuration instructions.

Output Patch Tab

The figure below illustrates the **Output Patch Tab**:

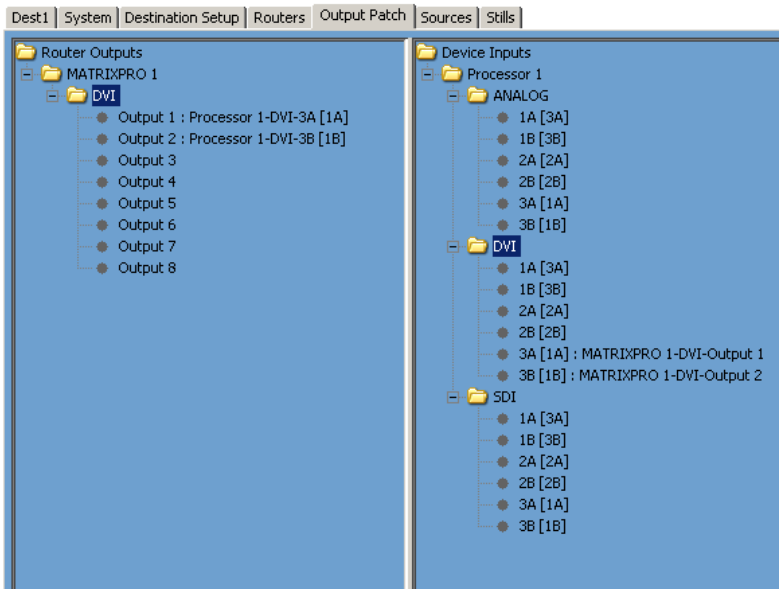


Figure 5-42. Output Patch Tab (sample)

The **Output Patch Tab** enables you to patch router outputs to various video processor inputs. When you add a new router or DA to the system on the **Routers Tab**, the **Output Patch Tab** updates with new data.

The tab is divided in half:

- On the left, the **Router Outputs Section** lists each system router, with individual folders representing each format, and individual lines representing each output.
- On the right, the **Device Inputs Section** lists all video processors and other destinations that are configured in your system.
  - ~ Individual folders are provided which represent each format.
  - ~ Individual lines are provided for each input, and each label indicates both the physical processor input (e.g., **1A**), and the logical **Destination Control Tab** layer (e.g., **[3A]**).

Note that you can resize the two sections by clicking and dragging the dividing bar.

Note

Before you patch outputs and assign sources, it is strongly recommended that you complete a set of "**connection charts**" for your Encore GC and ECU system. These charts will ensure that you have an error-free installation, particularly when complex patching is required. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "**Connection Charts**" section for instructions.

To make a "**router output**" to "**device input**" patch, click and hold the desired router output, then drag it directly on top of the desired device input.

Note that a “tool tip” label of the selected output appears as you drag.

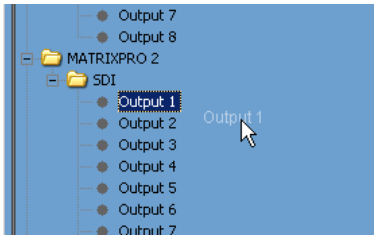


Figure 5-43. Output patch tool tip

To create the patch, drag the output to the desired input, and release the mouse button. When the patch is complete:

- The selected output’s label expands to show the **physical input** to which it is now connected on the processor (e.g., **1A**), and the **logical layer** in which it will appear on the **Destination Control Tab** (e.g., **[3A]**).
- Similarly, the selected input’s label expands to show the output that is routed it.

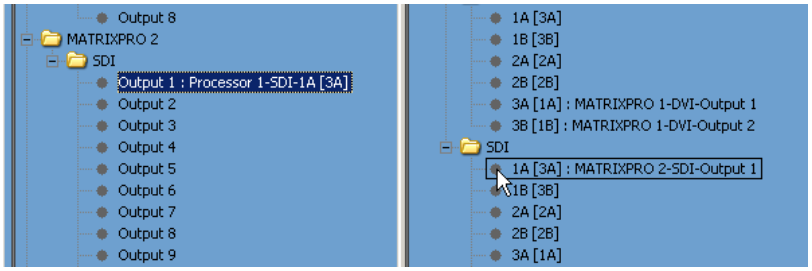


Figure 5-44. Completed output patch, with expanded labels.

Once all of your patches are complete, you can check them graphically using the **CTRL** button on the keyboard. There are several options:

- Hold down **CTRL** and click an individual patch (in either column) to view the output-to-input connection graphically.

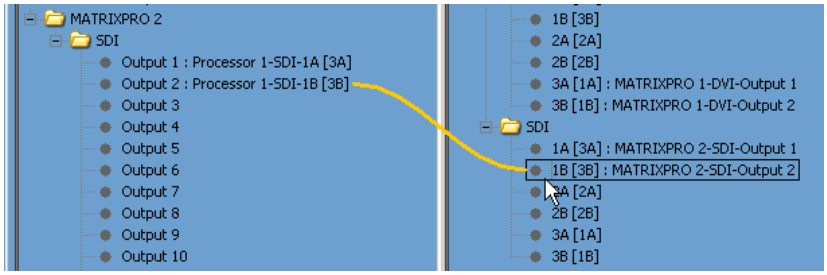


Figure 5-45. Individual patch view

- Hold down **CTRL** and click a format folder or a router folder to see all connections for that device.
- Hold down **CTRL** and click the top **Router Outputs** or **Device Inputs** folder to view all patches for the system.

Once all of your patches are complete, in the **Menu Bar** click **ECU > Save Configuration**.

Sources Tab

The figure below illustrates the **Sources Tab**:

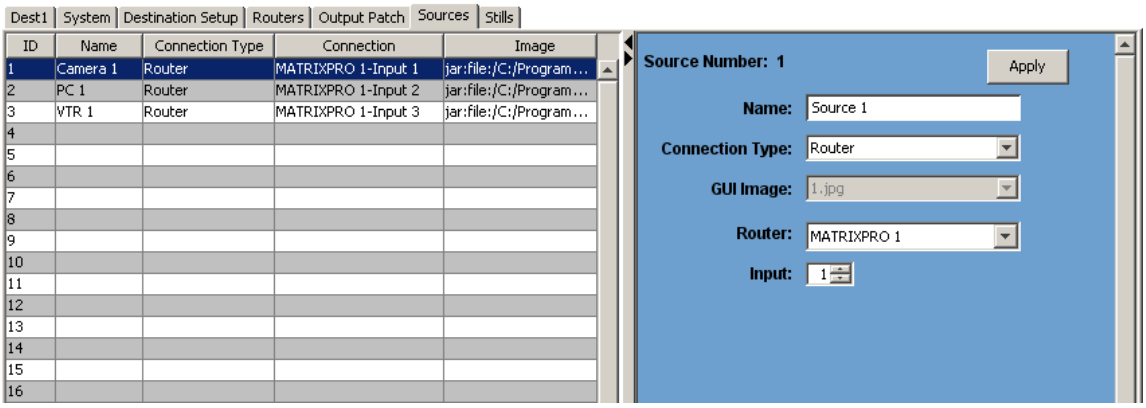


Figure 5-46. Sources Tab (sample)

The **Sources Tab** is used to set up all inputs, either via router or direct connection to the Processor(s). Setup parameters include source name, connection type, router, and the desired input number on the GUI. Selections on this tab directly determine the active inputs on the **Destination Control Tab**(s).

The tab is divided in half:

- On the left, the **Source Table** lists parameters for up to 64 sources. Refer to the "**Source Table**" section on page 94 for details.
- On the right, the **Source Parameters Section** enables you to configure the name, connection type, router, and the router input for each source. Refer to the "**Source Parameter Section**" heading on page 132 for details.

Note that you can resize the two sections by clicking and dragging the dividing bar. In addition, you can:

- Click the triangle (pointing left) ◂ to expand the **Source Parameter Section**, and hide the **Source Table**.
- Click the triangle (pointing right) ▸ to expand the **Source Table**, and hide the **Source Parameter Section**.

Source Table

In the **Sources Tab**, the figure below illustrates the **Source Table**:

ID	Name	Connection Type	Connection	Image
1	Camera 1	Router	MATRIXPRO 1-Input 1	jar:file:/C:/Program…
2	PC 1	Router	MATRIXPRO 1-Input 2	jar:file:/C:/Program…
3	VTR 1	Router	MATRIXPRO 1-Input 3	jar:file:/C:/Program…
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Figure 5-47. Source Table (sample)

The **Source Table** lists the parameters for up to 64 sources — one source per row. The columns in the table can be resized by clicking and dragging the boundary between headings, and you can change the order of the columns by clicking and dragging a column heading to a new location.

When you click on a source row, its settings appear in the **Source Parameter Section** to the right, enabling you to enter new information, or to modify existing information.

Descriptions of each column are provided below:

- The **ID** column lists the source's number, from 1 to 64. This number represents the button on which the source appears in the **Destination Control Tab**.
- The **Name** column lists a user-specified name for the source, as entered in the **Name** field in the **Source Parameter Section**. In the **Destination Control Tab**, this name appears on the selected source button, and in the top row of a PIP (when the source is assigned to a particular layer).

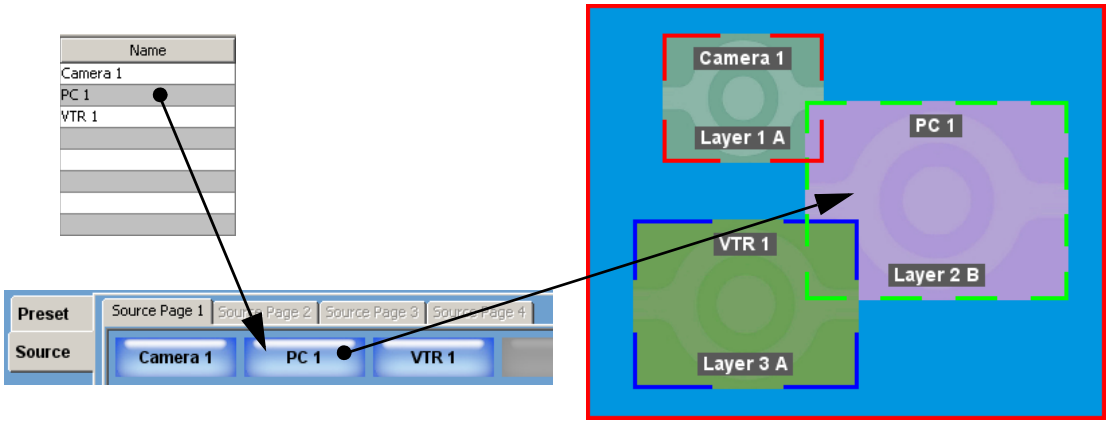


Figure 5-48. Sample source names, buttons and PIPs

- The **Connection Type** column indicates how the selected source is connected to the Processor. This data is entered in the **Connection Type** field in the **Source Parameter Section**.

- The **Connection** column lists the name of the router or processor plus the specific input connector to which the source is physically connected. This data is entered in the **Connection Type** and **Input** fields in the **Source Parameter Section**.
- The **Image** column lists the location of the graphic that represents the source on the Palette.

Source Parameter Section

In the **Sources Tab**, the figure below illustrates the **Source Parameter Section**:

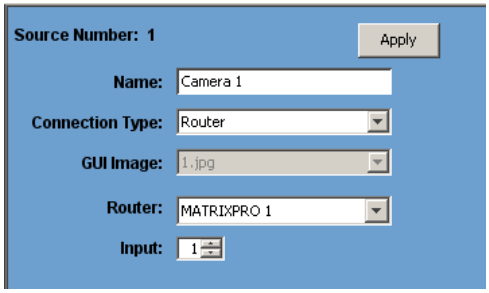


Figure 5-49. Source Parameter Section (sample)

The **Source Parameters Section** enables you to specify the name, connection, router and input for each source. To enter data for a source, first click on the desired source row in the **Source Table**. This action populates the parameter section with all current data — enabling you to enter new information, or to modify existing information.

Descriptions of each field are provided below. Note that the fields change slightly, depending on the connection type.

- Use the **Name** field to enter a custom source name, e.g, PC 1, PC 2, etc. Default names are **Source 1**, **Source 2**, etc. In the **Destination Control Tab**, the name will appear on the selected source button, and in the top row of a PIP (when the source is assigned to a layer).
- Use the **Connection Type** drop-down menu to select how the specific source is connected to the Processor.
  - ~ Select **Router** if the source is connected via router. To complete the connection, you must select a router and an input.
  - ~ Select **Direct Analog** if the source is connected directly to one of the processor's analog inputs. To complete the connection, you must select a processor and an input.
  - ~ Select **Direct DVI** if the source is connected directly to one of the processor's DVI inputs. To complete the connection, you must select a processor and an input.
  - ~ Select **Direct SDI** if the source is connected directly to one of the processor's SD inputs. To complete the connection, you must select a processor and an input.
  - ~ Select **SP2** if the source is connected directly to a ScreenPRO-II input — but if you want all connected ScreenPRO-IIs to switch simultaneously to the same input. To complete the connection, select an input only.
- The **GUI Image** field is currently not implemented.

- If a **Router** was selected in the **Connection Type** field:
  - ~ Use the **Router** drop-down menu to select the router to which the source is connected. All routers on the **Routers Tab** appear in the menu.
  - ~ Use the **Input** field to select the specific input connector (on the router) to which the source is connected.
- If a **Direct Connection** to a Processor (e.g., Direct DVI, Direct SDI, Direct Analog) was selected in the **Connection Type** field:
  - ~ Use the **Processor** drop-down menu to select the Processor to which the source is directly connected. All Processors as listed on the **System Tab** appear in the menu.
  - ~ Use the **Input** field to select the specific physical input connector (on the Processor) to which the source is connected (e.g., 1A, 1B, etc.).
  - ~ When an input is selected, note that the **Mixer Layer** field indicates the layer on which the source appears on the **Destination Control Tabs**. This field is provided for information only.
- If **SP2** was selected in the **Connection Type** field:
  - ~ Use the **Processor** drop-down menu to select the Processor to which the source is directly connected. All Processors as listed on the **System Tab** appear in the menu.
  - ~ Use the **Input** field to select the specific input connector (on the Processor) to which the source is connected (e.g., 1-8, SDI 1, SDI 2).
- If **ALL SP** was selected in the **Connection Type** field:
  - ~ Use the **Input** field to select the specific input (on all ScreenPRO-II processors) to which the source is connected (e.g., 1-8, SDI 1, SDI 2).

- After data is entered (or changed) for *each source,* click **Apply** to send the new information to the ECU.
- After all data is entered, in the **Menu Bar** click **ECU > Save Configuration**.

Stills Tab

The figure below illustrates the **Stills Tab**:

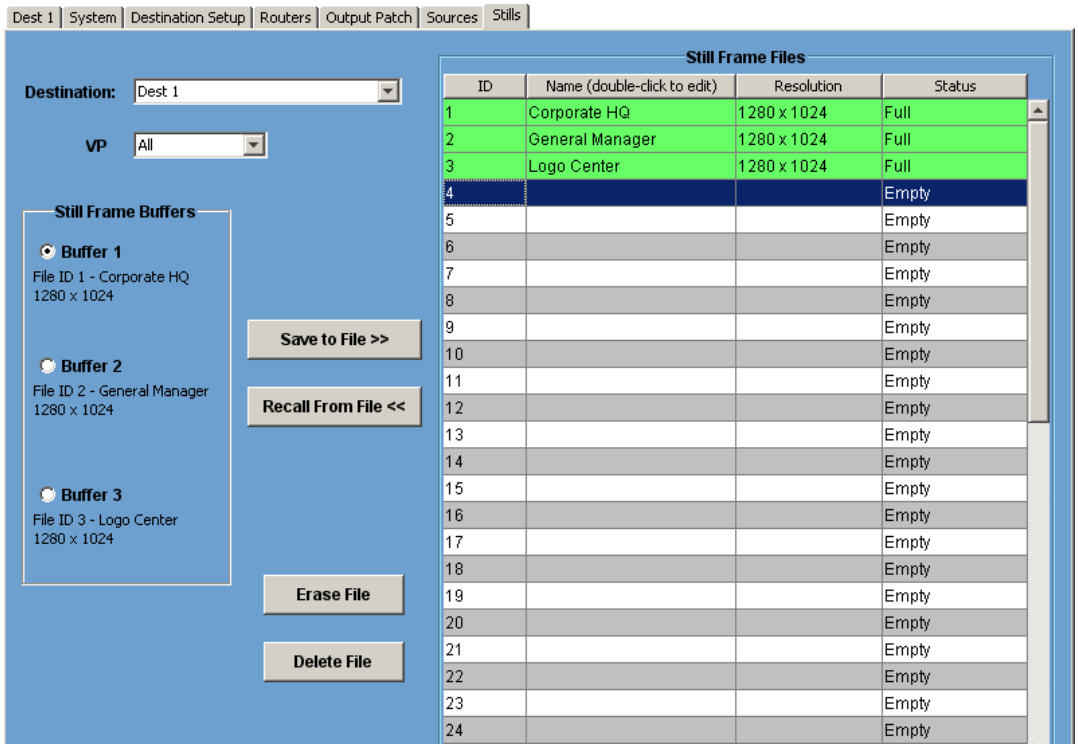


Figure 5-50. Stills Tab (sample)

The **Stills Tab** is used to name, save, recall, erase and delete still frames that have been captured on the **Destination Control Tab**(s) from a selected layer, the current background or the DSK.

The tab is divided in half:

- On the left, the **Still Management Section** provides status for the system's three on-line frame buffers, plus buttons that enable you to save, recall, erase and delete still frame files. Refer to the "**Still Management Section**" heading on page 98 for details.
- On the right, the **Still Frame Table** lists the status of all 100 available still frame files. Refer to the "**Still Frame Table**" heading on page 99 for details.

Still Management Section

The figure below illustrates the **Still Management Section**, which provides status for the system's three on-line frame buffers, plus buttons for saving, recalling, erasing and deleting still frame files.

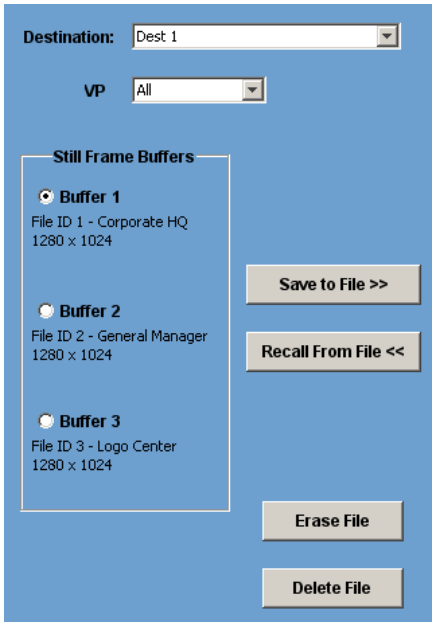


Figure 5-51. Still Management Section (sample)

The following functions are provided:

- Use the **Destination** drop-down menu to select the destination on which you want to save and recall stills. Remember that each destination has a pool of 100 stills that you can manage.
- For widescreen destinations only, use the **VP** drop-down menu to select the individual VP (or all VPs) for which you want to save or recall files. The default selection is "**All**," enabling you to save a still for all video processors, but in certain situations, you may elect to save (or recall) a still for only one of the widescreen destination's processors.
- In the **Still Frame Buffers** section, three mutually exclusive radio buttons are provided the system's on-line frame buffers (**Buffer 1**, **2** and **3**). The "selected" radio button determines the buffer that you can save to a file, or the buffer that you can load up with a still file from memory.

  Below the buffer name, several labels can appear:

  ~ **Empty** indicates that the buffer is empty, and available for use.

  ~ **Unsaved** indicates that a frame has been grabbed on a **Destination Control Tab**, but it has not been saved into non-volatile memory. The resolution at which it was grabbed is listed.

  ~ **File ID** "**n**" (plus an optional name) indicates a frame that has been recalled from memory to the indicated frame buffer. The resolution at which it was stored is listed.

- To the right of the **Still Frame Buffers** section are four buttons, each of which functions in conjunction with the highlighted row in the **Still Frame Table** and the selected radio button. If a row is not highlighted, all four buttons are grayed out:
  - ~ Click **Save to File >>** to save the selected frame buffer to the highlighted file in the **Still Frame Table**. Once saved, the row turns green to indicated that the memory register's status is **Full**.
  - ~ Click **Recall from File <<** to recall the highlighted still frame from memory into the selected frame buffer.
  - ~ Click **Erase File** to *permanently* erase a frame. This is a "destructive" process which takes several seconds. When clicked, the row's green color clears and the memory register's status changes to **Empty**.
  - ~ Click **Delete File** to *mark* a selected frame as deleted — but the **ERASE** function is *still required* for permanent deletion. This is essentially a "quick" delete function. When clicked, the row's green color clears and the memory register's status changes to **Empty**.

Still Frame Table

The **Still Frame Table** lists the status of all 100 still frame files in the library. Please note:

- The columns can be resized by clicking and dragging the boundary between headings
- You can change the order of the columns by clicking and dragging a column heading to a new location.
- You can sort a column by ascending or descending order, simply by clicking a column heading.

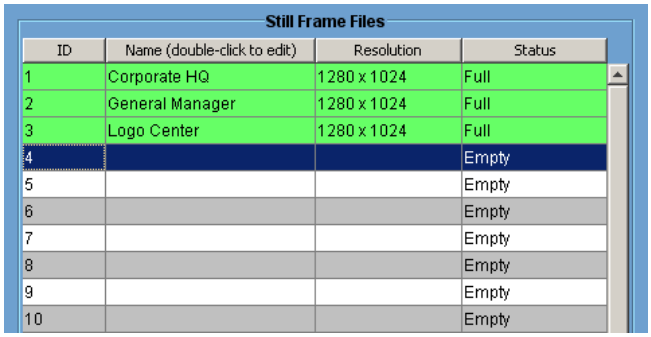


Figure 5-52. Still Frame Section (sample)

Descriptions of each column are provided below.

- The **ID Column** lists the system-assigned file number for each still frame in memory, from 1 to 100.
- The **Name** column lists the user-assigned name for each still in the library. Double click a cell to edit a name.
- The **Resolution** column lists the resolution at which the still was captured.
- The **Status** column provides status for each file (e.g., **Full**, **Empty**).

Destination Control Tabs

The figure below illustrates a **Destination Control Tab**, which enables you to configure the "look" of your presentation, including all sources, PIPs, Keys and backgrounds.

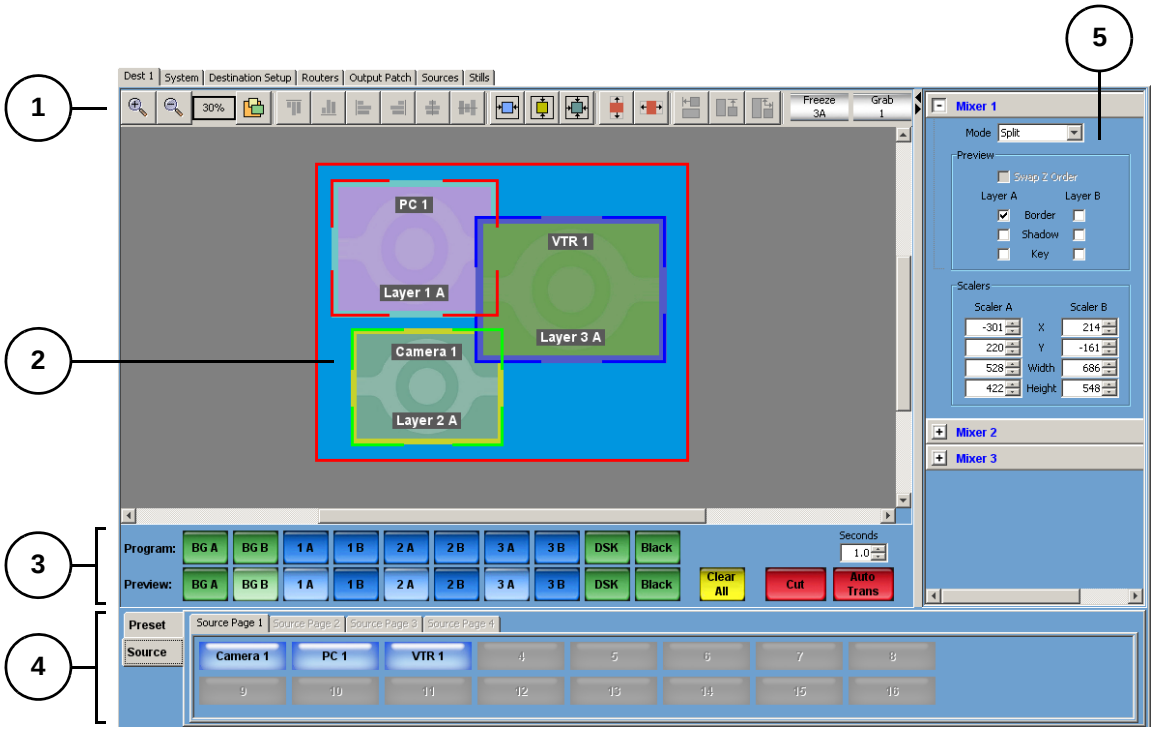


Figure 5-53. Destination Control Tab (sample)

1)	Tool Bar	3)	Layer Control Section	5)	Mixer Control Section
2)	Palette	4)	Source/Preset Section		

Following are descriptions of each **Destination Control Tab** section:

1) Tool Bar

The **Tool Bar** provides an array of icons that are (almost) identical to those on the **View Menu**. Different sets of icons are active (or grayed out) based on which PIP(s) are selected in the Palette. Refer to the "Tool Bar" section on page 101.

2) Palette

The **Palette** is the Encore GC's workspace in which you configure your presentation's exact "look." The solid red border represents the dimensions of the selected destination — whether it is a single screen or a widescreen. Refer to the "Palette" section on page 104 for details.

3) Layer Control Section

The **Layer Control Section** enables you to control the look on both Program and Preview, by enabling or disabling layers. In conjunction with the controls in the **Source/Preset Section**, you can assign sources to PIPs and Keys, and control up to six layers (on up to three mixers). Refer to the "Layer Control Section" heading on page 132 for details.

4) Source/Preset Section

The buttons in the **Source/Preset Section** enable you to select sources for the active PIP(s) or Key(s) on the Palette. In addition, you can also learn, recall and delete Presets within this section. Refer to the "**Source/Preset Section**" heading on page 133 for details.

5) Mixer Control Section

The **Mixer Control Section** provides expandable sections that enable you to configure the specific settings for each available mixer. All sections are identical. Refer to the "**Mixer Control Section**" heading on page 136 for details.

Please note the following important points regarding the **Destination Control Tab**:

- In the row of tabs, one **Destination Control Tab** appears for each destination that is configured on the **Destination Setup Tab**.
- If the system does not detect any valid video processors, no **Destination Control Tabs** will appear.
- You can resize the **Palette** and **Mixer Control Sections** by clicking and dragging the dividing bar. In addition, you can:
  - ~ Click the triangle (pointing left) ◂ to expand the **Mixer Control Section**, and hide the **Palette**.
  - ~ Click the triangle (pointing right) ▸ to expand the **Palette**, and hide the **Mixer Control Section**.

Tool Bar

The figure below illustrates the **Tool Bar**, which enables you to perform various functions to one (or more) selected PIPs or Keys. Tool tip help is provided for each icon.

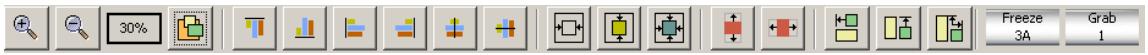


Figure 5-54. Tool Bar

Note

Different sets of icons are active (or grayed out) based on which PIPs or Keys are selected in the Palette. In the sample above, *all* icons are active for discussion purposes only.

Starting from the left, the **View Group** controls your "view" of the Palette:

Figure 5-55. View Group

- Click **Zoom In** to zoom the view closer to PIPs on the Palette.
- Click **Zoom Out** to zoom the view farther away from PIPs.
- The "**percentage**" box indicates the percentage of Palette magnification.
- Click **Show All** to adjust the view to ensure that the entire destination screen is visible on the Palette.

The icons in the **Alignment Group** are only enabled when two or more PIPs or Keys are selected simultaneously (using the standard **SHIFT + click** technique). If only one is selected, the items are grayed out.

Figure 5-56. Alignment Group

- Click **Align Top** to align the top edges of all selected PIPs or Keys.
- Click **Align Bottom** to align the bottom edges of all selected PIPs.
- Click **Align Left** to align the left edges of all selected PIPs.
- Click **Align Right** to align the right edges of all selected PIPs.
- Click **Align Centers Vertically** to align the vertical axes of all selected PIPs.
- Click **Align Centers Horizontally** to align the horizontal axes of all selected PIPs.

Note

In each case, the PIP or Key selected *first* is the master for the selected function. For example, given two PIPs in the Palette, one screen left and one screen right, you can align to either one — provided that you click it first, and then **SHIFT + click** the second PIP.

The icons in the **Centering Group** are only enabled when one (or more) PIPs or Keys are selected in the Palette. If the background is clicked, the items are grayed out. Note that if two or more PIPs are selected, the PIP selected *first* is the master for the selected function.

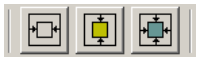


Figure 5-57. Centering Group

- Click **Center Horizontally** to center all selected PIPs horizontally, along the screen's vertical axis. PIPs do not change their vertical position.
- Click **Center Vertically** to center all selected PIPs vertically, along the screen's horizontal axis. PIPs do not change their horizontal position.
- Click **Center in Destination** to center all selected PIPs vertically and horizontally, within the destination's horizontal and vertical axes.

The icons in the **Full Screen Group** are only enabled when one (or more) PIPs are selected in the Palette. If the background is clicked, the items are grayed out.

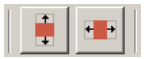


Figure 5-58. Full Screen Group

- Click **Full Screen Vertical** to take the selected PIP(s) to full screen, using the source's height as the guide. If borders are on, they will be taken into account so that they are visible.
- Click **Full Screen Horizontal** to take the selected PIP(s) to full screen, using the source's width as the guide. If borders are on, they will be taken into account.

The icons in the **Similarity Group** are only enabled when two (or more) PIPs are selected in the Palette. If the background is clicked, or if only one PIP is selected, the items are grayed out. Note that if two or more PIPs are selected, the PIP selected *first* is the master for the selected function.

Figure 5-59. Similarity Group

- Click **Make Same Width** to make the second (and subsequent) PIPs that you select the same width as the first selected PIP.
- Click **Make Same Height** to make the second (and subsequent) PIPs that you select the same height as the first selected PIP.
- Click **Make Same Size** to make the second (and subsequent) PIPs that you select the same size as the first selected PIP.

At the far right of the **Tool Bar**, two special buttons are provided:

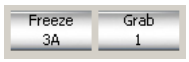


Figure 5-60. Freeze and Grab buttons

- Click a PIP, Key, or click the background layer in the Palette, then click **Freeze** to freeze the layer. The button's label identifies the selected PIP, Key, BG or DSK layer (e.g., **Freeze 1A**), and changes to **Unfreeze** when clicked again (e.g., **Unfreeze 1A**).
- Click **Grab** (**1**, **2** or **3**) to capture the selected layer into the indicated frame buffer. To select a different frame buffer, right-click the **Grab** button and choose the desired buffer.

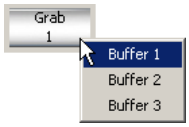


Figure 5-61. Grab Pop-up Menu

Once grabbed, the frame is available for naming and filing on the **Stills Tab**.

Note

All frame grabs are *full screen* captures. A frame can be captured from **BG A**, **BG B**, the **DSK**, or any of the scaled inputs (layers). When you capture a layer, you will capture the selected PIP with no borders, and with black as the background. In Chapter 7, refer to the "**Working with Frame Grabs**" section on page 184 for details.

Palette

The figure below illustrates a sample Palette:

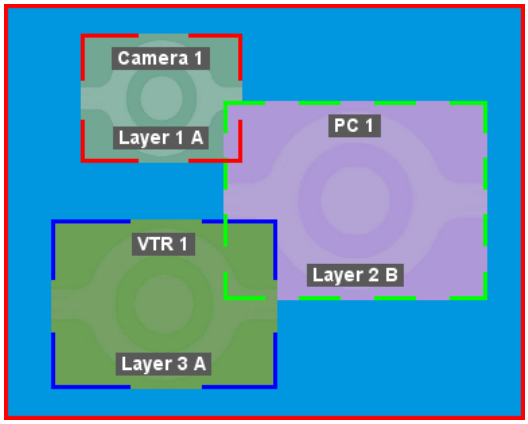


Figure 5-62. Palette (sample)

The **Palette** is the workspace in which you configure your presentation's exact "look." If you have your Program and Preview monitors properly connected to your Video Processors, you'll see that the still images on the Palette precisely represent the live images on the system's true video outputs.

The following topics are discussed in this section:

Palette Attributes

The Palette has the following important attributes:

- The solid red border represents the dimensions of the selected destination (whether it is a single screen or a widescreen), as configured on the **Destination Tab** in the **Output Settings Section**. The area outside the red border is also an active area, because PIPs and key can be positioned on or off screen.
- The various still images on the Palette represent scaled PIPs and Keys. These images represent layers, and each is controlled in the **Layer Control Section**.
- Behind the PIPs and Keys is the full screen background layer. The Encore GC controls up to two backgrounds, only one of which is displayed at a time, and both backgrounds are controlled in the **Layer Control Section**.
- If your configuration has multiple destinations and multiple **Destination Control Tabs**, each destination has its own Palette.

Palette Views

There are three ways to view the Palette, as selected in the **Menu Bar**:

- Click **View > Preview** to show only the destination's preview output in the Palette (for the selected destination).
- Click **View > Program** to view only the destination's program output in the Palette.
- Click **View > Preview and Program** to create a split screen in the Palette, with the program output above and the preview output below.

PIP and Key Behavior

When you enable a layer in the **Layer Control Section** and manipulate that layer in the Palette, its size, position, crop, border and shadow represent the layer's behavior on the Program and Preview outputs.

Default Images and Labels

When you assign a source to a layer, the Encore GC places an image inside the PIP or key layer. Each PIP or key is labeled with its layer and scaler location (e.g., **Layer 1A**), and with its source name (e.g., **Camera 1**), as assigned on the **Sources Tab**. If a layer does not have a source assigned, the label "**Source Unknown**" appears.

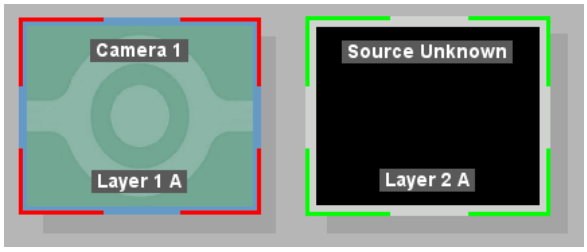


Figure 5-63. Layer labels

Raster Boxes

In the Palette (and on your Preview output), each PIP or Key is surrounded by a border called a **Raster Box**. This border helps identify the PIP or Key's mixer and layer.

- The PIP or Key with a "corner" style raster box is **Layer A**.
- The PIP or Key with a "dashed" raster box is **Layer B**.

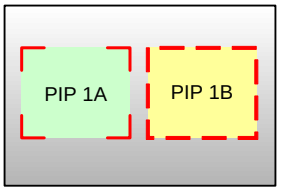


Figure 5-64. Raster Box styles

- The "blinking" raster box is always the one enabled for modification.
- If two or more PIPs or Keys are selected (using the standard **Shift + Click** method), you can modify them simultaneously.

- The borders of raster boxes that are *underneath* other layers (such as another PIP) are still visible on Preview and in the Palette.

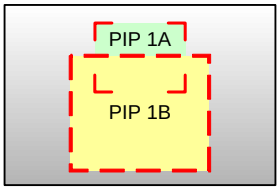


Figure 5-65. Raster Box visibility

Raster box color assignments are as follows:

- Layers 1A and 1B: **Red**
- Layers 2A and 2B: **Green**
- Layers 3A and 3B: **Blue**

Palette Cursors

The following four types of cursors are available on the Palette:

- The **Selection Cursor** is a single arrow that appears when you mouse over the background layer, enabling you to select the layer.

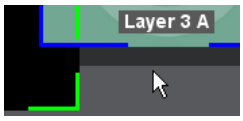


Figure 5-66. Background Cursor

- The **PIP Cursor** is a four-headed arrow that appears when you mouse over a PIP or a Key layer, enabling you to move the layer by clicking and dragging.

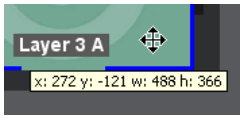


Figure 5-67. PIP Cursor

Note

When you mouse over a PIP or a key, a tool-tip message shows the layer's size and position.

- The **Edge Cursor** is a two-headed horizontal or vertical arrow that appears when you mouse over the edge of a PIP or a Key. This enables you to resize the layer by clicking and dragging (if **Lock Aspect Ratio** is on), or change the layer's aspect ratio (if **Lock Aspect Ratio** is off).

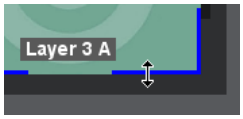


Figure 5-68. Edge Cursor

- The **Crop Cursor** is a small cross that appears when you mouse over the edge of a PIP or a Key when **Crop Mode** is enabled. This allows you to crop the selected edge of a PIP or Key by clicking and dragging.

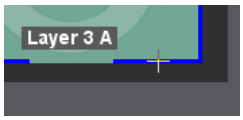


Figure 5-69. Crop Cursor

PIP and Key Positioning

On the Palette, the area surrounding the red border is an active area. PIPs and Keys can be positioned fully on, partially on, or fully off of the Palette, as shown below:

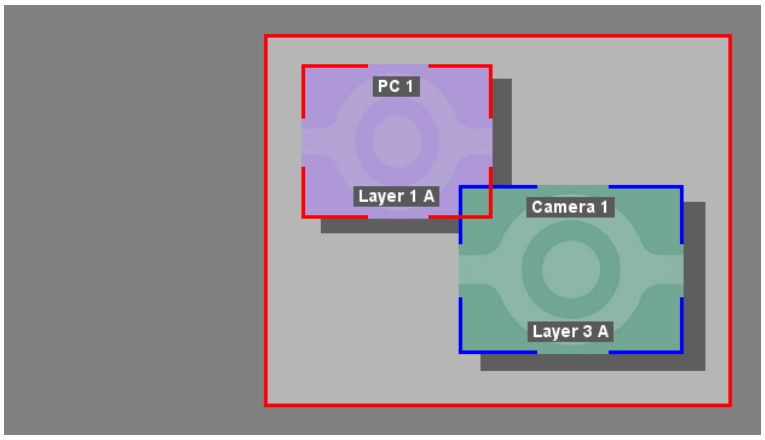


Figure 5-70. Two PIPs fully on screen (sample)

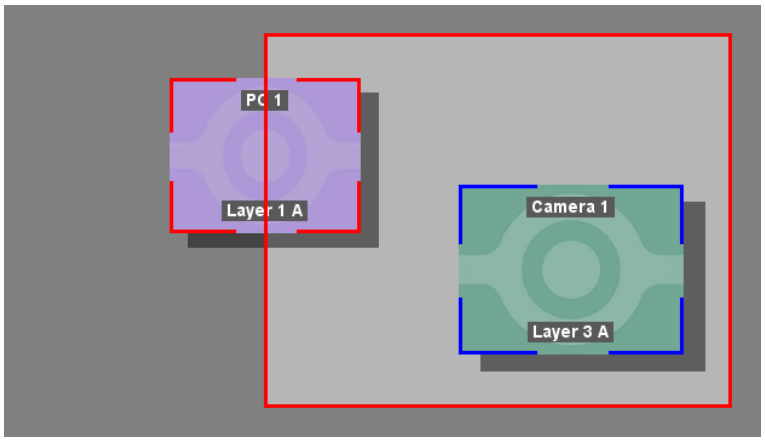


Figure 5-71. One PIP partially off screen (sample)

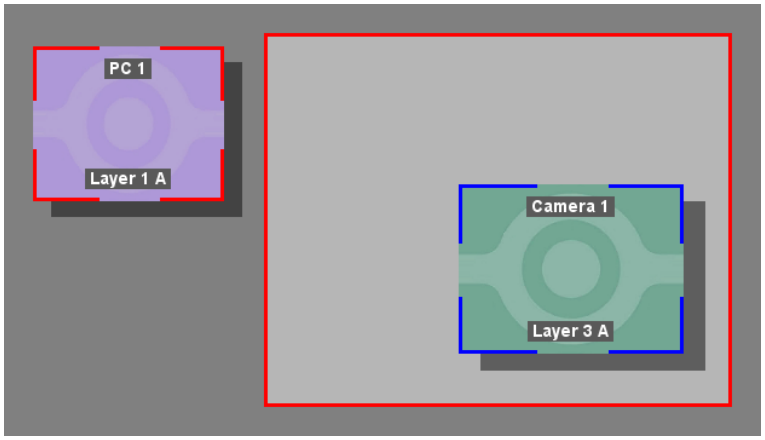


Figure 5-72. One PIP fully off screen (sample)

Palette Pop-ups

In the Palette, right-clicking PIPs, Keys and the background layer provides access to two different pop-up menus:

- **Background/DSK Pop-Up Menu**
- **PIP/Key Pop-Up Menu**

Background/DSK Pop-Up Menu

Right-click on the background layer to display the **Background/DSK Pop-up Menu**:

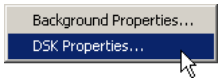


Figure 5-73. Background/DSK Pop-up Menu

- Click **Background Properties** to display the **Background Properties Dialog**. Background A or B must be enabled. Refer to the "**Background Properties Dialog**" section on page 118 for details.
- Click **DSK Properties** to display the **DSK Properties Dialog**. The DSK must be enabled. Refer to the "**DSK Properties Dialog**" section on page 124 for details.

PIP/Key Pop-Up Menu

Right-click on a PIP or a Key to display the **PIP/Key Pop-up Menu**:

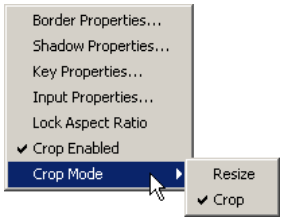


Figure 5-74. PIP/Key Pop-up Menu

- Click **Border Properties** to display the **Border Properties Dialog**. Refer to the "**Border Properties Dialog**" section on page 111 for details.

- Click **Shadow Properties** to display the **Shadow Properties Dialog**. Refer to the "**Shadow Properties Dialog**" section on page 112 for details.
- Click **Key Properties** to display the **Key Properties Dialog**. Refer to the "**Key Properties Dialog**" section on page 113 for details.
- Click **Input Properties** to display the **Input Properties Dialog**. Refer to the "**Input Properties Dialog**" section on page 114 for details.
- Check (or uncheck) **Lock Aspect Ratio** to lock or unlock the PIP's aspect ratio. The checkmark indicates "locked." When locked, a PIP's H and V size tracks proportionally. When unlocked, H and V size can be adjusted individually.
- Check **Crop Enabled** to crop the edges of a PIP. When enabled, several functions are available:
  - ~ Enable **Crop**. Place your cursor over any edge of the PIP, and then click and drag to crop the image.
  - ~ In **Crop** mode, place your cursor over the *inside* of the image, and then click and drag to move the image around — inside the cropped region.
  - ~ In **Crop** mode, place your cursor over the *inside* of the image hold down **CTRL**, and then click and drag to move the cropped region around the Palette, leaving the image in place.
  - ~ Enable **Resize** to move the cropped image around the Palette, or resize the cropped image by clicking and dragging an edge.

Note

If you un-check **Crop Enabled**, the image returns to full size, and all cropped edges are cleared.

Palette Dialogs

Six different dialogs can be accessed within the Palette, or by clicking **Layers** in the **Menu Bar**. Complete descriptions are provided in the following sections.

- **Border Properties Dialog**
- **Shadow Properties Dialog**
- **Key Properties Dialog**
- **Input Properties Dialog**
- **Background Properties Dialog**
- **DSK Properties Dialog**

Please note the following important points regarding the behavior of the Palette dialogs:

- Multiple dialogs can be open simultaneously.
- With a dialog open (e.g., **Border Properties**), you can click on different layers in the Palette, and the data within the dialog updates according to the selected layer. This enables you to easily compare settings between layers.
- An error message (e.g., **No Source Selected**, **No PIP Selected**) appears in place of the dialog's adjustments and controls if the proper layer or background is not selected in the Palette.

Important

If the selected source or background layer is already on Program, parameters can not be adjusted (even if a dialog is already open). To adjust the layer, clear it in the normal manner, after which full adjustment capabilities are available once the layer is on Preview.

Border Properties Dialog

The figure below illustrates the **Border Properties Dialog**:

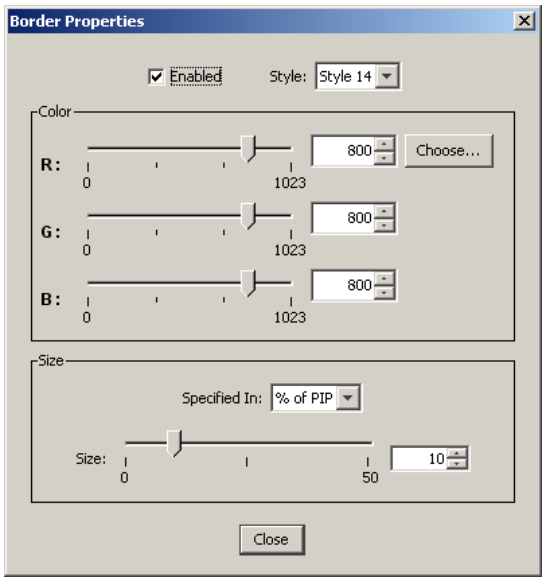


Figure 5-75. Border Properties Dialog (sample)

The **Border Properties Dialog** enables you to add a border to a PIP, and adjust its shape, style and color as desired. The following functions are provided:

- **Enabled** — use the check box to enable or disable the border.
- **Style** — select one of 20 border styles from the drop-down menu, including single color and dual color with various combinations of soft edge.
- In the **Color** section, use the sliders and spinners to adjust the border's **R**, **G** and **B** attributes. The border color changes in the Palette as you adjust.
- Click the **Choose** button to display the **Choose Color Dialog**. Click the desired border color, and note that each selection is added to the "**Recent**" section. Click **OK** to accept the selected color.

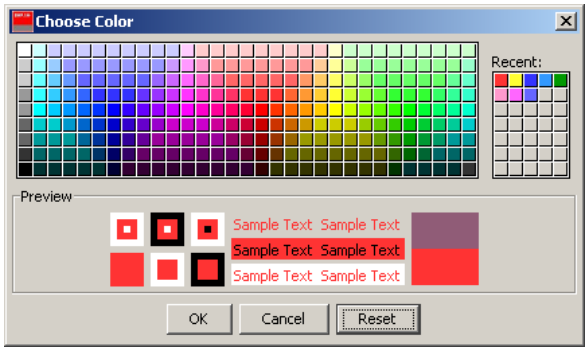


Figure 5-76. Choose Color Dialog (sample)

- **Specified In** — use the drop-down menu to select the method by which you want to specify the border size, either as a percentage of the PIP size or in pixels.
- **Size** — adjust's the border size using the slider and spinner. Note that if "**% of PIP**" is selected and you switch to "**Pixels**," the system auto converts.

Shadow Properties Dialog

The figure below illustrates the **Shadow Properties Dialog**:

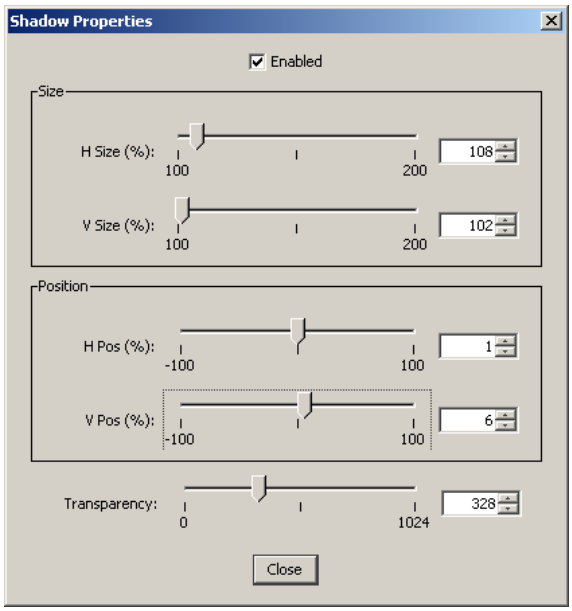


Figure 5-77. Shadow Properties Dialog (sample)

The **Shadow Properties Dialog** enables you place a shadow behind a PIP. The following functions are provided:

- **Enabled** — use the check box to enable or disable the shadow.
- In the **Size** section, use the sliders and spinners to adjust the shadow's horizontal and vertical size as a percentage of the PIP's size.
- In the **Position** section, use the sliders and spinners to adjust the shadow's horizontal and vertical position as a percentage of the PIP's size.
- Use the **Transparency** slider and spinner to adjust transparency, from **0** (transparent) to **1024** (opaque).

Key Properties Dialog

The figure below illustrates the **Key Properties Dialog**:

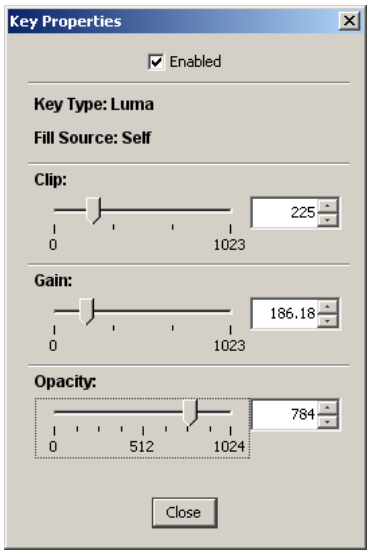


Figure 5-78. Key Properties Dialog (sample)

The **Key Properties Dialog** provides the tools to adjust the active key. The following functions are available:

- **Enabled** — use the check box to enable or disable the key. If the layer is currently a PIP and you enable the check box, it changes to a key, and the small red label "**Key**" appears on the layer. Similarly, if you disable the check box, the layer returns to a PIP, and its previous border and shadow properties are restored.
- **Key Type** — the key type is fixed as **Luma** (luminance). A Luma key is one in which the hole-cutting information is derived from the luminance (brightness) level of the key source.
- **Fill Source** — the fill source (the video that fills the key hole) is fixed as **Self**. The key source is filled with the key source video itself, for example, the video from a character generator or logo.
- **Clip** — adjusts the threshold of the video that "cuts" into the background image. A hole will be cut into the background anywhere that foreground luminance is greater than the clip level. The hole is then filled with the **Fill Source**.
  - ~ **Adjustment range**: 0 to 1023
- **Gain** — adjusts the sensitivity of the keyer, enabling you to change the sharpness of the keyed image. Gain only affects the key hole, as set by the clip.
  - ~ **Adjustment range**: 0 to 1023.99
- **Opacity** — enables you to adjust the opacity of the keyed image, from fully opaque to fully transparent.
  - ~ **Adjustment range**: 0 to 1024

Input Properties Dialog

The figure below illustrates the upper and lower sections of the **Input Properties Dialog**:

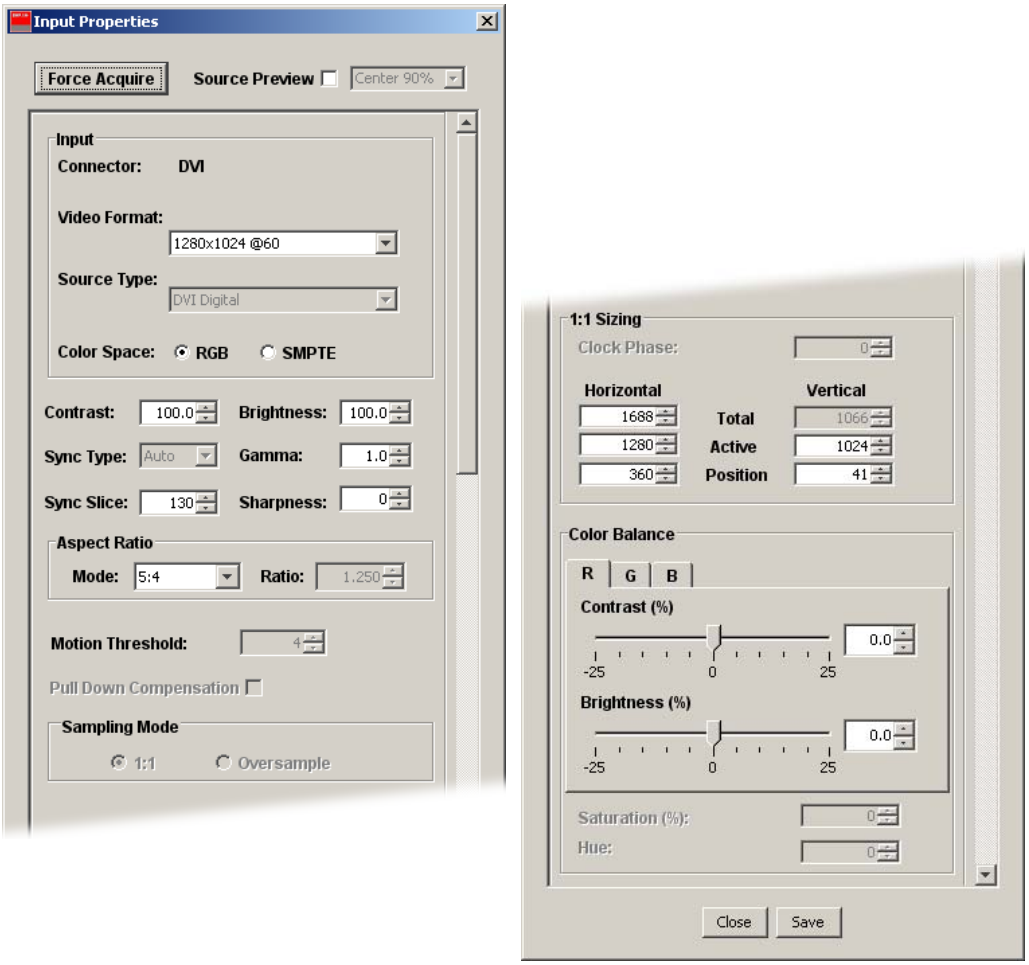


Figure 5-79. Input Properties Dialog (sample)

The **Input Properties Dialog** is used to adjust all parameters for the source input currently displayed in the selected layer. The dialog enables you to set all configuration options for the selected input. Note that the menu tracks the input selected in the Palette.

Important

Different combinations of functions are enabled or grayed out, depending on the selected connector, format and color space.

The following functions are provided for the selected input:

- Click **Force Acquire** to force the system to perform the optimum image setup. Use this feature as a good starting point for setup.

Note

The **Force Acquire** function only works on the selected Input Connector. For the selected input, be sure to select the correct connector type on the **Sources Tab** before issuing the **Force Acquire** command.

- Check **Source Preview** to quickly isolate the selected layer for sizing and adjustment purposes — in Preview only. When enabled, the border and shadow are turned off, and the PIP (or Key) is re-sized in the center of the screen. When disabled, the layer is restored.

  Please note:

  - When **Source Preview** is enabled, use the drop-down menu to size the image to 90% of the output resolution or to 1:1.
  - If the system is in wide screen mode, the layer is centered in screen 1.
  - All other layers are hidden.
  - The background switches to a neutral gray.
  - While **Source Preview** is enabled, you can only perform input adjustments and source selections. All other layer, destination and output functions are disabled.

- **Input Connector** — indicates the physical connector to which the input is connected on the M/E, either **HD-15**, **DVI** or **BNC**. Note that the connection type is determined by the selection on the **Sources Tab**.
- **Source Type** — use the drop-down menu to set the type of input connected to the M/E. Available choices *change* depending on the selected **Video Format**, and the choice also affects the **Color Space** selection. Input types include:
  - RGB
  - YPbPr
  - Composite/S-Vid
  - HD SDI
  - SDI
  - DVI Digital
- **Video Format** — this drop-down menu performs two functions:
  - The menu displays the resolution that is automatically determined by the **Force Acquire** function.
  - The menu enables you to manually set the resolution of the source.
  - If the "**Adjusted**" label appears, it indicates that the sizing has been changed by the user.

  In Appendix A, refer to the "**Input and Output Resolutions**" section on page 194 for details on all available resolutions. Please note:

  - Manually selecting a video format automatically defaults the **Color Space**. In some cases, the **Color Space** cannot be changed due to the selected resolution.
  - The choice of available formats varies depending on the selected connector. For example, when BNC is selected, only standard definition and high definition resolutions can be selected.
- **Color Space** — use the two radio buttons to set the input's color space, either **SMPTE** or **RGB**. The system automatically sets the Color Space based on the selected **Video Format** and/or **Input Connector** — but in some cases, color space can be changed.
- **Contrast** — use the spinner to set the input's contrast.
- **Brightness** — use the spinner to set the input's brightness.

- **Input Sync Type** — if enabled, use the drop-down menu to set the type of sync used by the source. Choices include **H/V**, **CSync** (composite sync). **SOG** (sync on green) and **Auto**.
- **Gamma** — use the spinner to set the input gamma, enabling you to match the source's gamma.
  - ~ **Adjustment range**: 1.0 to 3.0
- **Sync Slice** — use the spinner to select the sync comparator threshold for RGsB (RGB with Sync on Green) or YP_bP_r analog component video sources.
  - ~ **Adjustment range**: from 20mV to 280mV, adjustable in steps of 10mV. The default value is 160mV.

  When the VP detects Macrovision® copy protection on the incoming YP_bP_r NTSC/PAL video, the Sync Slice value is repositioned to 60mV to account for the reduced amplitude sync pulse.

  Please note:
  - ~ The default **Sync Slice** level has been optimized for virtually all sources that will be encountered and should rarely, if ever, require adjustment.
  - ~ You can adjust the level to improve sync detection and synchronization in cases of extremely noisy RGsB or YP_bP_r signals.
- **Sharpness** — use the spinner to set the input's sharpness.
  - ~ **Adjustment range**: -10 (very smooth) to 10 (very sharp).
- The controls in the **Aspect Ratio** section enable you to change the image's aspect ratio to pre-defined configurations, or a "custom" configuration.
  - ~ **Mode** — use the drop-down menu to select the desired aspect ratio, either **16:9**, **5:4**, **4:3**, **3:2**, **1:1** or **Custom**.
  - ~ **Ratio** — when **Custom** is selected in the **Mode** field, use the spinner to select a custom aspect ratio. The field is grayed out when a pre-defined ratio is selected.
- **Motion Threshold** — if enabled, use the spinner to increase or decrease the de-interlacer's sensitivity towards moving content. The adjustment range is **0** to **15**:
  - ~ **0** — the de-interlacer has the maximum sensitivity to motion.
  - ~ **15** — the de-interlacer has the least amount of sensitivity to motion. Moving pixels will be treated as "static."
  - ~ **4** (default) — the optimum value for a wide range of motion conditions.

  For example, if you detect "popping" or "flickering" noise in the image, particularly along sharp edges such as text, *increase* the motion threshold value to effectively *decrease* motion sensitivity. This will help to alleviate the pixel flickering.
- **Pulldown Compensation** — This function is applicable only for standard video (component, s-video, composite) inputs. The default mode is off (un-checked). The feature should be enabled to process video derived from film material.
- **Sampling Mode** — the two radio buttons set the sampling for the selected input, and also change the functions available in the "**Sizing**" section directly below.
  - ~ When **1:1** is selected, the system provides pixel-for-pixel sampling, and generally better image quality.
  - ~ When **Oversample** is selected, the system performs multiple samples for every pixel, with a resulting "softer" image.

- **1:1 Sizing** — When **1:1** is selected in the **Sampling Mode** section, the "**Sizing**" section provides the following controls:

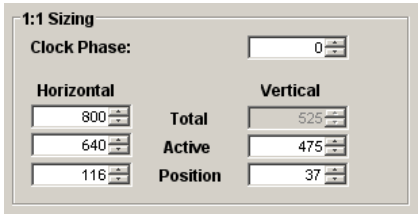


Figure 5-80. 1:1 sizing controls (sample)

  ~ **Clock Phase** — sets the system's A/D converter, allowing you to select where pixels are sampled (ideally, on the pixel's peak).

    - **Adjustment range**: -16 to 15

    For best visual results when adjusting high-resolution sources, project a burst test pattern and adjust the sampling for the minimum noise.

  ~ **Horizontal Total** — sets the total pixel count per line.

Note

This field is not adjustable for digital sources, including digital signals on the DVI and BNC input connectors. This field is not adjustable for NTSC and PAL sources.

  ~ **Horizontal Active** — sets the width of the active area.

  ~ **Horizontal Position** — sets the start of the active area's horizontal offset from H sync.

  ~ **Vertical Total** — fixed value which cannot be adjusted.

  ~ **Vertical Active** — sets the number of vertical lines in the image.

  ~ **Vertical Position** — sets the start of the active area's vertical offset from V sync.

- **Oversample Sizing** — When **Oversample** is selected in the **Sampling Mode** section, the "**Sizing**" section provides the following four controls:

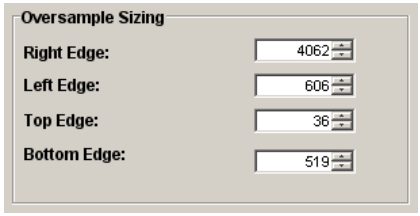


Figure 5-81. Oversample sizing controls (sample)

  Select and adjust **Right Edge**, **Left Edge**, **Top Edge** or **Bottom Edge** as required, to fit the image precisely in its raster box.

- The functions in the **Color Balance** section change depending on the selected **Source Type**.

  ~ When **RGB** sources are selected, the section provides tabs for **R**, **G** and **B** — each of which has sliders and spinners for contrast and brightness.

    - **Adjustment range**: -25% to +25%

- When **Composite**, **S-Video** or **YP_bP_r** sources are selected, the **Saturation** and **Hue** controls are enabled:
  - **Adjustment range** (**Saturation**): 75% to 125%
  - **Adjustment range** (**Hue**): -90.0 to 90.0, in degrees

- **Save** — When all parameters have been entered, click **Save** to save the input settings. Using an automatic "copy down" function, the saved file will be transferred to all active destinations.

Important | Always click **Save** after you're changed an input's settings.

Background Properties Dialog

The **Background Properties Dialog** enables you to select and define background sources **A** and **B**. For each background, you can choose between a solid matte color, a DVI input, an analog input, or a captured frame grab. The dialog changes depending on the selected background "type."

The following topics are discussed in this section:

Background and DSK Connections

Please note the following important points regarding inputs, sources and physical connections for the background and the DSK:

- On the Encore Video Processor's rear panel, there are two **DVI-I** input connectors (**A** and **B**) for each M/E, and each contains both a digital and an analog input. Depending upon your application (and the location of the M/E), you can use the input for a scaled or an unscaled source:
- The "digital" side of the connector accepts connections from a standard DVI output or digital graphic router. This side of the input can be used as both a scaled input source or as an unscaled **Background** or **DSK** source.
- Using an optional breakout cable, the "analog" side of the connector accepts connections from a VGA output or VGA router. This side is designed for inputting the system's unscaled sources — **Background** and **DSK**.
  - The lowest priority M/E in your system must be used for inputting the **Background** source.
  - The highest priority M/E in your system must be used for inputting the **DSK** source.

Physical connection rules are as follows:

- In a **3 M/E** system:
  - **M/E 1** connectors are the highest priority, and they appear as **Layer 3** on the Encore GC. The DSK will be connected to the M/E 1 board.
  - **M/E 2** connectors have middle priority. They appear as **Layer 2**.

- ~ **M/E 3** connectors are the lowest priority. They appear as **Layer 1**. Background sources will be connected to the M/E 3 board.

- In a **2 M/E** system:
  - ~ **M/E 1** connectors are the highest priority, and appear as **Layer 2**. The DSK will be connected to the M/E 1 board.
  - ~ **M/E 2** connectors are the lowest priority, and appear as **Layer 1**. Background sources will be connected to the M/E 2 board.
  - ~ **M/E 3** connectors are ***not installed***.
- In a **1 M/E** system:
  - ~ **M/E 1** connector priorities are relative to the connectors being used:
    - The **DVI Input A** or **Analog Input A** connector could be set up as a Background input (lowest priority).
    - The **DVI Input B** or **Analog Input B** connector could be setup as a DSK input (highest priority).

    This leaves the other connectors to fall in between Background and DSK. The rule stating that "**A**" connectors are lower in priority than "**B**" connectors still holds.
  - ~ **M/E 2** and **3** connectors are ***not installed***.

Shared Background Properties Dialog Functions

The figure below illustrates the top section of the **Background Properties Dialog**, which is shared between all selected background types:

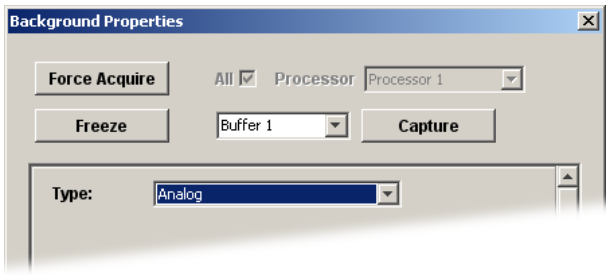


Figure 5-82. Background Properties Dialog - shared section

- **Force Acquire** — For DVI and Analog background types, click to automatically detect the input signal resolution and acquire the selected input. The button is grayed out for Matte and Still Frame background types.
- **All** — For single screen destinations, this check box and the **Processor** drop-down menu are both grayed out. In widescreen configurations, different backgrounds can be assigned to different video processors, thus the **All** check box and the **Processor** drop-down menu are active.
  - ~ Enable the **All** check box to create backgrounds across all video processors.
  - ~ Disable the **All** check box to create individual backgrounds for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to create a background.
- **Freeze** — For DVI and Analog background types, click to freeze the selected full screen input signal, in preparation for capturing it into a frame buffer. The button is grayed out for Matte and Still Frame background types.

- **Capture** — For DVI and Analog background types, click to capture the input into the selected frame buffer, as chosen with the **Frame Buffer** drop-down menu. The **Capture** button is grayed out for Matte and Still Frame types.

Note

All frame grabs are *full screen* captures. In Chapter 7, refer to the "**Working with Frame Grabs**" section on page 184 for details.

- **Type** — use the pull-down menu to select the desired background type:
  - ~ Select **MATTE** to use a solid color as the background. Refer to the "**Matte Background Properties**" section on page 120 for details.
  - ~ Select **DVI** to use a digital graphic from a computer (or other DVI source) as the background. Refer to the "**DVI Background Properties**" section on page 121 for details.
  - ~ Select **Analog** to use an analog graphic from a computer (or other analog source) as the background. Refer to the "**Analog Background Properties**" section on page 122 for details.
  - ~ Select **Still Frame Buffer 1**, **2** or **3** to use a frame grab as the background. Refer to the "**Still Frame Background Properties**" section on page 123 for details.

Matte Background Properties

The figure below illustrates the **Background Properties Dialog** with Matte type selected.

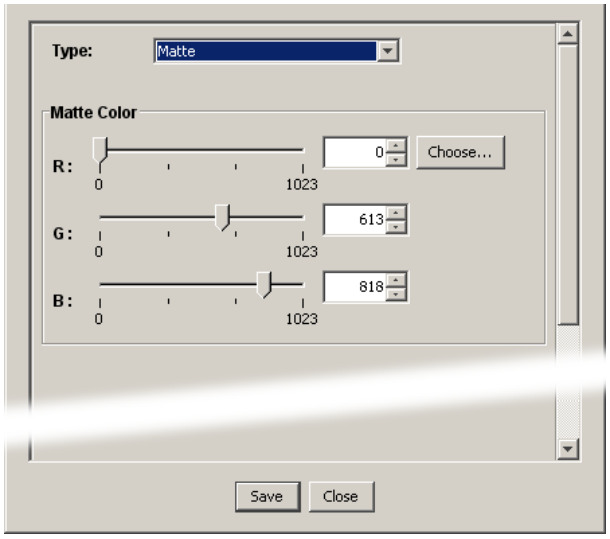


Figure 5-83. Background Properties Dialog - Matte Type (sample)

Use the **Matte Color** sliders and spinners to create a solid background matte color to use behind your PIPs and Keys. The system supports two separate matte colors — one for **Background A** and one for **Background B**.

- For **R**, **G** and **B**, adjust each component from 0 to 1023.
- Click the **Choose** button to display the **Choose Color Dialog**. Click the desired background color, and note that each selection is added to the "**Recent**" section. Click **OK** to accept.
- Click **Save** to save the selected background configuration.

DVI Background Properties

The figure below illustrates the **Background Properties Dialog** with DVI type selected.

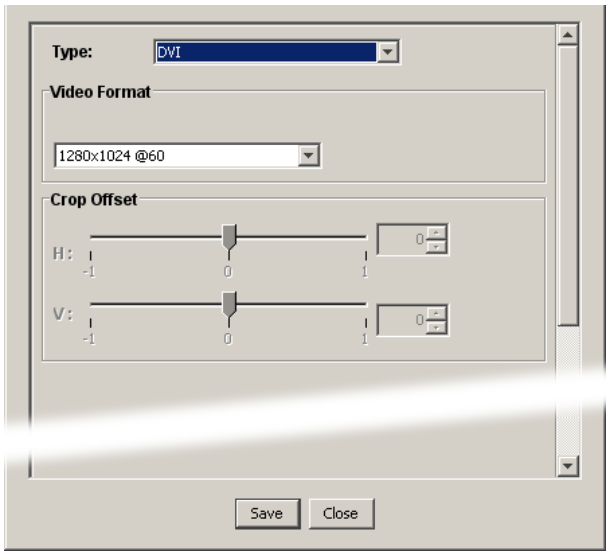


Figure 5-84. Background Properties Dialog - DVI Type (sample)

The following functions are provided for a **DVI** background source:

- **Video Format** — this section performs two functions:
  - ~ The field displays the resolution that is automatically determined by the **Force Acquire** function.
  - ~ Use the pull-down menu to manually set the resolution of the incoming DVI source.
- For the two settings in the **Crop Offset** section:
  - ~ If the source's input resolution matches the output resolution, or if output resolution is *larger* than input resolution, **Crop** settings are grayed out.
  - ~ If input data is smaller than the output resolution, the area around the active data is set to black, and input data is centered in the screen.
  - ~ If the source's input resolution is larger than the output resolution, the **H Crop Offset** and **V Crop Offset** sliders and spinners can be used to choose which portion of the background you want to display.
- Click **Save** to save the selected background input configuration.

Analog Background Properties

The figure below illustrates the upper and lower sections of the **Background Properties Dialog** — with Analog type selected.

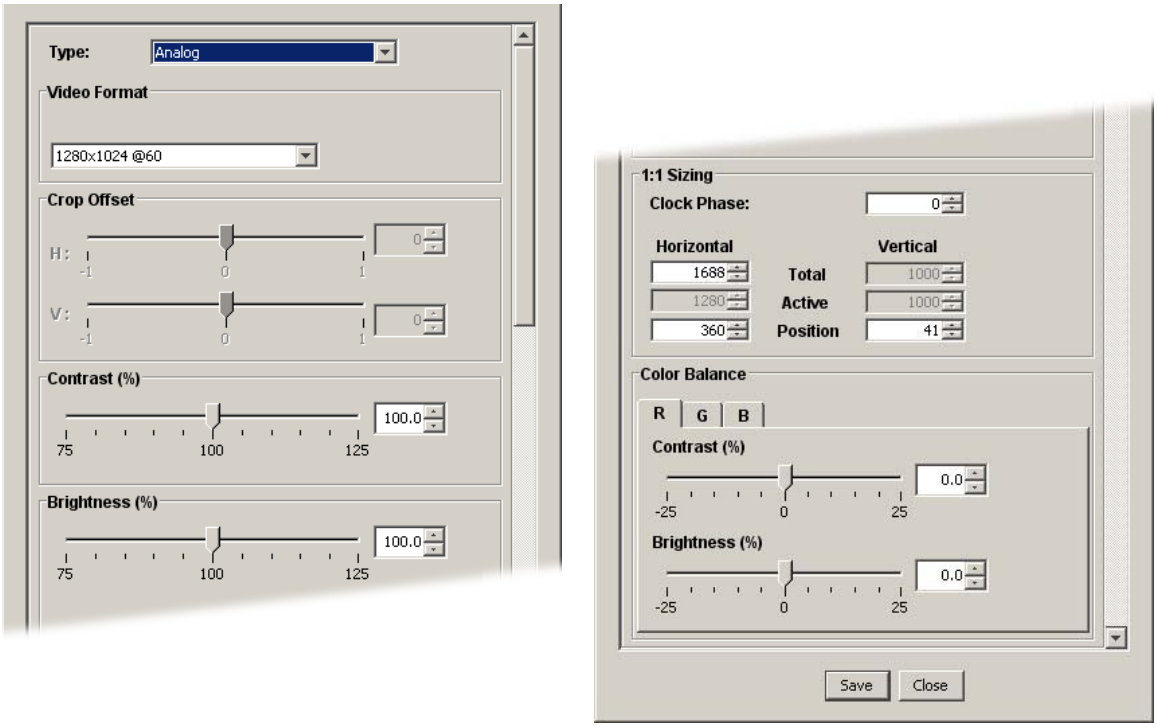


Figure 5-85. Background Properties Dialog - Analog Type (sample)

The following functions are provided for an **Analog** background source:

- **Video Format** — this section performs two functions:
  - ~ The drop-down menu displays the resolution that is automatically determined by the **Force Acquire** function.
  - ~ Use the drop-down menu to manually set the resolution of the incoming analog source.
- For the two settings in the **Crop Offset** section:
  - ~ If the source's input resolution matches the output resolution, or if output resolution is *larger* than input resolution, **Crop** settings are grayed out.
  - ~ If input data is smaller than the output resolution, the area around the active data is set to black, and input data is centered in the screen.
  - ~ If the source's input resolution is larger than the output resolution, the **H Crop Offset** and **V Crop Offset** sliders and spinners can be used to choose which portion of the background you want to display.
- **Contrast** — use the slider and spinner to set the background's contrast.
  - ~ **Adjustment range**: 75% to 125%
- **Brightness** — use the slider and spinner to set the background's brightness.
  - ~ **Adjustment range**: 75% to 125%

- **1:1 Sizing** — This section provides the following controls:
  - ~ **Clock Phase** — sets the system's A/D converter, allowing you to select where pixels are sampled (ideally, on the pixel's peak).
    - **Adjustment range**: -16 to 15

    For best visual results when adjusting high-resolution sources, project a burst test pattern and adjust the sampling for the minimum noise.
  - ~ **Horizontal Total** — sets the total pixel count per line.
  - ~ **Horizontal Active** — sets the width of the active area.
  - ~ **Horizontal Position** — sets the start of the active area's horizontal offset from H sync.
  - ~ **Vertical Total** — fixed value which cannot be adjusted.
  - ~ **Vertical Active** — sets the number of vertical lines in the image.
  - ~ **Vertical Position** — sets the start of the active area's vertical offset from V sync.
- The **Color Balance** section provides tabs for **R**, **G** and **B** — each of which has sliders and spinners for contrast and brightness.
    - **Adjustment range**: -25% to +25%
- **Save** — Click **Save** to save the input in its designated input file.

Still Frame Background Properties

The figure below illustrates the **Background Properties Dialog** with one of the three still frame buffers selected.

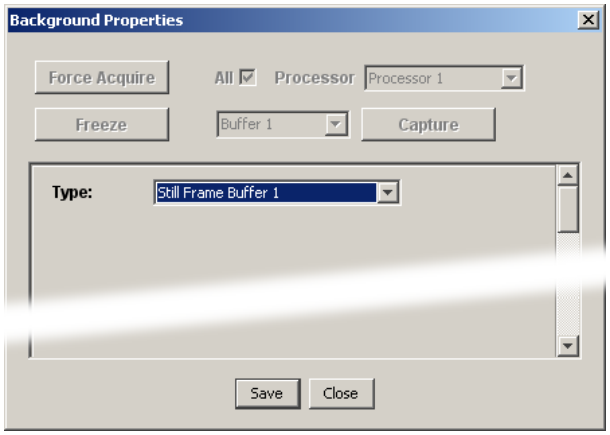


Figure 5-86. Background Properties Dialog - still frame buffer type (sample)

Use the drop-down menu to select **Still Frame Buffer 1**, **2** or **3** to use as the background. Please note:

- Use the **Freeze** and **Capture** buttons to capture a still from an Analog or DVI input which has been selected as the background.
- You can also use the **Stills Tab** to recall stills from memory, back into a selected frame buffer, for use as a background.

DSK Properties Dialog

The **DSK Properties Dialog** provides the tools necessary to adjust the **DSK** (Downstream Key). For the DSK, you can elect to key a dedicated physical M/E input or one of the system's capture frames. The dialog changes depending on the selected DSK "type."

Note

Refer to the "**Background and DSK Connections**" section on page 118 for important background information on DSK inputs and sources.

The following topics are discussed in this section:

- **Shared DSK Properties Dialog Functions**
- **DVI DSK Properties**
- **Analog DSK Properties**
- **Still Frame DSK Properties**

Shared DSK Properties Dialog Functions

The figure below illustrates the top section of the **DSK Properties Dialog**, which is shared between all selected DSK types:

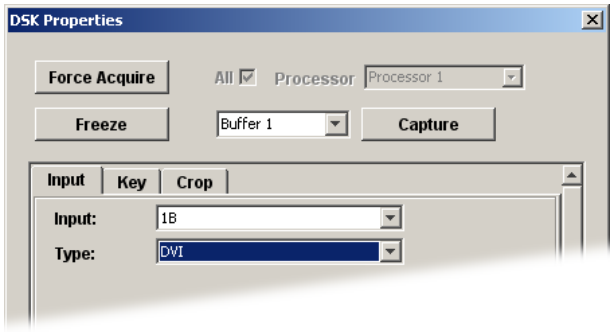


Figure 5-87. DSK Properties Dialog - shared section

- **Force Acquire** — For DVI and Analog DSK types, click to automatically detect the input signal resolution and acquire the selected input. The button is grayed out when either a Still Frame DSK type or "None" is selected.
- **All** — For single screen destinations, this check box and the **Processor** drop-down menu are both grayed out. In widescreen configurations, different DSKs can be assigned to different video processors, thus the **All** check box and the **Processor** drop-down menu are active.
  - ~ Enable the **All** check box to create a DSK across all video processors.
  - ~ Disable the **All** check box to create individual DSKs for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to create a DSK.
- **Freeze** — For DVI and Analog DSK types, click to freeze the selected full screen input signal, in preparation for capturing it into a frame buffer. The button is grayed out when either a Still Frame DSK type or "None" is selected.

- **Capture** — For DVI and Analog DSK types, click to capture the input into the selected frame buffer, as chosen with the **Frame Buffer** drop-down menu. The button is grayed out when either a Still Frame DSK type or "None" is selected.

Note

All frame grabs are *full screen* captures. In Chapter 7, refer to the "**Working with Frame Grabs**" section on page 184.

- **Input** — use the pull-down menu to select the **physical** video processor input to which the desired DSK source is connected — either **1A** or **1B**.
- **Type** — use the pull-down menu to select the desired DSK type:
  - ~ Select **None** to turn the DSK circuitry for a selected Processor off.

Tip

This selection is recommended when a DSK is only needed on the last screen in a widescreen configuration (such as a bug), and when only a single head graphics card is required.

  - ~ Select **DVI** to use a digital graphic from a computer or other DVI source as the DSK. Refer to the "**DVI DSK Properties**" section on page 126 for details.
  - ~ Select **Analog** to use an analog graphic from a computer (or other analog source) as the DSK. Refer to the "**Analog DSK Properties**" section on page 129 for details.
  - ~ Select **Still Frame Buffer 1**, **2** or **3** to use a frame grab as the DSK. Refer to the "**Still Frame DSK Properties**" section on page 131.

DVI DSK Properties

When a DVI source is selected for the DSK, three tabs are provided in the dialog:

- **DVI DSK, Input Tab Selected**
- **DVI DSK, Key Tab Selected**
- **DVI DSK, Crop Tab Selected**

DVI DSK, Input Tab Selected

The figure below illustrates the **DSK Properties Dialog** with the following selections made:

- **DVI** type
- **Input** tab

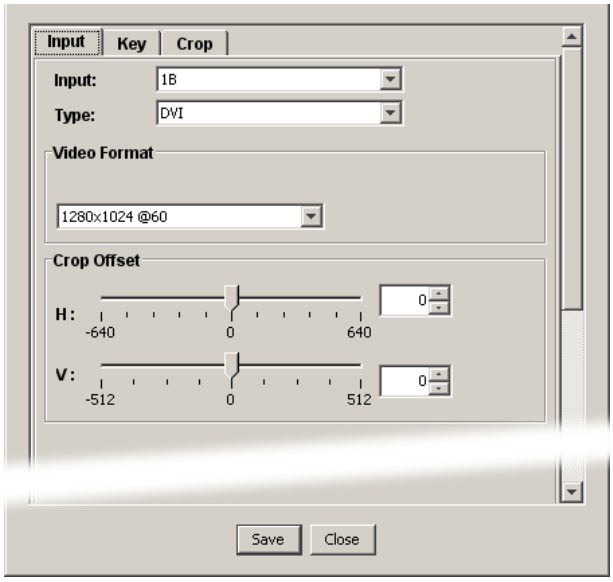


Figure 5-88. DSK Properties Dialog - DVI Type, Input Tab (sample)

The following functions are provided for a **DVI** DSK source with the **Input Tab** selected:

- **Video Format** — this section performs two functions:
  - The field displays the resolution that is automatically determined by the **Force Acquire** function.
  - Use the pull-down menu to manually set the resolution of the incoming DVI source.
- For the two settings in the **Crop Offset** section:
  - If the source's input resolution matches the output resolution, or if output resolution is *larger* than input resolution, **Crop** settings are grayed out.
  - If input data is smaller than the output resolution, the area around the active data is set to black, and input data is centered in the screen.
  - If the source's input resolution is larger than the output resolution, the **H Crop Offset** and **V Crop Offset** sliders and spinners can be used to choose which portion of the DSK you want to display.
- Click **Save** to save the selected DSK input configuration.

DVI DSK, Key Tab Selected

The figure below illustrates the **DSK Properties Dialog** with the following selections made:

- **DVI** type
- **Key** tab

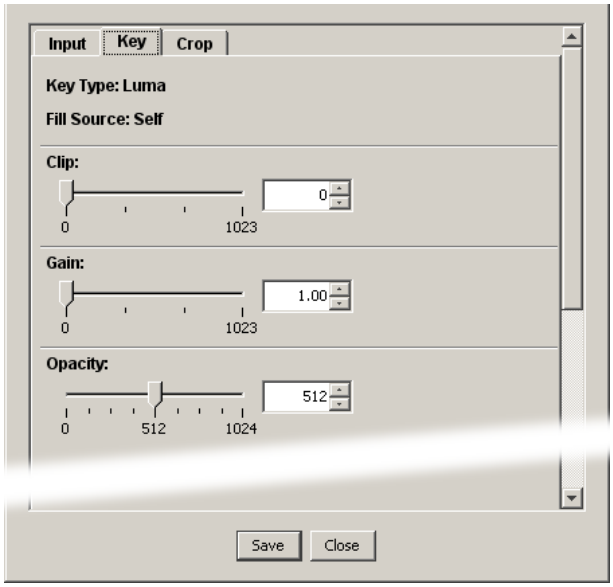


Figure 5-89. DSK Properties Dialog - DVI Type, Key Tab (sample)

The following functions are provided for a **DVI** DSK source with the **Key Tab** selected:

- **Key Type** — the DSK key type is fixed as **Luma** (luminance).
- **Fill Source** — the fill source (the video that fills the key hole) is fixed as **Self**.
- **Clip** — adjusts the threshold of the video that "cuts" into the background image. A hole will be cut into the background anywhere that the DSK source's luminance is greater than the clip level. The hole is then filled with the **Fill Source**.
  - ~ **Adjustment range**: 0 to 1023
- **Gain** — adjusts the sensitivity of the keyer, enabling you to change the sharpness of the keyed image. Gain only affects the key hole, as set by the clip.
  - ~ **Adjustment range**: 0 to 1023.99
- **Opacity** — enables you to adjust the opacity of the keyed image, from fully opaque to fully transparent.
  - ~ **Adjustment range**: 0 to 1024
- Click **Save** to save the selected DSK input configuration.

DVI DSK, Crop Tab Selected

The figure below illustrates the **DSK Properties Dialog** with the following selections made:

- **DVI** type
- **Crop** tab

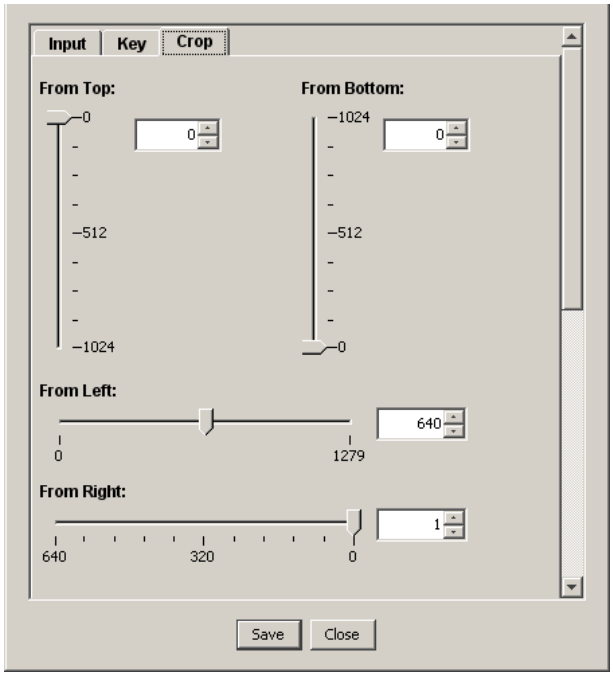


Figure 5-90. DSK Properties Dialog - DVI Type, Crop Tab (sample)

The following functions are provided for a **DVI** DSK source with the **Crop Tab** selected:

- **From Top** — use the vertical sliders and spinners to crop video from the top edge of the DSK.
- **From Bottom** — use the vertical sliders and spinners to crop video from the bottom edge of the DSK.
- **From Left** — use the horizontal sliders and spinners to crop video from the left edge of the DSK source.
- **From Right** — use the horizontal sliders and spinners to crop video from the right edge of the DSK.
- Click **Save** to save the selected DSK input configuration.

Analog DSK Properties

When an Analog source is selected for the DSK, three tabs are provided in the dialog:

- Analog DSK, Input Tab Selected
- Analog DSK, Key Tab Selected
- Analog DSK, Crop Tab Selected

Analog DSK, Input Tab Selected

The figure below illustrates the top and bottom portion of the **DSK Properties Dialog** with the following selections made:

- **Analog** type
- **Input** tab

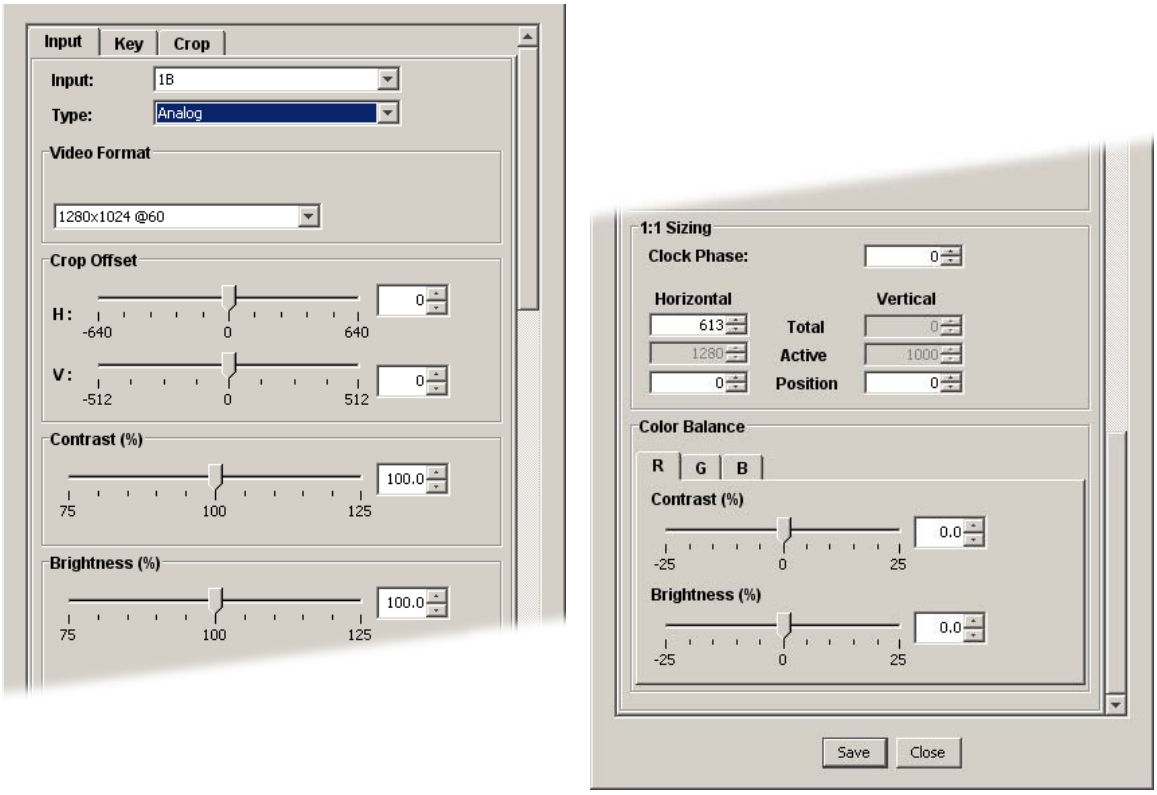


Figure 5-91. DSK Properties Dialog - Analog Type, Input Tab (sample)

The following functions are provided for an **Analog** DSK with the **Input Tab** selected:

- **Video Format** — this section performs two functions:
  - ~ The field displays the resolution that is automatically determined by the **Force Acquire** function.
  - ~ Use the pull-down menu to manually set the resolution of the incoming Analog source.
- For the two settings in the **Crop Offset** section:
  - ~ If the source's input resolution matches the output resolution, or if output resolution is *larger* than input resolution, **Crop** settings are grayed out.
  - ~ If input data is smaller than the output resolution, the area around the active data is set to black, and input data is centered in the screen.

- If the source's input resolution is larger than the output resolution, the **H Crop Offset** and **V Crop Offset** sliders and spinners can be used to choose which portion of the DSK you want to display.

- **Contrast** — use the slider and spinner to set the analog DSK's contrast.
  - **Adjustment range**: 75% to 125%
- **Brightness** — use the slider and spinner to set the analog DSK's brightness.
  - **Adjustment range**: 75% to 125%
- **1:1 Sizing** — This section provides the following controls:
  - **Clock Phase** — sets the system's A/D converter, allowing you to select where pixels are sampled (ideally, on the pixel's peak).
    - **Adjustment range**: -16 to 15

    For best visual results when adjusting high-resolution sources, project a burst test pattern and adjust the sampling for the minimum noise.
  - **Horizontal Total** — sets the total pixel count per line.
  - **Horizontal Active** — sets the width of the active area.
  - **Horizontal Position** — sets the start of the active area's horizontal offset from H sync.
  - **Vertical Total** — fixed value which cannot be adjusted.
  - **Vertical Active** — sets the number of vertical lines in the image.
  - **Vertical Position** — sets the start of the active area's vertical offset from V sync.
- The **Color Balance** section provides tabs for **R**, **G** and **B** — each of which has sliders and spinners for contrast and brightness.
    - **Adjustment range**: -25% to +25%
- **Save** — Click **Save** to save the DSK in its designated input file.

Analog DSK, Key Tab Selected

When an analog source is selected for the DSK and the **Key Tab** is selected, functions are identical to those provided when a DVI source is selected. Refer to the "**DVI DSK, Key Tab Selected**" section on page 127 for details.

Analog DSK, Crop Tab Selected

When an analog source is selected for the DSK and the **Crop Tab** is selected, functions are identical to those provided when a DVI source is selected. Refer to the "**DVI DSK, Crop Tab Selected**" section on page 128 for details.

Still Frame DSK Properties

When a still frame buffer is selected as the DSK source, two tabs are provided in the dialog (and the **Crop Tab** is grayed out):

- **Still Frame DSK, Input Tab Selected**
- **Still Frame DSK, Key Tab Selected**

Still Frame DSK, Input Tab Selected

The figure below illustrates the **DSK Properties Dialog** with the following selections made:

- **Still Frame Buffer** type (one of three selected)
- **Input** tab

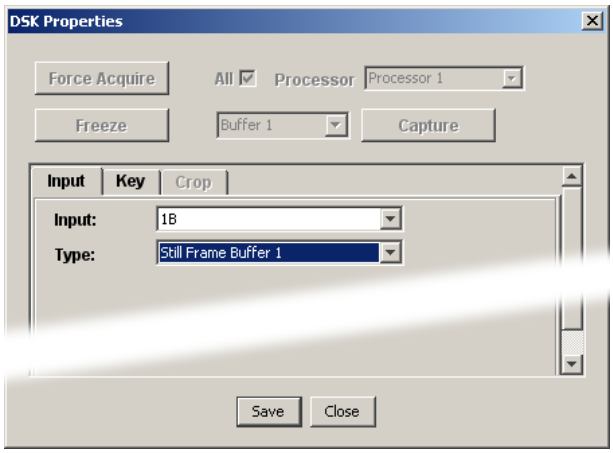


Figure 5-92. DSK Properties Dialog - still frame buffer type, Input Tab (sample)

Use the drop-down menu to select **Still Frame Buffer 1**, **2** or **3** to use as the DSK source. Please note:

- Use the **Freeze** and **Capture** buttons to capture a still from an Analog or DVI input which has been selected as the DSK.
- You can also use the **Stills Tab** to recall stills from the library (memory) back into a selected frame buffer, for use as a DSK source.

Still Frame DSK, Key Tab Selected

When a still frame buffer is selected for the DSK and the **Key Tab** is selected, functions are identical to those provided when a DVI source is selected. Refer to the "**DVI DSK, Key Tab Selected**" section on page 127 for details.

Layer Control Section

The figure below illustrates the **Layer Control Section**, which enables you to control the "look" on Program and Preview for the selected destination. Using the buttons, you can enable or disable layers, backgrounds and the DSK. In conjunction with the controls in the **Source/Preset Section**, you can assign sources to PIPs and Keys, and control up to six layers (on up to three mixers).

Figure 5-93. Layer Control Section (sample)

- The **Program Row** controls layers directly on the video processor's Program output. Green buttons are provided for backgrounds **A** and **B**, the **DSK** and **Black**. Blue buttons are provided for layers **1A** through **3B**.
  - ~ When a button is clicked **on**, it turns red — and the layer immediately cuts to Program (for the selected destination).
  - ~ When a button is clicked **off**, it returns to its default "dim" color — and the layer immediately cuts off Program.
  - ~ When a button is gray, the layer is not available.

Note

In the **Menu Bar**, click **View > Program** or **View > Preview And Program** to see the results of any "Program Row" actions on the Palette. Watch your physical Program Monitor output to see the actual video from all Program Row changes.

- The **Preview Row** controls layers on the processor's Preview output. Green buttons are provided for backgrounds **A** and **B**, the **DSK** and **Black**. Blue buttons are provided for layers **1A** through **3B**.
  - ~ When a layer button is clicked **on**, it glows bright, and the layer is enabled on Preview — in preparation for a transition to Program.
  - ~ When a layer button is clicked **off**, it returns to its default color, and the layer is cleared from Preview — in preparation for a transition off of the Program output.
  - ~ When a button is gray, the layer is not available.

Note

In the **Menu Bar**, click **View > Preview** or **View > Preview And Program** to see the results of any "Preview Row" actions immediately on the Palette. Watch your physical Preview Monitor output to see the actual video from all Preview Row changes.

Two transition buttons and a spinner are also provided on the **Preview Row**:

- ~ Click **Clear All** to clear all layers from Preview.
- ~ Click **Cut** to instantly cut the Preview's look to Program.
- ~ Click **Auto Trans** to perform a smooth transition of the Preview's look to Program. Note that auto transitions can not be paused.

- Use the **Transition Rate** spinner (above the **Auto Trans** button) to adjust the transition rate, from **0.0** to **120.0** seconds.

- Remember that the buttons (layers) on the **Preview Row** are critical for setting up a transition to the next look. For example:
  - If layer **1A** is off Program but enabled on Preview, it will transition on to Program when **Cut** or **Auto Trans** is clicked.
  - If layer **1A** is on Program and also enabled on Preview, it will not transition off of Program when **Cut** or **Auto Trans** is clicked. Here, there is no difference between the Program and Preview states of the layers.
  - If layer **1A** is on Program and disabled on Preview, it will transition off of Program when **Cut** or **Auto Trans** is clicked.

  These rules hold true for multiple layers, backgrounds, the DSK and Black, and all combinations of different layers.
- Once a transition completes (either **Cut** or **Auto Trans**), buttons on the **Program Row** change color accordingly. For example:
  - If **1A** is off Program but enabled on Preview, it turns red on Program once the transition interval completes.
  - If **1A** is on Program (and glowing red) but disabled on Preview, it returns to its default “dim” color on Program once the transition completes.

Source/Preset Section

The buttons in the **Source/Preset Section** enable you to select sources for the active PIP(s) or Key(s) on the Palette — those that are enabled in the **Layer Control Section**. In addition, you can also learn, recall and delete Presets.

The following topics are discussed in this section:

Source Section

The figure below illustrates the **Source/Preset Section**, with the **Source Section** selected.

Figure 5-94. Source Section (sample)

- The **Source Section** provides four pages of 16 source buttons each, corresponding directly to the 64 available sources that can be configured and named on the **Sources Tab**.
- To assign a source to a PIP or Key, simply click the desired layer in the Palette, then click the desired source button.
- The buttons in this section are completely linked with other system tabs, and the buttons are enabled (or disabled) depending on many factors:

- When sources are named and inputs are assigned on the **Sources Tab**, this determines the buttons that are enabled in the **Source Section**, and the labels that appear on the buttons themselves.
- When router outputs are patched on the **Output Patch Tab** and inputs are assigned on the **Sources Tab**, these factors determine only those layers into which sources can be assigned on the Palette.

  For example:

  - If router output 1 is patched to a processor's physical input 1A (which appears as logical input 3A on the Encore GC), clicking layer 3A on the Palette causes only those sources assigned from that router to appear in the **Source Section**.
  - Similarly, if router output 2 is patched to your processor's physical input 3A (which appears as logical input 1A), clicking layer 1A on the Palette causes only those sources assigned from that router to appear in the **Source Section**.

  In this manner, the array of buttons in the **Source Section** will change depending on which layer is clicked in the Palette.

Preset Section

The figure below illustrates the **Source/Preset Section**, with the **Preset Section** selected.

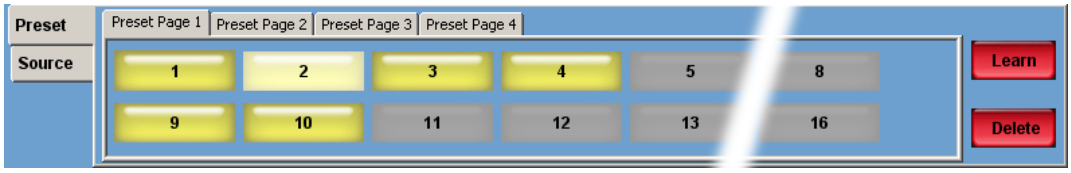


Figure 5-95. Preset Section (sample)

- The **Preset Section** provides four pages of 16 buttons each, corresponding directly to the 64 Presets that can be stored and recalled in the Encore GC system. Each button represents one "look" of the selected destination, including the current state of all mixers, layers, sources, backgrounds and the DSK.
- Button color is important:
  - **Gray** buttons are empty Preset registers.
  - Dim **Yellow** buttons represent stored presets (such as button 1 above).
  - Bright **Yellow** buttons represent "selected" active presets (such as button 2 above) that have been recalled to Preview.
- Click **Learn**, then click a Preset button to learn the current "look" into a Preset register. You can learn to an empty register, or you can overwrite one in which a Preset is already stored. Please note:
  - When you click **Learn**, all empty Preset register buttons glow white.
  - When you overwrite a register that already contains a Preset, there is no confirmation dialog.
- Click **Delete**, then click a Preset button to delete that preset. There is no confirmation dialog when you delete, so please use care when deleting.

- To recall a preset to Preview, simply click its button:
  - ~ If any layers within the recalled Preset's "look" are already on Program, they will not change position on the Palette, but on the physical Preview output, raster boxes will change position to indicated the "next" look.
  - ~ If any layers within the recalled Preset's "look" are not on Program, they will appear both on the Palette and the physical Preview output.
- To transition a recalled Preset to Program, click **Auto Trans** or **Cut**. If there are no resource conflicts (see the "**Resource Conflicts**" section below), all recalled layers will move from point to point per the recalled look, or dissolve on/off Program as required. Note that the current transition rate in the **Layer Control Section** will be used for all transitions.
- Preset can be used in conjunction with "manual" Program/Preview transitions (as selected and performed in the **Layer Control Section**) without restriction.

Resource Conflicts

Resources, as they apply to Presets, are the layers that comprise the current "look."

- The contents of a Preset are locked to the mixers from which they were originally stored. For example, if you store a Preset that only has Layers **1A** and **1B** enabled on Preview, that Preset can only be recalled into **Mixer 1**.
- When you store a Preset, you are not only recording the entire look, but you are also recording the priorities of the individual layers (PIPs and Keys) as selected in the **Layer Control Section**.
- When you recall a Preset, you are recalling the entire look, and all previously stored priorities — PIPs, Keys, colors, sources, etc.

If a resource conflict occurs when you click to recall a Preset, the **Alert Dialog** appears:

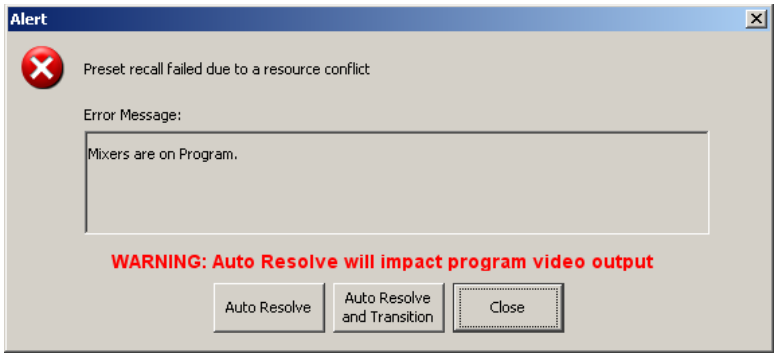


Figure 5-96. Resource Conflict Alert Dialog (sample)

The dialog lists all "discovered" conflicts in the "**Error Message**" section. These include:

- No available destination
- No valid info for VP [n]
- DSK is on Program
- BG_A is on Program
- BG_B is on Program
- Mixers are on Program
- Cannot set ME mode

At the bottom of the dialog, three options are provided:

- Click **Auto Resolve** to pull the conflicting resources smoothly off of Program, and place the “requested” resources on Preview.
- Click **Auto Resolve and Transition** to pull the conflicting resources smoothly off of Program, place the “requested” resources on Preview, and smoothly transition the new “look” to Program.
- Click **Close** to close the dialog, but take no action on Preview or Program. This option enables you to make your own choices with regard to resolving the conflict, or selecting another “non-conflicting” Preset.

Important	Both of the “resolve” options affect the Program video output, but are designed in such a way as to appear very smooth to the viewer, rather than abrupt.

In Chapter 7, refer to the “**A Word About Resources**” section on page 167 for more information about resource conflicts.

Mixer Control Section

The **Mixer Control Section** provides expandable sections that enable you to configure the specific settings for each available mixer. All sections are identical, and one section will be provided for each M/E in your video processors. The figure below illustrates the **Mixer Control Section** with Mixer 1 expanded:

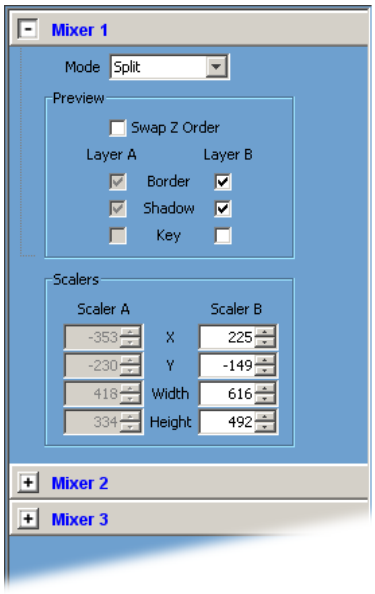


Figure 5-97. Mixer Control Section, Mixer 1 expanded (sample)

Each mixer has two layers, **A** and **B**, and each can be assigned to either PIP or Key functionality. (In Chapter 1, refer to the “**A Word About Layers**” section on page 20 for details.) The controls in each **Mixer Control Section** are designed for easy layer setup

and adjustment, and many controls are duplicates of those found in the Palette dialogs.

Note

Controls for a particular layer will be grayed out if that layer is currently on Program.

The following controls are provided:

- **Mode** — Use the drop-down menu to select one of four different transition modes:

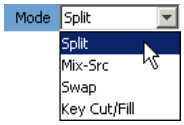


Figure 5-98. Mode drop-down menu

  ~ Select **Split** to operate the mixer's two layers independently. You can independently transition the following combinations of effects:
    - One or two PIPs
    - One or two Keys
    - One PIP and one Key

  ~ Select **Mix-Src** (Mix Source) to perfectly co-locate both mixers after every transition. Layers **A** and **B** are exactly the same *vertical* size — in exactly the same position — with exactly the same border and shadow.

    This mode is ideal for transitioning images inside a static PIP. Even though *two* identical PIPs are used, they visually appear as one, provided that they are both the same aspect ratio.

Note

In this mode, two PIPs will be the same vertical size, but may differ in horizontal size, for example, if one layer is 4:3 and the other layer is 16:9.

  ~ Select **Swap** to locate both layers independently, with different positions, sizes, borders and shadows. Layers **A** and **B** can be positioned and sized as desired — but *only one* can be on screen at a time.

  ~ Select **Key Cut/Fill** to cut a key hole with video from **Layer B**, and fill with video from **Layer A**. In this mode, the two layers can be manipulated independently, and labels on the individual layers in the Palette change to "**Key Cut**" and "**Key Fill**" accordingly.

- In the **Preview** section, the following controls affect PIPs and Keys on Preview:

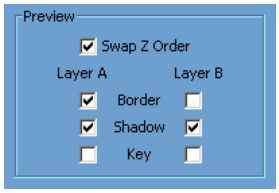


Figure 5-99. Mixer Preview section (sample)

~ Enable the **Swap Z-Order** check box to swap the priority of two layers in the same mixer. In **Split** mode only, the function works with two Keys, two PIPs, or one of each.

Note

When **Swap Z-Order** is enabled, the priority visually changes on the Palette, and the red labels on the PIPs and Keys themselves indicate the change.

~ Enable the **Border** check box to place a border around a PIP on layer A or B. This function is identical to the **Enabled** check box at the top of the **Border Properties Dialog**.

~ Enable the **Shadow** check box to place a shadow underneath a PIP on layer A or B. This function is identical to the **Enabled** check box at the top of the **Shadow Properties Dialog**.

~ Enable the **Key** check box to change a PIP to a Key. Disable the check box to return to a PIP. This function is identical to the **Enabled** check box at the top of the **Key Properties Dialog**.

- In the **Scalers** section, precision controls are provided for adjusting the PIP or Key's position, width and height:

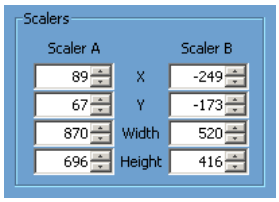


Figure 5-100. Mixer Scalers section (sample)

~ For both scalers A and B, the **X** and **Y** spinners change as you manually click and drag a PIP or Key around the Palette. For precision placement or adjustment, however, use the **X** and **Y** spinners to manually position a PIP or Key along the Palette's X-Axis or Y-Axis, respectively.

~ For both scalers A and B, the **Width** and **Height** spinners change as you manually scale a PIP or Key (by clicking and dragging on an edge). For precision width and height adjustment, however, use the **Width** and **Height** spinners to manually scale a PIP or Key's size.

Note

Note that the **Lock Aspect Ratio** control on the **PIP/Key Pop-up Menu** affects whether or not the **Width** and **Height** adjustments track together, or can be independently adjusted.

Multiple Destinations Tab

If two or more destinations are configured, select the **Multiple Destinations Tab** to configure Presets that affect multiple destinations simultaneously. The figure below illustrates the **Multiple Destination Tab**.

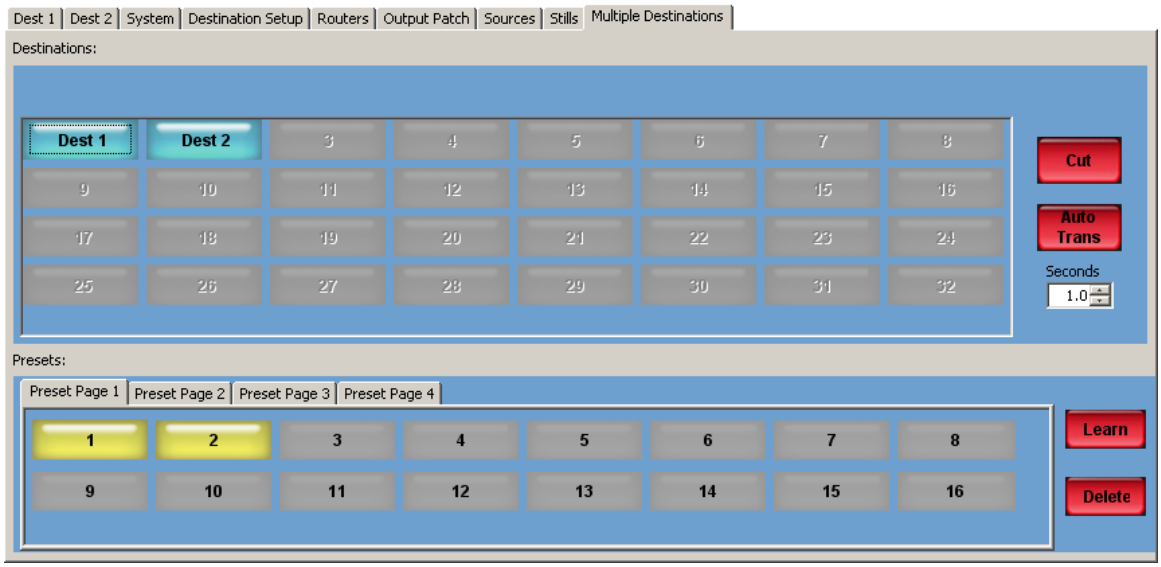


Figure 5-101. Multiple Destination Tab (sample)

The **Multiple Destination Tab** is divided into two sections:

- **Destinations Section**
- **Presets Section**

Destinations Section

The top **Destinations Section** provides 32 latching buttons, representing the maximum number of destinations for which the Encore GC system is capable of supporting. Any combination of destinations can be selected:

- Dim turquoise buttons represent “unselected” configured destinations.
- Bright turquoise buttons represent “selected” destinations.
- Gray buttons represent un-configured destinations.

At the right, three controls work in conjunction with the selected Preset in the **Presets Section** (at the bottom of the tab). For all enabled destinations:

- Click **Cut** to instantly cut all layers that are enabled on Preview to the Program output.
- Click **Auto Trans** to perform a smooth transition of all layers enabled on Preview to Program.
- Use the **Transition Rate** spinner (below the **Auto Trans** button) to adjust the transition rate, from **0.0** to **120.0** seconds.

Presets Section

The bottom **Presets Section** provides four pages of 16 buttons each, corresponding to the 64 Presets that can be stored and recalled in the system. Each button represents one "look" of all selected destinations, including the current state of all mixers, layers, sources, backgrounds and DSKs.

Note

The entire Encore GC system has one set of 64 Presets, which can be stored and recalled throughout the system. These Presets can be single destination or multi-destination.

- Button color is important:
  - ~ **Gray** buttons are empty Presets.
  - ~ Dim **Yellow** buttons represent stored multi-destination presets.
  - ~ Bright **Yellow** buttons represent "selected" active presets that have been recalled to Preview — for all selected destinations.
- For all enabled destinations:
  - ~ Click **Learn** followed by a selected Preset button to learn the current "looks" into a register. You can learn to an empty register, or you can overwrite one in which a Preset is already stored.
    - When you click **Learn**, all empty register buttons glow white.
    - When you overwrite a register that already contains a Preset, there is no confirmation dialog.

Important

Prior to learning a Preset that includes multiple destinations, ensure that the desired "individual" destination looks are set up on Preview on their respective **Destination Control Tabs**.

  - ~ Click **Delete** followed by a selected Preset to delete that preset. There is no confirmation dialog.
- To recall a preset to Preview for all selected destinations, simply click its button.
- To transition a recalled Preset to Program, click **Auto Trans** or **Cut** in the **Destinations Section**. If there are no resource conflicts (see the "**Resource Conflicts**" section on page 135), all recalled layers will move from point to point per the recalled look, or dissolve on/off Program as required. Note that the current transition rate will be used for all transitions.

Demo Mode

When the Encore GC system is offline, click **File > Load Demo Cfg** to place the system in demonstration mode:

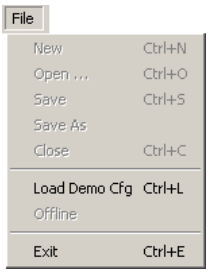


Figure 5-102. File Menu in Offline mode

The “demo” version of Encore GC is pre-configured with two destinations — one single screen and one widescreen, and the version enables you to explore all tabs, menus and features. In addition, you can also explore the **Multiple Destinations Tab**, which only appears when two (or more) destinations are configured.

Note

In “demo” mode, you cannot save Presets and the “**System Save**” function is grayed out.

To exit the demo mode, click **Discover ECU** on the **System Tab**.

5. Menu Orientation

Demo Mode

6. System Setup

In This Chapter

This chapter provides comprehensive instructions for setting up the Encore GC system. The following topics are discussed:

Note

Once you have reviewed all of the sections in this chapter, please continue with Chapter 7, "Operations" on page 163.

Setup Prerequisites

Before starting to set up your Encore GC system, please review the following prerequisites:

- Ensure that you are familiar with all Encore GC system hardware. Refer to Chapter 2, "**Hardware Orientation**" on page 29 for details.
- Ensure that all hardware is properly installed, and that all sources, routers and peripherals are properly connected. Refer to Chapter 3, "**Hardware Installation**" on page 33 for details.
- Ensure that you are familiar will all Encore GC menus. Refer to Chapter 5, "**Menu Orientation**" on page 61 for details.

System Setup Sequence

This section provides a top level view of the entire Encore GC setup procedure, plus links to each individual sequence. Please note:

- The first few procedures point to steps *already covered* in Chapter 4, "**Getting Started**" on page 43. Links are included here, so as to provide a complete view of the entire setup sequence.
- Many procedures add information to procedures that were partially covered in Chapter 4, "**Getting Started**." The remainder of procedures provide new, important setup information that is vital to configuring the Encore GC system.

Important For the optimum Encore GC setup, it is recommended that you follow all procedures in the order outlined below.

The entire Encore GC setup sequence is outlined below.

1. "**ID Setup and System Power-up**," page 145.
2. "**Installing Encore GC Software**," page 145.
3. "**Launching the Encore GC Application**," page 145.
4. "**Updating ECU and Processor Software**," page 145.
5. "**Resetting Software**," page 146.
6. "**Destination Setup**," page 146.
7. "**Router and DA Setup**," page 149.
8. "**Patching Outputs**," page 149.
9. "**Patching Sources**," page 150.
10. "**Verifying Output and Source Patches**," page 152.
11. "**Projector Setup**," page 153.
12. "**Input Setup**," page 155.
13. "**Background Setup**," page 158.
14. "**DSK Setup**," page 160.
15. "**Saving the System Configuration**," page 162.

ID Setup and System Power-up

Encore GC setup: **Step 1**.

This procedure provides instructions for setting up Encore VP, VPx and ScreenPRO-II IDs and powering up your Encore GC and ECU system. Each unit in your system must have a unique ID.

In Chapter 4, refer to the "**ID Setup and System Power-up**" section on page 45 for instructions. When complete, please continue with the "**Installing Encore GC Software**" section below.

Installing Encore GC Software

Encore GC setup: **Step 2**.

For "first time" system installations, use this procedure to install Encore GC software. In Chapter 4, refer to the "**Installing Encore GC Software**" section on page 46 for instructions. When complete, please continue with the "**Launching the Encore GC Application**" section below.

Launching the Encore GC Application

Encore GC setup: **Step 3**.

Use this procedure to launch the Encore GC application and connect to the ECU.

- **Prerequisite** — Ensure that you are familiar with the **System Tab**. In Chapter 5, refer to the "**System Tab**" section on page 71.

In Chapter 4, refer to the "**Launching the Encore GC Application**" section on page 50 for instructions. When complete, please continue with the "**Updating ECU and Processor Software**" section below.

Updating ECU and Processor Software

Encore GC setup: **Step 4**.

If required, use this procedure to update ECU and video processor software to match that of the Encore GC.

- **Prerequisite** — Ensure that you are familiar with the **System Tab**. In Chapter 5, refer to the "**System Tab**" section on page 71.

In Chapter 4, refer to the "**Updating ECU and Processor Software**" section on page 52 for instructions. When complete, please continue with the "**Resetting Software**" section on page 146.

Resetting Software

5

Encore GC setup: **Step 5**.

If required, use this procedure to reset the ECU and all video processors to their factory default settings.

▲ **Prerequisite** — Ensure that you are familiar with the **System Tab**. In Chapter 5, refer to the "**System Tab**" section on page 71.

In Chapter 4, refer to the "**Resetting Software**" section on page 54 for instructions. When complete, please continue with the "**Destination Setup**" section below.

Destination Setup

6

Encore GC setup: **Step 6**.

This procedure enables you to set up your system's destinations. Note that this is the *complete* procedure, which was partially covered in Chapter 4.

▲ **Prerequisite** — Ensure that you are familiar with the **Destination Setup Tab**. In Chapter 5, refer to the "**Destination Setup Tab**" section on page 76.

■ Use the following steps to set up or add destinations to your Encore GC system.

1. Click the **Destination Setup Tab**. Remember that at first startup, the left-hand **Destination Table** is completely empty.
2. In the **Destination Table**, click the row for the destination number that you wish to set up. Any row can be selected.
3. In the right-hand **Destination Settings Section**, enter a name for the new destination in the **Name** field, if desired. Otherwise, use the default name provided by the system (e.g., **Dest 1**, **Dest 2**, etc.).
4. Click the **Type** drop-down menu to choose the type of destination. The destination choices are Single Screen VP, Single Screen SP and Wide Screen VP.

   Remember that in the **Destination Settings Section**, different sections appear and disappear, depending on the destination type.
5. Click the "**+**" adjacent to the **Processor Selection** heading to expand the section.

Figure 6-1. Processor Selection heading

6. To add processor(s) to the destination, highlight the processor(s) in the **Available** column, then click **<<** to transfer the processor(s) to the **Added (Master)** column.
7. When all processors have been assigned for the selected destination, click **Apply**.
8. Click the "**+**" adjacent to the **Output Settings** heading to expand the section.

Figure 6-2. Output Settings heading

9. Use the **Format** drop-down menu to set the resolution and frame rate at which you want to drive your projector.
10. Use the **Gamma** spinner to set the output gamma.
11. Use the **Raster Box Size** spinner to set the size of the raster box that appears around PIPs and Keys.
12. Use the **Color Space** radio buttons to set the output's color space.
13. Use the **Sync** drop-down menus to set the sync parameters for your Preview, Program 1 and Program 2 monitors.
14. Use the **SOG / Y** drop-down menus to select a specific "sync on green" signal for your Preview, Program 1 and Program 2 monitors.
15. Use the **Source** drop-down menu to set the genlock source that is connected to the Processor's **Genlock** connector.
16. Click **Apply** to enter all changes.
17. Click the "**+**" adjacent to the **EDID Setting** heading to expand the section.

Figure 6-3. EDID Setting heading

This section enables you to update the system's preferred EDID resolution for the processor's DVI inputs — for the selected destination bus.

Note

This function is designed for advanced users only. Do not program EDID unless it is necessary.

18. Use the **Select Format** drop-down menu to select the preferred DVI video format with which you want to program the system's EDID non-volatile memory.
19. Click **Apply** to apply the new EDID format, and send the parameters to the ECU. When you click **Apply**, an alert is shown:
    - ~ If required, click **Cancel** to stop the procedure without changing the current format.
    - ~ To proceed, ensure that all DVI inputs to each VP are disconnected, then click **OK** to apply the new EDID format.
    - ~ After a minute, when EDID programming is complete, re-connect DVI inputs to the VP, then reboot the external computer(s).

    Note that the Processor's EDID PROM is *not* reset to any default during a factory reset. To change the EDID, you must use the **EDID Setting Section**.
20. For widescreen destinations only, click the "**+**" adjacent to the **Widescreen Settings** heading to expand the section.

Figure 6-4. Widescreen Settings heading

Note

Refer to the "**Wide Screen Projector Setup**" section on page 154 for wide screen setup instructions.

21. For ScreenPRO-II destinations only, click the "**+**" adjacent to the **Routing Modes** heading to expand the section.

Figure 6-5. Routing Modes heading

22. Use the **Analog Routing Mode** radio buttons to set the selected ScreenPRO-II's eight analog inputs to either **Internal** or **External** routing mode.
23. If applicable, use the **SDI Routing Mode** radio buttons to set the selected ScreenPRO-II's two SDI inputs to either **Internal** or **External** routing mode.
24. Click **Apply** to enter all changes.
25. For all types of destinations, click the "**+**" adjacent to the **Test Patterns** heading to expand the section.

Figure 6-6. Test Patterns heading

This section enables you to control test patterns and raster boxes for a VP's three outputs — Preview, Program 1 and Program 2. Controls are similar for each.

26. Use the **Raster Box** check box to enable or disable a raster box, as defined by the exact outer edges of the output resolution.
27. Use the **Test Pattern** drop-down menus to set the desired test pattern.
28. Click **Apply** to enter all changes to your selected test patterns.
29. Click **Apply All** at the top of the **Destination Settings Section** to enter all changes, and send the parameters to the ECU.

Note

Once you click **Apply All**, the **Destination Table** fills in with the new destination. In addition, a new tab appears for the newly created destination (to the left of the **System Tab**) — indicating that a valid destination is now available.

30. Repeat the entire procedure from step **2** to add additional destinations, provided that video processors are available.

Note

If you need to delete a destination, highlight the destination in the **Destination Table** and press **Delete** on your keyboard.

31. In the **Menu Bar**, click **ECU > Save Configuration**.

When complete, please continue with the "**Router and DA Setup**" section below.

Router and DA Setup

7

Encore GC setup: **Step 7**.

Use this procedure to set up your system's routers and DAs. Up to eight routers can be configured. These steps must be followed precisely, so that all routers will be properly recognized on the **System Tab**.

▲ **Prerequisite** — Ensure that you are familiar with the **Routers Tab**. In Chapter 5, refer to the "**Routers Tab**" section on page 86.

In Chapter 4, refer to the "**Router and DA Setup**" section on page 57 for instructions on setting up routers and DAs.

Note

If you need to delete a router or DA, highlight the desired router or DA in the **Router Table** and press **Delete** on your keyboard.

When complete:

- In the **Menu Bar**, click **ECU > Save Configuration**.
- Please continue with the "**Patching Outputs**" section below.

Patching Outputs

8

Encore GC setup: **Step 8**.

Use this procedure to patch router outputs to various video processor inputs.

▲ **Prerequisite** — Ensure that you are familiar with the **Output Patch Tab**. In Chapter 5, refer to the "**Output Patch Tab**" section on page 91.

■ Use the following steps to patch router outputs to video processor inputs.

Note

Before you patch outputs, it is strongly recommended that you complete a set of "**connection charts**" for your Encore GC and ECU system. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "**Connection Charts**" section for instructions.

1. Click the **Output Patch Tab**. Remember that the tab is divided in half:
   - ~ On the left, the **Router Outputs Section** lists each router, with folders representing each format, and individual lines representing each output.
   - ~ On the right, the **Device Inputs Section** lists all video processors that are configured in your system.
2. In the **Router Outputs Section**, open up the folder for the first router that you want to patch — and note its format (e.g., DVI, SDI, Analog).
3. In the **Device Inputs Section**, open up the target folder for processor to which you want to patch inputs. Ensure that you open the folder that matches the router's format.

4. To make a patch, click and hold the desired router output (in the **Router Outputs Section**), and drag it directly on top of the desired device input (in the **Device Inputs Section**), then release the mouse button.
5. Repeat steps **2** through **4** for each patch. Note that when each patch is complete, each label expands to show the **physical input** to which the output is now connected on the processor (e.g., **1A**), and the **logical layer** in which it will appear on the **Destination Control Tab** (e.g., **[3A]**).
6. To check your patches graphically, hold down **CTRL** and click an individual patch (in either column) or an individual folder (in either column) to view the output-to-input connection graphically.

Note

If you need to delete an output patch, highlight the desired patch in either the **Router Outputs Section** or the **Device Inputs Section** and press **Delete** on your keyboard.

7. In the **Menu Bar**, click **ECU > Save Configuration**.

When complete, please continue with the "**Patching Sources**" section below.

Patching Sources

Encore GC setup: **Step 9**.

Use this procedure to patch router sources to specific input buttons on the **Destination Control Tab**(s). Setup parameters include source name, connection type, router, and the desired input number on the GUI. Selections directly determine the active inputs on the **Destination Control Tab**(s).

▲ **Prerequisite** — Ensure that you are familiar with the **Sources Tab**. In Chapter 5, refer to the "**Sources Tab**" section on page 93.

■ Use the following steps to patch sources.

Note

Before you patch sources, it is strongly recommended that you complete a set of "**connection charts**" for your Encore GC and ECU system. In Chapter 3 of the **Encore Presentation System User's Guide**, refer to the "**Connection Charts**" section for instructions.

1. Click the **Sources Tab**. Remember that the tab is divided in half:
   ~ On the left, the **Source Table** lists the parameters for up to 64 sources. Remember that the **ID** number represents the button on which the source appears in the **Destination Control Tab**.
   ~ On the right, the **Source Parameters Section** enables you to configure the name, connection type, router, and the router input for each source.
2. Click the row in the **Source Table** for the button that you wish to set up in the **Destination Control Tab**.
3. In the **Source Parameters Section**, enter a custom name for the source in the **Name** field (e.g, PC 1, VTR 2, etc.).

4. Use the **Connection Type** drop-down menu to select how the specific source is connected to the Processor.
   - ~ Select **Router** if the source is connected via router.
   - ~ Select **Direct Analog** if the source is connected directly to one of the processor's analog inputs.
   - ~ Select **Direct DVI** if the source is connected directly to one of the processor's DVI inputs.
   - ~ Select **Direct SDI** if the source is connected directly to one of the processor's SD inputs.
   - ~ Select **SP2** if the source is connected directly to a ScreenPRO-II input — but if you want all connected ScreenPRO-IIs to switch simultaneously to the same input.
5. If a **Router** was selected in the **Connection Type** field:
   - ~ Use the **Router** drop-down menu to select the router to which the source is connected.
   - ~ Use the **Input** field to select the specific input connector (on the router) to which the source is connected.
6. If a **Direct Connection** to a Processor (e.g., Direct DVI, Direct SDI, Direct Analog) was selected in the **Connection Type** field:
   - ~ Use the **Processor** drop-down menu to select the Processor to which the source is directly connected.
   - ~ Use the **Input** field to select the specific input connector (on the Processor) to which the source is connected (e.g., 1A, 1B, etc.). Note that the **Mixer Layer** field indicates the layer on which the source appears on the **Destination Control Tab**(s).
7. If **SP2** was selected in the **Connection Type** field:
   - ~ Use the **Processor** drop-down menu to select the Processor to which the source is directly connected.
   - ~ Use the **Input** field to select the specific input connector (on the Processor) to which the source is connected (e.g., 1-8, SDI 1, SDI 2).
8. If **ALL SP** was selected in the **Connection Type** field use the **Input** field to select the specific input (on all ScreenPRO-IIs) to which the source is connected.
9. After data is entered (or changed) for *each source,* click **Apply** to send the new information to the ECU.
10. Repeat steps **2** through **9** for all additional **Destination Control Tab** buttons that you wish to set up.

Note

If you need to delete a source patch, highlight the desired patch in the **Source Table** and press **Delete** on your keyboard.

11. In the **Menu Bar**, click **ECU > Save Configuration**.

When complete, please continue with the "**Verifying Output and Source Patches**" section below.

Verifying Output and Source Patches

10

Encore GC setup: **Step 10**.

Use this procedure to verify all router output and source patches on your various destinations.

▲ **Prerequisite** — Ensure that you are familiar with the **Destination Control Tab**, and in particular, the tab's **Layer Control Section**, **Source/Preset Section** and **Palette**. In Chapter 5, refer to the "**Destination Control Tabs**" section on page 139.

■ Use the following steps to verify output and source patching.

1. Ensure that your Program and Preview monitors (and projectors) are properly configured and connected to the outputs of your video processors.
2. Click a **Destination Control Tab**. Remember that one tab appears for each destination that you have configured on the **Destination Setup Tab**.
3. In the **Menu Bar**, click **View > Preview**. This action enables you to view only the VP's preview output in the Palette (for the selected destination).
4. In the **Layer Control Section**, click layer **1A** on the **Preview** row. The layer (PIP) appears in the **Palette**, and the source buttons assigned to that layer appear in the **Source/Preset Section**. Remember that for the selected layer, the location and names of these buttons are based on the following factors:
   - ~ The routers configured on the **Routers Tab**.
   - ~ The "Router Output" to "Device Input" patches on the **Output Patch Tab**.
   - ~ The source (router input) patches on the **Sources Tab**.
5. In the **Source/Preset Section**, switch source buttons, and verify that sources switch properly on your router and on your Preview monitor. If a sources does not switch properly, first click the "**force acquire**" button in the source's **Input Properties Dialog**. In Chapter 5, refer to the "**Input Properties Dialog**" section on page 114 for details.

   If the source still does not display properly, verify the previous setup steps:
   - ~ "**Router and DA Setup**," page 149.
   - ~ "**Patching Outputs**," page 149.
   - ~ "**Patching Sources**," page 150.
6. Press **Auto Trans** to transition the PIP to Program. On your Program monitor, verify that the PIP transitions properly to Program.
7. Repeat the procedure from step **4**, for layer **2A** (if configured).
8. Repeat the procedure from step **4**, for layer **3A** (if configured).
9. Repeat the procedure from step **2** for all other destinations that you have configured.

When complete, please continue with the "**Projector Setup**" section below.

Projector Setup

11

Encore GC setup: **Step 11**.

This procedure enables you to set up your projectors for both single screen and widescreen destinations.

▲ **Prerequisite** — Ensure that you are familiar with the **Destination Setup Tab**. In Chapter 5, refer to the "**Destination Setup Tab**" section on page 76.

The following procedures are provided:

- **Single Screen Projector Setup**
- **Wide Screen Projector Setup**

Single Screen Projector Setup

■ Use the following steps to set up a projector for a single screen destination.

1. On the **Destination Setup Tab**, highlight the single screen destination whose projector you want to configure.
2. Expand the **Test Patterns Section**.
3. Enable the **Raster Box** for the output(s) on which you want a test pattern to appear — **Preview**, **Program 1** and/or **Program 2**.
4. In the drop-down "test pattern" menu(s), select the **Burst** pattern and click **Apply**.
5. At the projector itself, perform the following adjustments to ensure that the output data is properly displayed:
   - ~ Adjust the image for the minimum amount of noise.
   - ~ Adjust the pixel clock for proper image position, such that the entire **Raster Box** is visible.
6. In the drop-down "test pattern" menu(s), select one of the many **Gray Scale** test patterns and click **Apply**.
7. At the projector itself, adjust color balance, brightness and contrast.

Important | Refer to your projector's technical manual for information on all projector setup and adjustment procedures.

8. Once the projector is properly set, turn each **Raster Box** off, and set the "test pattern" drop-down menu to **Off**.
9. At the top of the entire section click **Apply All** to complete the procedure.
10. In the **Menu Bar**, click **ECU > Save Configuration**.
11. Repeat from step **1** for additional single screen destination projector setups.

Wide Screen Projector Setup

- Use the following steps to set up projectors for a wide screen application. This procedure affects *all* projectors assigned to the selected destination.

1. On the **Destination Setup Tab**, highlight the wide screen destination whose projectors you want to configure.
2. Expand the **Test Patterns Section**.
3. Enable the **Raster Box** for the output(s) on which you want a test pattern to appear — **Preview**, **Program 1** and/or **Program 2**.
4. In the drop-down "test pattern" menu(s), select the **Burst** test pattern, then click **Apply**.
5. Expand the **Widescreen Settings Section**.
6. Use the **Processors H** and **V** spinners to select the desired horizontal only, vertical only, or horizontal plus vertical array.
7. As required, use the **Total Horizontal Resolution** and **Total Vertical Resolution** spinners to set the total number of horizontal and vertical pixels in the overall array. Note that in an array that is exclusively horizontal, the vertical field is fixed.
8. Use the **Widescreen Markers** radio buttons to enable or disable the wide screen markers.

Note

As required, you can change the **Marker Mode** during operations without affecting other wide screen settings.

9. Use the **Background** radio buttons to select how your background graphics were originally produced, either **Edge-butted** or **Overlapped**.
10. Use the **Justification** radio buttons to set the desired wide screen justification, either **Center** or **Left**.
11. Use the **Data Doubling** radio buttons to enable or disable data doubling.
12. Use the horizontal and vertical **Overlap**, **Feather** and **Gamma** controls to fine tune the desired overlap and feathering between projectors.
13. Click **Apply** to enter all changes.
14. At each projector, perform the following adjustments to ensure that the output data is properly displayed:
    - ~ Adjust the images for a minimum amount of noise.
    - ~ Adjust the pixel clocks for proper image position, such that the entire **Raster Box** is visible.
15. In the **Test Patterns Section**, in the drop-down "test pattern" menu(s), select one of the many **Gray Scale** test patterns and click **Apply**.
16. At the projector itself, adjust color balance, brightness and contrast.

Important

Refer to your projector's technical manual for information on all projector setup and adjustment procedures.

17. Once each projector is properly set, enable one of the three **Alignment Test Patterns** which are available in the "Program" drop-down test pattern menu — **H Align**, **V Align** or **H and V Align**.

These special patterns allow you to perform projector lens shift and registration adjustments.

a. At each projector, perform lens shift and registration adjustments. Refer to your projector's technical manual for information on all lens shift and registration procedures

b. If required, adjust the horizontal and vertical "totals" to match those entered on the **Wide Screen Settings Menu**.

c. Repeat step 17 for the remaining **Alignment Test Patterns**.

d. When adjustments are complete, turn off the **Alignment Test Pattern** and click **Apply**.

18. If required, re-enable edge feathering and data doubling.
19. At the top of the entire section click **Apply All** to complete the procedure.
20. In the **Menu Bar**, click **ECU > Save Configuration**.
21. Repeat from step **1** for additional wide screen destination projector setups.

When complete, please continue with the "**Input Setup**" section below.

Input Setup

Encore GC setup: **Step 12**.

This procedure provides steps for setting up the system's inputs, for single screen and wide screen destinations.

▲ **Prerequisite** — Ensure that you are familiar with the **Input Properties Dialog**. In Chapter 5, refer to the "**Input Properties Dialog**" section.

The following topics are provided:

- **Input Setup — Quick Start**
- **Input Setup — Comprehensive Method**
- **Input Setup Notes**

Input Setup — Quick Start

■ Use the following "quick start" method to set up inputs.

1. Click the **Destination Control Tab** for the destination whose inputs you want to set up.
2. In the **Layer Control Section**, click a layer button on Preview (e.g., **1A**).
3. In the **Source/Preset Section**, select the first source that you wish to set up.
4. In the **Palette**, right-click the layer's PIP, and select **Input Properties**.
5. Enable **Source Preview** to expand the PIP, display a gray background, and turn off borders and shadows.
6. Click **Force Acquire** to perform the optimum image setup.
7. Click **Save** to save the new input configuration.
8. In the **Source/Preset Section**, select the (next) source that you wish to set up.

9. Repeat from step **6** for the next source.
10. Repeat from step **1** for the next destination — *only if required*. Refer to the "**Input Setup Notes**" section on page 157 for details. When all inputs have been adjusted and saved, click **Close** to close the **Input Properties Dialog**.

Input Setup — Comprehensive Method

- Use the following "comprehensive" method to set up inputs.

1. Click the **Destination Control Tab** for the destination whose inputs you want to set up.
2. In the **Layer Control Section**, click a layer button on Preview (e.g., **1A**).
3. In the **Source/Preset Section**, select the first source that you wish to set up.
4. In the **Palette**, right-click the layer's PIP, and select **Input Properties** to display the **Input Properties Dialog**.
5. Click **Source Preview** to expand the PIP, display a gray background, and turn off borders and shadows.
6. Click **Force Acquire** to perform the optimum image setup.
7. As required, adjust the following basic input properties:
    a. To manually set the resolution, use the **Video Format** drop-down menu.
    b. To manually set the input type, use the **Source Type** drop-down menu. Remember that the choices *change* depending on the selected **Format**, and in some cases, this function is not available.
    c. Use the **Color Space** radio buttons to set the input's color space, either **SMPTE** or **RGB**. In some cases, this function is not available.
    d. Use the **Contrast** and **Brightness** spinners to set the input's contrast and brightness.
    e. Use the **Sync Type** drop-down menu to set the source's sync type.
    f. Use the **Sync Slice** spinner to adjust the sync slice as required.
    g. Use the **Gamma** spinner to set the input gamma.
    h. Use the **Sharpness** spinner to set the input's sharpness.
8. Adjust the **Aspect Ratio Menu** if required:
    a. Use the **Mode** drop-down menu to select the aspect ratio.
    b. If **Custom** is selected as the mode, use the **Ratio** spinner as required.
9. Use the **Motion Threshold** spinner to increase or decrease the de-interlacer's sensitivity towards moving content, if required.
10. Enable the **Pulldown Compensation** check box if required. Remember that this function only applies to standard video (component, s-video, composite) inputs.
11. Use the **Sampling Mode** radio buttons to set the sampling mode.
    a. If **1:1 Sampling** was selected:
        - Use the **Clock Phase** spinner to adjust for the cleanest, brightest and sharpest image.
        - Use the **H Total** spinner to set the total pixel count per line.
        - Use the **H Active** spinner to set the width of the active area.
        - Use the **H Position** spinner to set the start of the active area's horizontal offset from H sync.

- Use the **V Active** spinner to set the number of vertical lines in the image.
- Use the **V Position** spinner to set the start of the active area's vertical offset from V sync.

b. If **Oversample** was selected:

- Use the **Right Edge** spinner to adjust the source's right edge.
- Use the **Left Edge** spinner to adjust the source's left edge.
- Use the **Top Edge** spinner to adjust the source's top edge.
- Use the **Bottom Edge** spinner to adjust the bottom edge.

12. Use the controls in the **Color Balance** section to adjust the input's color balance.

a. When **RGB** sources are selected, tabs are provided for **R**, **G** and **B**. Use the brightness and contrast sliders and spinners to adjust color balance as required.

b. When **Composite**, **S-Video** or **YP_bP_r** sources are selected, use the **Saturation** and **Hue** spinners to adjust saturation and hue as required.

13. Click **Save** to save the new input configuration in memory.

Important

Ensure that you click **Save** before you close the **Input Properties Dialog** — otherwise your adjustments will be lost. If you do not save the input, the next time the source is selected, the input's default settings will be displayed.

14. In the **Source/Preset Section**, select the (next) source that you wish to set up.

15. Repeat from step **6** for the next source.

16. Repeat from step **1** for the next destination — *only if required*. Refer to the "**Input Setup Notes**" section on page 157 for details. When all inputs have been adjusted and saved, click **Close** to close the **Input Properties Dialog**.

Input Setup Notes

You ***do not*** have to repeat the input setup procedure for other destinations if either of the following two criteria are met:

- Your other destinations use sources that are patched to the same router.
- Your other destinations use input that are configured using the "**All SP**" function on the **Sources Tab**.

In this case, all other system destinations will automatically receive input configuration files via the system's "copy down" functionality.

You ***do*** have to repeat the input setup procedure if either of the following criteria are met:

- Your other destinations use a different router.
- Your other destinations use unique input patching.

When complete, please continue with the "**Background Setup**" section on page 158.

Background Setup

13

Encore GC setup: **Step 13**.

This procedure enables you to set up Encore GC's two "background" sources (**BG A** and **BG B**). A background can be configured as a DVI input, an analog input, a matte color or a frame grab.

▲ **Prerequisite** — Ensure that you are familiar with the **Background Properties Dialog**. In Chapter 5, refer to the "**Background Properties Dialog**" section on page 118.

Please note the following important points:

- For ScreenPRO-II destinations, remember that **BG B** and the **DSK** are mutually exclusive. This occurs because the **BG/DSK Input B** is *shared* between the **DSK** and **BG B** on all individual ScreenPRO-II units.
- For single or wide screen Encore GC systems using single M/E video processors, there are only two DVI inputs available (**1A** and **1B**). In this configuration, you can not set up both backgrounds and the DSK — you can only configure two of the three (e.g., both backgrounds or one background plus one DSK).

■ Use the following steps to set up your background sources:

1. Click the **Destination Control Tab** for the destination whose backgrounds you want to set up.
2. In the **Layer Control Section**, click a background button on Preview (e.g., **BG A**).
3. In the **Palette**, right-click the background layer and select **Background Properties** to display the **Background Properties Dialog**.
4. For widescreen destinations only:
   - ~ Enable the **All** check box to create a background across all video processors.
   - ~ Disable the **All** check box to create individual backgrounds for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to create a background.
5. To configure a matte background:
   - **a.** Select **Matte** in the **Type** drop-down menu.
   - **b.** Use the sliders and spinners in the **Matte Color** section to adjust the matte color as desired.
   - **c.** Click **Save**.
6. To configure a DVI background:
   - **a.** Select **DVI** in the **Type** drop-down menu.
   - **b.** Ensure that your DVI source (e.g., a PC) is properly connected to the Video Processor or ScreenPRO-II chassis, and that the PC is turned on.
   - **c.** Ensure that EDID is properly set. If not, refer to the "**Destination Setup**" section on page 146 for details.
   - **d.** Set the DVI source's format:
     - Click **Force Acquire**, or ...
     - To manually set the source's resolution, select the desired format using the **Video Format** drop-down menu.

e. (Optional) Adjust **H** and **V Crop Offset** as required.

f. Click **Save**.

7. To configure an Analog background:

a. Select **Analog** in the **Type** drop-down menu.

b. Ensure that your analog source is properly connected to the Video Processor chassis.

Note

Analog backgrounds cannot be configured on ScreenPRO-II destinations.

c. Set the analog source's format:

- Click **Force Acquire**, or ...
- To manually set the source's resolution, select the desired format using the **Video Format** drop-down menu.

d. (Optional) Adjust **H** and **V Crop Offset** as required.

e. (Optional) Adjust **Contrast**, **Brightness**, **Sizing** and **Color Balance**.

f. Click **Save**.

Important

Using analog background in edge-butted mode could possibly cause seams, and is not recommended!

8. To configure a frame grab background:

a. Ensure that you have captured frame(s) into one of the three available frame buffers, or have loaded frame(s) from permanent memory into one of the three buffers. In Chapter 7, refer to the "**Working with Frame Grabs**" section on page 184 for instructions.

b. Select **Still Frame Buffer** 1**, Buffer 2** or **Buffer 3** in the **Type** drop-down menu.

c. Click **Save**.

9. Repeat from step **2** for **BG B**.

10. Repeat from step **1** for the next destination's background sources.

11. When all backgrounds have been adjusted and saved, click **Close** to close the **Background Properties Dialog**.

When complete, please continue with the "**DSK Setup**" section below.

DSK Setup

14

Encore GC setup: **Step 14**.

This procedure enables you to set up theEncore GC's **DSK** source. An DSK can be configured as a DVI input, an analog input, a frame grab or "none."

▲ **Prerequisite** — Ensure that you are familiar with the **DSK Properties Dialog**. In Chapter 5, refer to the "**DSK Properties Dialog**" section on page 124.

Please note the following important points:

- For ScreenPRO-II destinations, remember that **BG B** and the **DSK** are mutually exclusive. This occurs because the **BG/DSK Input B** is *shared* between the **DSK** and **BG B** on all individual ScreenPRO-II units.
- For single or wide screen Encore GC systems using single M/E Video Processors, there are only two DVI input connectors available (**1A** and **1B**). In this configuration, you can not set up both backgrounds and the DSK — you can only configure two of the three (e.g., both backgrounds, or one background plus DSK).

■ Use the following steps to set up your DSK source:

1. Click the **Destination Control Tab** for the destination whose DSK you want to set.
2. In the **Layer Control Section**, click **DSK**.
3. In the **Palette**, right-click the background layer and select **DSK Properties** to display the **DSK Properties Dialog**.
4. For widescreen destinations only:
   - ~ Enable the **All** check box to configure a DSK across all video processors.
   - ~ Disable the **All** check box to create individual DSKs for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to create a DSK.

Note

Typically, in a wide screen destination, the DSK is placed on only *one* of the multiple screens (e.g., the far right screen). For this setup, select a individual video processors and set up their "**types**" accordingly — DVI or Analog for the DSK screen, and "none" for the remaining screens.

5. Click the **Input Tab**.
6. To configure the DSK with no input:
   a. Select **None** in the **Type** drop-down menu.
   b. Click **Save**.
7. To configure a DVI input as the DSK:
   a. Select **DVI** in the **Type** drop-down menu.
   b. Use the **Input** drop-down menu to select the DVI input connector from which the DSK source is pulled.
   c. Ensure that your DVI source is properly connected to the Video Processor or ScreenPRO-II chassis, and that the PC is turned on.

d. Ensure that EDID is properly set. If not, refer to the "**Destination Setup**" section on page 146 for details.

e. Set the DVI source's format:

- Click **Force Acquire**, or ...
- To manually set the source's resolution, select the desired format using the **Video Format** drop-down menu.

f. (Optional) Adjust **H** and **V Crop Offset** as required.

g. Click **Save**.

8. To configure an Analog source as the DSK:

a. Select **Analog** in the **Type** drop-down menu.

b. Ensure that your analog source is properly connected to the Video Processor chassis.

Note Analog DSKs cannot be configured on ScreenPRO-II destinations.

c. Set the analog source's format:

- Click **Force Acquire**, or ...
- To manually set the source's resolution, select the desired format using the **Video Format** drop-down menu.

d. (Optional) Adjust **H** and **V Crop Offset** as required.

e. (Optional) Adjust **Contrast**, **Brightness**, **Sizing** and **Color Balance**.

f. Click **Save**.

9. To configure a frame grab as the DSK:

a. Ensure that you have captured frame(s) into one of the three available frame buffers, or have loaded frame(s) from permanent memory into one of the three buffers. In Chapter 7, refer to the "**Working with Frame Grabs**" section on page 184 for instructions.

b. Select **Still Frame Buffer** 1**, Buffer 2** or **Buffer 3** in the **Type** drop-down menu.

c. Click **Save**.

10. Click the **Key Tab**, and use the spinners and sliders to adjust **Clip**, **Gain** and **Opacity**.

11. For Analog and DVI key types only, click the **Crop Tab** and use the spinners and sliders to adjust the four crop parameters as required: **From Top**, **From Bottom**, **From Left** and **From Right**.

12. When your DSK is fully adjusted, click **Save**, then click **Close** to close the **DSK Properties Dialog**.

When complete, please continue with the "**Saving the System Configuration**" section on page 162.

Saving the System Configuration

Encore GC setup: **Step 15**.

This procedure enables you to save the current Encore GC configuration in the ECU, so that you can shut down and power-up again with the identical setup.

- Use the following steps to save the system configuration:

  1. In the **Menu Bar**, click **ECU > Save Configuration**. This action saves the configuration of equipment, all setup parameters, and all of the Presets that you have created.

Please continue with Chapter 7, "**Operations**" on page 163.

7. Operations

In This Chapter

This chapter includes operational instructions for all Encore GC modes and functions. The following topics are discussed:

Prerequisites

Prior to reviewing this chapter, please ensure the following:

- All system destinations are properly configured. In Chapter 6, refer to the "**Destination Setup**" section on page 146 for details.
- All system inputs (sources) are properly configured. In Chapter 6, refer to the "**Input Setup**" section on page 155 for details.
- All system backgrounds are properly configured. In Chapter 6, refer to the "**Background Setup**" section on page 158 for details.
- The DSK is properly configured. In Chapter 6, refer to the "**DSK Setup**" section on page 160 for details.
- Ensure that you are familiar with all menus, tabs and dialogs. Refer to Chapter 5, "**Menu Orientation**" on page 61 for details:

Tip

As you review each function, it is recommended that you practice each feature on the Encore GC itself — using a fully configured system consisting of Program and Preview monitors, projector(s), and all the required destinations, sources and backgrounds.

Operational Configuration

The following topics are discussed in this section:

- **Wide Screen Markers**
- **Lookahead Preview**
- **A Word About LOS**
- **A Word About Resources**

Wide Screen Markers

If you are using a wide screen destination, ensure that your **Wide Screen Markers** are enabled on the **Destination Setup Tab**. In Chapter 5, refer to the "**Destination Setup Tab**" section on page 76 for details.

Wide Screen Markers are thin vertical **green lines** at the edges of the Preview monitors that are used to denote the *actual* projected image area. Markers apply to horizontal blends (e.g., **3W** x **1H**), and to horizontal + vertical arrays (e.g., **2W** x **2H**), but do not apply to vertical blends (e.g., **1W** x **3H**).

Using edge feathering and data doubling, Encore GC provides perfect and seamless wide screen images. Because of the required overlap, a *portion* of the original image is unused, and does not get projected. The location of the unused portion depends on your selected justification — left or center.

With each type of justification, the Wide Screen Markers accurately denote the unused portion, thus enabling you to properly compose your screens.

- **Left Justified Markers**

  The figure below illustrates the Wide Screen Marker in a left justified configuration. Images to the left of the green vertical line are projected. Images to the right are not.

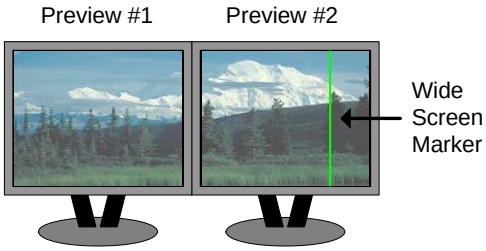


Figure 7-1. Wide Screen Marker, Left Justification

- **Center Justified Markers**

  The figure below illustrates the two Wide Screen Markers in a center justified configuration. Images between the two vertical green lines are projected. Images outside of the lines are not.

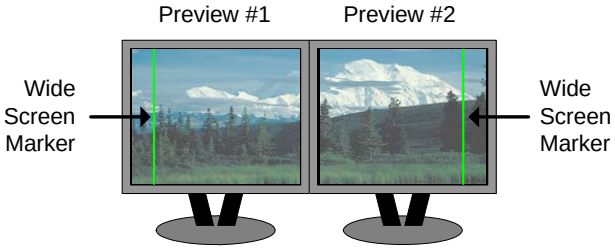


Figure 7-2. Wide Screen Marker, Center Justification

Lookahead Preview

Encore GC uses a “lookahead” preview system that ensures the accuracy of all your transitions. The “look” that you create on Preview represents the *exact* appearance of Program, after you cut or “auto transition” the look to Program.

The illustration below represents a simple Preview-to-Program transition. **SPLIT** mode is on, enabling you to have two PIPs on screen simultaneously:

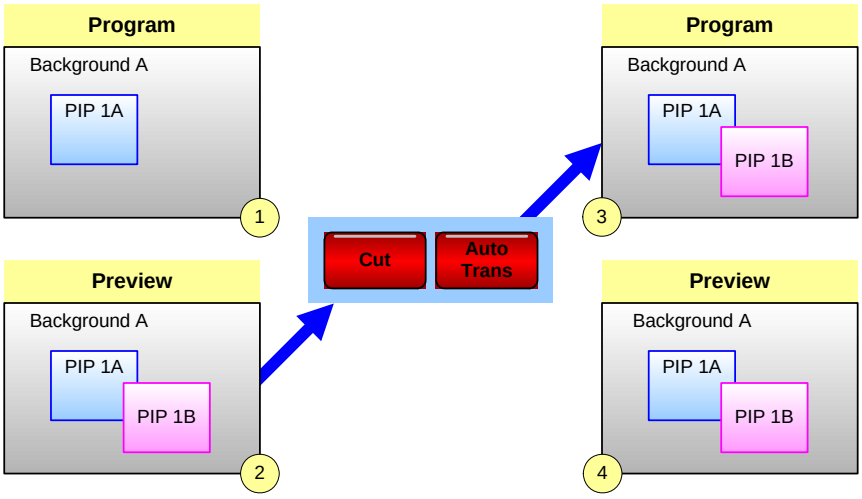


Figure 7-3. Program-to-Preview Transition with Lookahead

- In frame **1**, Program consists of a background and a single PIP (**1A**).
- In frame **2**, a second PIP (**1B**) is selected and positioned on Preview.
- When **CUT** or **AUTO TRANS** is clicked, the PIP transitions to Program. Frame **3** represents the Program screen — identical to the Preview “look” in frame **2**.
- Frame **4** represents Preview *after* the transition. Preview will continue to match Program until you modify the preview image, in preparation for the next transition.

With these facts in mind, ensure that you always create the desired “next” look in Preview. In this manner, there won’t be any operational surprises:

- By using lookahead, you’ll always know visually what PIPs and keys you want to transition **TO** Program.
- Conversely, you’ll always know what PIPs and keys to you wish to clear — to visually remove elements **FROM** Program.

A Word About LOS

If you experience **LOS** (loss of signal), the VP obeys a precise set of rules:

- **Scaler LOS** — If there is a LOS for a video signal inside a scaler (PIP or KEY), the video switches to black, but the scaler remains in its current size and position.
- **Background LOS** — If there is a LOS for a background DVI input, the video switches to the background’s selected matte color.
- **DSK LOS** — If there is a LOS for the DSK, the system switches the DSK **Off** (specifically, selecting "**none**" as the type).

In each case, when the video signal recovers, the VP re-enables the signal as before.

A Word About Resources

Resources, as they apply to Presets, are the layers that comprise the current “look.”

- The contents of a Preset are locked to the mixers from which they were originally stored. For example, if you store a Preset that only has Layers **1A** and **1B** enabled on Preview, that Preset can only be recalled into **Mixer 1**.
- When you store a Preset, you are not only recording the entire look, but you are also recording the priorities of the individual layers (PIPs and Keys) as selected in the **Layer Control Section**.
- When you recall a Preset, you are recalling the entire setup, and all previously stored priorities — PIPs, Keys, colors, sources, etc.

Several "resource" examples are provided below:

▲ **Example 1**: Split — No conflict.

a. Enable **Split** mode.

b. Store a Preset that contains **Source 1** on layer **1A**, and layer **1B** is clear.

c. Take **Source 2** to Program on layer **1A**.

d. Recall the Preset.

You *can* recall the Preset to Preview, because the system temporarily borrows scaler **1B** to avoid a resource conflict.

▲ **Example 2**: Split — Conflict.

a. Enable **Split** mode.

b. Store a Preset that contains **Source 1** on layer **1A**, and layer **1B** is clear.

c. Take **Source 2** to Program on layer **1A**, and **Source 3** to Program on **Layer 1B**.

d. Recall the Preset — the **Alert Dialog** appears. Here, you *cannot* recall the Preset to Preview, because both scalers are in use. Remember, however, that Encore GC offers several "Auto Resolve" options. Refer to the "**Auto Resolve**" section on page 168 for details.

▲ **Example 3**: Mix — No conflict.

a. Enable **Mix-Src** mode.

b. Store a Preset that contains **Source 1** on layer **1A**.

c. Take **Source 2** to Program on layer **1A**.

d. Recall the Preset.

You *can* recall the Preset to Preview, because there is always a layer available in **Mix-Src** mode. The system will pick the available layer based on resources (e.g., if you stored the Preset in layer **1A**, the system may recall it to layer **1B** — if layer **1A** is already in use).

▲ **Example 4**: Store a Split, Recall a Mix — No conflict.

a. Enable **Split** mode.

b. Store a Preset that contains **Source 1** on layer **1A** and **Source 2** on layer **1B**.

c. Enable **Mix-Src** mode.

d. Store a second Preset that contains **Source 1** on layer **1A**.

e. Recall the first (**Split**) Preset, and take it to Program.

f. Recall the second (**Mix-Src**) Preset. The system recalls the Preset to Preview, but the mode changes to **Split**, enabling you to perform the transition. The Preset is still stored as a **Mix-Src**, however.

Auto Resolve

Knowing that resource conflicts can arise, you may wish to store (and organize) your Presets according to the use of resources:

- For example, you could store Presets on **Page 1** that only use one PIP, and presets on **Page 2** that use two PIPs.
- As an alternate method, you may want to plan your presentations such that Presets are always recalled to an “empty” Program setup (with only a background visible). This method avoids all resource issues entirely.

However, remember that Encore GC offers several "Auto Resolve" options that you can use when the **Alert Dialog** appears when you recall a Preset. Three options are provided:

- Click **Auto Resolve** to pull the conflicting resources smoothly off of Program, and place the “requested” resources on Preview.
- Click **Auto Resolve and Transition** to pull the conflicting resources smoothly off of Program, place the “requested” resources on Preview, and smoothly transition the new “look” to Program.
- Click **Close** to close the dialog, but take no action on Preview or Program. This option enables you to make your own choices with regard to resolving the conflict, or selecting another “non-conflicting” Preset.

Important

Both of the “resolve” options affect the Program video output, but are designed in such a way as to appear very smooth to the viewer, rather than abrupt.

Working with Layers

The following topics are discussed in this section:

Switching Sources

- Use the following steps to switch sources into a PIP or a Key:

1. Select the desired **Destination Control Tab**.
2. In the **Menu Bar**, click **View > Preview** to show Preview in the Palette, or **View > Preview and Program** to show both outputs.
3. In the **Layer Control Section**, click a layer button (e.g., **1A**) to place that layer in the Palette.
4. In the **Mixer Control Section**, enable or disable **Key** as desired.
5. In the **Source/Preset Section**, click the desired source button to assign that source to the PIP or Key.
6. Manipulate the PIP or Key as desired. Refer to the "Manipulating PIPs and Keys" section on page 170 for details.

Please note the following points regarding sources:

- In the **Layer Control Section**, when the layer's button is **Red** on the Program row, the layer is on Program. The layer is not active for manipulation.
- If a router is used for input connection, a source can be assigned to multiple layers simultaneously.
- The blinking raster box in the Palette indicates the last selected PIP or Key, but it does not always indicate that the PIP or Key is available for modification, particularly if that PIP is on Program. To "visually" know which layer can be modified, use **View > Preview and Program** to show both outputs.

Manipulating PIPs and Keys

- To move a PIP or Key:
  1. In the **PIP/Key Pop-up Menu**, ensure that **Crop Enabled** is un-checked.
  2. Mouse over the PIP or Key until the four-headed arrow (**PIP Cursor**) appears.
  3. Click within the PIP or Key, and drag to move the image.
- To scale a PIP or Key:
  1. In the **PIP/Key Pop-up Menu**:
     - ~ Ensure that **Crop Enabled** is un-checked.
     - ~ Check or un-check **Lock Aspect Ratio** as desired.
  2. Mouse over the edge of a PIP or Key until the two-headed arrow (**Edge Cursor**) appears.
  3. Click on the edge, and drag to scale the image.
- To crop a PIP or Key:
  1. In the **PIP/Key Pop-up Menu**, check the **Crop Enabled** option.
  2. Mouse over the edge of a PIP or Key until the cross (**Crop**) cursor appears.
  3. Click on the edge, and drag to crop the image.
  4. To move or scale a cropped PIP or Key, in the **PIP/Key Pop-up Menu**, select **Crop Mode > Resize**, then move or scale the image in the normal manner.

Background Transitions

- Use the following steps to perform a background transition:
  1. Ensure that your backgrounds are properly set up. In Chapter 6, refer to the "**Background Setup**" section on page 158 for details.
  2. Select the desired **Destination Control Tab**.
  3. Select the desired background (**BG A** or **BG B**) on Preview.
  4. Right click in the Palette to display the **Background/DSK Pop-up Menu**, and select **Background Properties** to display the **Background Properties Dialog**.
  5. In the **Background Properties Dialog**, change (and adjust) backgrounds if desired, to **Matte**, **DVI**, **Analog** or a **Still Frame** background.
  6. Perform the desired transition (**AUTO TRANS** or **CUT**). When the selected background is on Program, its button is **Red** on the Program row.
  7. To clear a background from Program, turn the "on air" background button **Off** on Preview (or select the other background source), then perform the transition.

Note

When you clear a background by turning the button off on Preview, it clears to the last selected background matte color. Note that two separate matte colors can be defined, one for **BG A** and one for **BG B**.

Understanding Split and Mix-Src Modes

Encore GC provides two different modes with which you can transition PIPs and Keys:

- **Split Mode**
- **Mix-Src and Swap Modes**

Split Mode

With the **Split** mode enabled in the **Mixer Control Section**, a mixer's two layers operate independently. You can manipulate and transition the following combinations of effects on a single mixer:

- One or two PIPs
- One or two Keys
- One PIP and one Key

Mix-Src and Swap Modes

With the **Mix-Src** (Mix Source) or **Swap** modes enabled in the **Mixer Control Section**, a mixer's two layers are ganged together. These two modes are mutually exclusive.

- With **Mix-Src** enabled, both mixer layers are perfectly co-located after every transition. Layers **A** and **B** are exactly the same *vertical* size — in exactly the same position — with exactly the same border and shadow.

  This mode is ideal for transitioning images inside a static PIP. Even though *two* identical PIPs are used, they visually appear as one, provided that they are both the same aspect ratio.

  Note — In this mode, two PIPs will be the same vertical size, but may differ in horizontal size, for example, if one layer is 4:3 and the other layer is 16:9.

- With **Swap** enabled, both mixer layers can be located independently, with different positions, sizes, borders and shadows. Layers **A** and **B** can be positioned and sized as desired — but *only one* can be on screen at a time.

  Note — In the **Mix-Src** and **Swap** modes, when neither layer is on Program, if you select one layer, the other is automatically de-selected. Only one layer can be active at a time.

Working with PIPs in Split Mode

In **Split Mode**, a mixer's two layers operate *independently*.

- Use the following steps to work with PIPs in **Split Mode**.

1. Select the desired **Destination Control Tab**.
2. In the **Layer Control Section**, click the desired layer button.
3. In the **Mixer Control Section**, expand the selected layer's mixer.
4. Select **Split**, and ensure that the **Key** check box (for the layer) is un-checked.
5. In the **Source/Preset Section**, click the desired source.

6. Adjust the PIP's size, position, border and shadow as desired. Refer to the "**Modifying PIPs**" section on page 172 for details.
7. Prior to the transition, set up additional PIPs and Keys as desired.
8. Transition the setup to Program.
9. Repeat the procedure from step **1** for the next transition.

Please note:

- If a mixer is in **Split** mode and a layer is active for modification, selecting **Mix-Src** or **Swap** changes the mode accordingly, and **Split** is turned off. Please note:
  - ~ The layer selected on Preview remains selected, and if a layer is currently on Program, it remains on air.
  - ~ If both layers are active on Program, **Mix-Src** cannot be enabled.
- If a mixer is in **Mix-Src** or **Swap**, selecting **Split** automatically cancels the current mode, and the current layer on Program is automatically placed on Preview.

Working with PIPs in Mix-Src and Swap Modes

In **Mix-Src** and **Swap** modes, a mixer's layers are ganged together. Both layers can be perfectly co-located on screen (**Mix-Src** mode), or both can operate independently (**Swap** mode), but only one layer can be on Program at a time.

- Use the following steps to work with PIPs in **Mix-Src** and **Swap** modes.

1. Select the desired **Destination Control Tab**.
2. In the **Layer Control Section**, click the desired layer button.
3. In the **Mixer Control Section**, expand the selected layer's mixer.
4. Select **Mix-Src** or **Swap**, and ensure that the **Key** check box (for the selected layer) is un-checked.
5. In the **Source/Preset Section**, click the desired source.
6. Adjust the PIP's size, position, border and shadow as desired. Refer to the "**Modifying PIPs**" section on page 172 for details.
7. Prior to the transition, set up additional PIPs and Keys as desired.
8. Transition the setup to Program.
9. Repeat the procedure from step **1** for the next transition.

Modifying PIPs

- Use the following steps to modify a PIP:

1. In the **Palette**, click the PIP that you wish to modify.
2. **Size, Position, Crop** — Manipulate the PIP as required on Preview. Refer to the "**Manipulating PIPs and Keys**" section on page 170 for details.
3. **Border** — Using the **PIP/Key Pop-up Menu**, select **Border Properties** to display the **Border Properties Dialog**. Select the border's style, color and size as desired. In Chapter 5, refer to the "**Border Properties Dialog**" section on page 111 for details.
4. **Shadow** — Using the **PIP/Key Pop-up Menu**, select **Shadow Properties** to display the **Shadow Properties Dialog**. Choose the shadow's size, position and

transparency. In Chapter 5, refer to the "**Shadow Properties Dialog**" section on page 112 for details.

5. **Freeze** — Click the **Freeze** button in the **Tool Bar** to freeze the PIP. Click again to unfreeze. Please note:
   - ~ If a mixer is in **Mix-Src** mode, you can only freeze and un-freeze while a layer is selected on Preview.
   - ~ If a mixer is in **Split** mode, you can freeze and un-freeze while a layer is selected on either Preview or Program.
   - ~ When **Freeze** is enabled for a layer, PIP and Key adjustments are not allowed.
6. **Alignment** — **Shift + Click** two or more PIPs on the Palette. In the **Tool Bar**, use the buttons in the **Alignment Group** to align the PIPs as required. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
7. **Centering** — Click a single PIP, or **Shift + Click** two or more PIPs on the Palette. In the **Tool Bar**, use the buttons in the **Centering Group** to center the PIPs. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
8. **Full Screen** — Click a single PIP, or **Shift + Click** two or more PIPs on the Palette. In the **Tool Bar**, use the buttons in the **Full Screen Group** to size the PIPs to full screen as required. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
9. **Similarity** — **Shift + Click** two or more PIPs on the Palette. In the **Tool Bar**, use the buttons in the **Similarity Group** to make PIPs the same height or width. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
10. **Swap Z** — In the **Mixer Control Section**, expand the mixer for a selected layer and click **Swap Z-Order** to swap the priority of two layers in the same mixer. The function works with two Keys, two PIPs, or one of each. Note that the layers remain at their current locations — only the priority changes.

Note

The **Swap Z-Order** function only works in **Split** mode, and only works on the layers within a selected mixer. You cannot use the function to swap the priority of different mixers.

11. **Transition** — Transition the new look to program with a **Cut** or **Auto Trans**.

Working with Keys in Split Mode

In **Split Mode**, a mixer's two layers operate *independently*.

- Use the following steps to work with PIPs in **Split Mode**.
  1. Select the desired **Destination Control Tab**.
  2. In the **Layer Control Section**, click the desired layer button.
  3. In the **Mixer Control Section**, expand the selected layer's mixer.
  4. Select **Split**, and ensure that the **Key** check box (for the selected layer) is checked.
  5. In the **Source/Preset Section**, click the desired source.
  6. Adjust the Key as desired. Refer to the "**Modifying Keys**" section on page 175 for details.
  7. Prior to the transition, set up additional PIPs and Keys as desired.

8. Transition the setup to Program.
9. Repeat the procedure from step **1** for the next transition.

Working with Keys in Mix-Src and Swap Modes

In **Mix-Src** and **Swap** modes, a mixer's layers are ganged together. Both Keys can be perfectly co-located on screen (**Mix-Src** mode), or both can operate independently (**Swap** mode), but only one layer can be on Program at a time.

- Use the following steps to work with Keys in **Mix-Src** and **Swap** modes.

1. Select the desired **Destination Control Tab**.
2. In the **Layer Control Section**, click the desired layer button.
3. In the **Mixer Control Section**, expand the selected layer's mixer.
4. Select **Mix-Src** or **Swap**, and ensure that the **Key** check box (for the selected layer) is checked.
5. In the **Source/Preset Section**, click the desired source.
6. Adjust the Key as desired. Refer to the "**Modifying Keys**" section on page 175 for details.
7. Prior to the transition, set up additional PIPs and Keys as desired.
8. Transition the setup to Program.
9. Repeat the procedure from step **1** for the next transition.

Using Key Cut/Fill

In any mixer, **Key Cut/Fill** is a mode in which the hole-cutting information is provided by a **Key** on **Layer B**, while the fill information is provided by a **PIP** on **Layer A**.

- Use the following steps to create a **Key Cut/Fill**:

1. Select the desired **Destination Control Tab**.
2. In the **Mixer Control Section**, expand the mixer on which you want to create a **Key Cut/Fill**.
3. Select the **Key Cut/Fill** mode from the drop-down menu.
4. In the **Layer Control Section**, click either layer, and note that both layer's **A** and **B** are placed on the Palette. A label appears in the center of each layer:
   - **Layer B** has the label **Key Cut**. This layer cuts the hole.
   - **Layer A** has the label **Key Fill**. This layer fills the hole.
5. Click each layer, and in the **Source/Preset Section**, select sources for each.
6. In the Palette, move **Layer B** on top of **Layer A**, and note the effect on your Preview monitor.

Note

At this point, Layer A's image will disappear, however, the layer's raster box remains visible on Preview. Depending on current Key parameters (e.g., Clip, Gain), some part of the "fill" may be visible in the shape of the "cut" source.

7. Size and position the layers in the normal manner, and adjust the Key as desired (including clip, gain and opacity). Refer to the "**Modifying Keys**" section on page 175 for details.
8. Transition the new setup to Program.

Modifying Keys

- Use the following steps to modify a Key:

1. In the **Palette**, click the Key that you wish to modify.
2. **Size, Position, Crop** — Manipulate the Key as required. Refer to the "**Manipulating PIPs and Keys**" section on page 170.
3. **Key Mode** — In the **Mixer Control Section**, enable **Key**, or select **Key Cut/Fill** from the drop-down menu.
4. **Clip, Gain, Opacity** — Using the **PIP/Key Pop-up Menu**, select **Key Properties** to display the **Key Properties Dialog**. Adjust the Key's clip, gain, and opacity on Preview as required. In Chapter 5, refer to the "**Key Properties Dialog**" section on page 113 for details.
5. **Freeze** — Click the **Freeze** button in the **Tool Bar** to freeze/unfreeze the Key. Please note:
   - ~ If a mixer is in **Mix-Src** mode, you can only freeze and un-freeze while a layer is selected on Preview.
   - ~ If a mixer is in **Split** mode, you can freeze and un-freeze while a layer is selected on either Preview or Program.
   - ~ When **Freeze** is enabled for a layer, PIP and Key adjustments are not allowed.
6. **Alignment** — **Shift + Click** two or more Keys (and/or PIPs) on the Palette. In the **Tool Bar**, use the buttons in the **Alignment Group** to align the layers as required. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
7. **Centering** — Click a single Key, or **Shift + Click** two or more Keys (and/or PIPs) on the Palette. In the **Tool Bar**, use the buttons in the **Centering Group** to center the layers. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
8. **Full Screen** — Click a single Key, or **Shift + Click** two or more Keys (and/or PIPs) on the Palette. In the **Tool Bar**, use the buttons in the **Full Screen Group** to size the layers to full screen as required. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
9. **Similarity** — **Shift + Click** two or more Keys (and/or PIPs) on the Palette. In the **Tool Bar**, use the buttons in the **Similarity Group** to make the layers the same height or width. In Chapter 5, refer to the "**Tool Bar**" section on page 101.
10. **Swap Z** — In the **Mixer Control Section**, expand the mixer for a selected layer and click **Swap Z-Order** to swap the priority of two layers in the same mixer. The function works with two Keys, two PIPs, or one of each. Note that the layers remain at their current locations — only the priority changes.

Note

The **Swap Z-Order** function only works on the layers within a selected mixer. You cannot use the function to swap the priority of different mixers.

11. **Transition** — Transition the new look to program with a **Cut** or **Auto Trans**.

Clearing Layers from Program

The "clear layer" procedure enables you to remove layers from Program — including backgrounds, mixers and the DSK. When clearing layers, always use the **Lookahead Preview** function. Refer to the "**Lookahead Preview**" section on page 166 for details.

- Use the following steps to clear a layer (or all layers) from Program:

1. Check (and compare) the Program and Preview monitors, and note the layer(s) that you wish to clear. In the **Layer Control Section**, remember that **Red** buttons indicate the layers that are on Program. The following options are available:
   - ~ To clear individual layers, in the **Layer Control Section** (on the Preview row), turn off the buttons for the layers that you wish to clear.
   - ~ To clear all layers, click **Clear All** in the **Layer Control Section**.
   - ~ Transition the setup to Program. The selected layer(s) will transition off.

Modifying Layers On Program

Encore GC enables you to modify layers directly on Program, without first setting up a "look" on Preview. This is a "cuts-only" mode.

- Use the following steps to modify layers directly on Program:

1. Select the desired **Destination Control Tab**.
2. In the **Layer Control Section** (on the Program row), click the desired layer button to "cut" the layer on and off Program. This step is valid for all layers, including **BG A**, **BG B**, the **DSK** and **Black**.

Please note:

- When you switch sources directly on Program, you may notice a glitch in the image as the scalers recall the source's file.
- If you use camera inputs in this mode, it is recommended that you use an external **Genlock** signal. Refer to the "**A Word About Resources**" section on page 167 for details on source files.

Using Black

In the **Layer Control Section**, the **Black** button enables you to transition all layers, backgrounds and the DSK to black for the selected destination.

- Use the following steps to transition to/from **Black**:

1. Select the desired **Destination Control Tab**.
2. Regardless of the setup currently in Preview, in the **Layer Control Section** click **Black** to place source "black" on Preview. All PIPs, keys and backgrounds are maintained under the black screen. All raster boxes remain visible on Preview.
3. Perform a transition in the normal way to fade (or cut) Program to black.
4. To transition up from black, turn off the **Black** button on Preview. All PIPs, keys and backgrounds are restored in their previous positions.
5. Perform a transition in the normal way to fade (or cut) up from black.

Using the DSK

- Use the following steps to perform a downstream key:

1. Ensure that the **DSK** is properly set up, and that the desired key "**type**" is selected in the **DSK Properties Dialog**. In Chapter 6, refer to the "**DSK Setup**" section on page 160 for instructions.
2. Please remember the following important DSK rules:
   - For ScreenPRO-II destinations, remember that **BG B** and the **DSK** are mutually exclusive.
   - For single or wide screen Encore GC systems using single M/E Video Processors, there are only two DVI input connectors available (**1A** and **1B**). In this configuration, you cannot use both backgrounds and the DSK — you can only use two of the three.
3. Select the desired **Destination Control Tab**.
4. In the **Layer Control Section**, click **DSK** on Preview.
5. In the **Palette**, right-click the background layer and select **DSK Properties** to display the **DSK Properties Dialog**.
6. For widescreen destinations only:
   - Enable the **All** check box to configure a DSK across all video processors.
   - Disable the **All** check box to create individual DSKs for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to create a DSK.
7. On the **Input**, **Key** and **Crop** tabs, adjust DSK parameters, including key type, clip, gain, opacity and crop.
8. Perform a **Cut** or **Auto Trans**.
9. Clear the **DSK** from Program in the normal manner — by clearing its layer from Preview and then transitioning.

Using Source Preview

The **Source Preview** function enables you to quickly isolate a selected layer for sizing and adjustment purposes — in Preview only.

- Use the following steps to use the **Source Preview** function:

1. In the Palette, click the layer that you want to isolate, and ensure the layer is on Preview only.
2. In the **Source/Preset Section**, select a source.
3. Right-click the desired layer, and using the **PIP/Key Pop-up Menu**, select **Input Properties** to display the **Input Properties Dialog**.
4. Enable the **Source Preview** check box. The following actions occur:
   - For the selected layer, the border and shadow are turned off, and if the layer is a Key, the Key is turned off.

~ The PIP (or Key) is placed in the center of the screen.

Note

Use the **Source Preview Drop-down Menu** to size the image to either 90% of the output resolution, or to 1:1.

~ If the system is in wide screen mode, the layer is centered in screen 1 and sized to 90% of that screen.

~ All other layers are hidden.

~ The background switches to a neutral gray.

Note

If the 1:1 PIP size is less than the output resolution of the Preview screen, the PIP will be centered in the Preview screen at 1:1.

5. Using the **Input Properties Menu**, adjust the source in the normal manner.
6. To restore Preview to its previous look, disable the **Source Preview** check box.

Please note the following important point regarding Source Preview:

- While the **Source Preview** mode is enabled, you can only perform input adjustments and source selections. All other layer, destination and output functions are disabled.

Working with Presets

This section provides detailed instructions for working with Presets. On the **Destination Control Tabs**, the **Source/Preset Section** enables you to store and recall entire setups. Each Preset button represents one “look,” including the current state of all mixers, layers, sources, backgrounds and the DSK.

The following topics are discussed in this section:

Storing Presets

- Use the following steps to store a Preset:

1. Set up the desired “look” on Preview. Remember that one Preset equals a single “look,” including the current state of all mixers, layers, sources, backgrounds and the DSK.
2. In the **Source/Preset Section**, click the **Preset** tab and select the “page” on which you want to store the preset.
3. Set the desired transition rate (which is stored with the Preset), using the "**Seconds**" spinner.
4. To store the preset, click **Learn**, then click the desired **Preset** button.

Recalling Presets

- Use the following steps to recall a Preset:

1. In the **Menu Bar**, click **Presets > Preset Recall Options**, to display the **Preset Recall Options Dialog**. Select your "recall" options as desired. For each recall, you can elect to include or exclude the background, DSK and/or borders.

Important	The recall configuration (as set in the **Preset Recall Options Dialog**) is global, and it affects all recalls from that point forward, until changed.

2. In the **Source/Preset Section**, click the **Preset** tab and select the “page” from which you want to recall the preset.
3. To recall a Preset, simply click the desired **Preset** button to recall the stored “look” to Preview.
   - ~ If a resource conflict **Alert** appears, you have several options available for resolving the conflict. Refer to the "**Auto Resolve**" section on page 168 for additional information.
4. Transition the Preset to Program in the normal manner.

Deleting Presets

- Use the following steps to delete a Preset:

  1. In the **Source/Preset Section**, click the **Preset** tab and select the “page” from which you want to delete a preset.
  2. Click **Delete**, then click the desired Preset button to delete that register from memory.

Presets and Moves

The ECU provides a unique "**automatic pend move**" feature:

- If you store several Presets in **Split** mode with the same PIP in different sizes and positions on screen, the system automatically pends a **Move** when you recall each Preset. In this way, when you cut each Preset to Program, the PIP moves from point to point. The end point of the last move becomes the starting point for the next move — regardless of the sequence in which the Presets are recalled.
- As a rule, the layer(s) stored in each Preset must be the same, the source must be the same, and PIP parameters (in general) must be the same. If any of these parameters are different, the system will not pend the move.
- For a given PIP, the following effects are valid "move" parameters, each of which will transition smoothly from point to point. You can change any of these parameters, and the system will pend a move:
  - ~ PIP or Key size and position
  - ~ PIP or Key source size and position
  - ~ PIP Shadow size and position
  - ~ PIP or Key Crop values

  If you change any other parameters, such as shadow opacity, border color, border style, etc., the system will not pend the move.

Multiple Destination Presets

If two or more destinations are configured, use the **Multiple Destinations Tab** to configure Presets that affect multiple destinations simultaneously.

Note

Remember that the entire Encore GC system has one set of 64 Presets, which can be stored and recalled throughout the system. These Presets can be single destination or multi-destination.

The following topics are discussed in this section:

Storing Multiple Destination Presets

- Use the following steps to store a Preset:

1. Prior to learning a Preset:
   - ~ Ensure that the desired “individual” destination Presets are recalled to Preview on their respective **Destination Control Tabs**, or ...
   - ~ Set up "new" looks on Preview on each individual **Destination Control Tab** that you wish to store.
2. Click the **Multiple Destination Tab**. In the tab’s top **Destinations Section**, turquoise buttons represent configured destinations.
3. Click the destination button(s) for which you want to store a Preset. Each button toggles between bright (selected) and dim (un-selected).
4. In the bottom **Presets Section**, select the “page” on which you want to store the Preset.
5. Set the desired transition rate (which is stored with the Preset), using the "**Seconds**" spinner.
6. To store the preset, click **Learn**, then click the desired **Preset** button.

Recalling Multiple Destination Presets

- Use the following steps to recall a Preset:

1. In the **Menu Bar**, click **Presets > Preset Recall Options**, to display the **Preset Recall Options Dialog**. Select your "recall" options as desired. For each recall, you can elect to include or exclude the background, DSK and/or borders.

Important

The recall configuration (as set in the **Preset Recall Options Dialog**) is global, and it affects all recalls from that point forward, until changed.

2. In the **Presets Section**, select the “page” from which you want to recall the preset.
3. To recall a Preset, click the desired **Preset** button to recall the stored “look” to Preview — for the destinations selected within the Preset.
   - ~ If a resource conflict **Alert** appears, you have several options available for resolving the conflict. Refer to the "**Auto Resolve**" section on page 168 for additional information.
4. Transition the Preset to Program in the normal manner.

Deleting Multiple Destination Presets

- Use the following steps to delete a Preset:

1. In the **Presets Section**, select the “page” from which you want to delete a preset.
2. Click **Delete**, then click the desired Preset button to delete that Preset.

Preset Notes

Note that active destinations are stored in Presets. If a destination which was saved in a Preset goes off-line, the Preset recalls "looks" on the destinations that are still available.

Resetting Software

A “**Factory Defaults**” software reset is recommended, for example, after Encore GC has returned from an event or other presentation. Although there are several types of reset procedures, the full “factory reset” function guarantees that all ECU and processor values are returned to their factory default settings, and that all previous configurations are erased.

The following topics are discussed:

Resetting the ECU

- Use the following steps to reset the ECU:

1. In the **System Tab**, click **Reset** to display the **Reset Window**. In the left-hand section, the window displays device selection controls, plus a table that lists the IDs of all “discovered” processors. In the right-hand section, reset options are listed along with a status box.
2. In the **Device Selection** section, check the **ECU** check box.
3. In the **Reset Type** section, choose the desired option:
   - ~ Click **Soft Reboot** to restart the entire ECU OS (operating system). Stored configurations will not be lost, provided that you have previously clicked **System Save** in the **System Tab**.
   - ~ Click **Factory Defaults** to reset the ECU to factory default values.

Important | All stored ECU configurations will be lost when **Factory Defaults** is selected.

4. Click **Reset**. A warning dialog will be displayed, confirming which information will be lost or retained. Click **Yes** to continue, or **No** to cancel the procedure.
5. If **Yes** is clicked, the ECU is reset, and it disconnects from the Encore GC system.
6. In the pop-up dialog, click **Connect** to re-populate the tables.

Resetting Processors

- Use the following steps to reset the processors:

1. In the **System Tab**, click **Reset** to display the **Reset Window**. In the left-hand section, the window displays device selection controls, plus a table of all "discovered" processors. In the right-hand section, reset options are listed.
2. In the **Device Selection** section, uncheck the **ECU** check box, and select the desired "Processor" button.
   - ~ Click **All Processors** to reset all VP and VPx processors, and all ScreenPRO-IIs.
   - ~ Click **All Encore VP** to reset all VP and VPx processors only.
   - ~ Click **All SP** to reset all ScreenPRO-IIs only.
   - ~ Click **Clear All Processors** to reset your selections.
   - ~ If desired, click **All Devices** to reset all VP and VPx processors, all ScreenPRO-IIs and the ECU.
3. In the **Reset Type** section, choose the desired option:
   - ~ Click **Soft Reboot** to restart the selected processor(s) OS. Stored configurations will not be lost, provided that you have previously clicked **System Save** in the **System Tab**.
   - ~ Click **Factory Defaults** to reset the selected processor(s) to factory default values.

Important	All stored processor configurations will be lost when **Factory Defaults** is selected.

4. Click **Reset**. A warning dialog will be displayed, confirming which information will be lost or retained. Click **Yes** to continue, or **No** to cancel the procedure.
5. If **Yes** is clicked, the selected processor(s) are reset, and they disconnect from the Encore GC system. During the update procedure, all program and preview output video from the processors switches to black.

Note	This procedure can take several minutes.

   At the conclusion of the procedure, program and preview video is restored from the selected processor(s).
6. Close the **Reset Window**.

Working with Frame Grabs

The following topics are discussed in this section:

Prerequisites

Please note the following important prerequisites to all frame grab procedures:

- Ensure that you are familiar with the **Frame Grab** buttons on the **Tool Bar**. In Chapter 5, refer to the "**Tool Bar**" section on page 101 for details.
- Ensure that you are familiar with the **Background Properties Dialog**. In Chapter 5, refer to the "**Background Properties Dialog**" section on page 118.
- Ensure that you are familiar with the **DSK Properties Dialog**. In Chapter 5, refer to the "**DSK Properties Dialog**" section on page 124 for details.
- Ensure that you are familiar with the **Stills Tab**. In Chapter 5, refer to the "**Stills Tab**" section on page 97 for details.

Frame Capture Overview

The Encore GC system enables you to capture frames into the processor's three internal frame stores. The "sources" of the frames are the background and DSK inputs on each VP (and VPx), or any active layer. Please note:

- For single screen and ScreenPRO-II destinations, you are working with the individual destination's three frame stores (**Buffer 1**, **2** and **3**) as normal.
- For widescreen destinations, even though you are using the frame stores of *multiple* VPs, you are "operationally" working with only three frame stores (**Buffer 1**, **2** and **3**) — each of which captures's its "slice" of the complete widescreen.

Encore GC provides complete flexibility with regard to frame grabs:

- **Frame Buffers** — The VP has three still frame buffers (**Buffer 1**, **2** and **3**) which function as the three sources from which "on-air" frames originate. The contents of these buffers are visible on the **Stills Tab**. During operations, you can:
  - ~ Capture (grab) frames to any frame buffer.
  - ~ Assign any frame buffer to **BG A**, **BG B** or the **DSK**.
  - ~ Store the contents of a frame buffer into "permanent" memory.
  - ~ Download a frame from permanent storage into any frame buffer.
  - ~ Overwrite any frame buffer with a new capture.

- **Capture Sources** — All frame grabs are *full screen* captures. A frame can be captured from **BG A**, **BG B**, the **DSK**, or any of the scaled inputs (layers).

  The following important rules apply:

  ~ If **BG A**, **BG B**, or the **DSK** is on **Program**, a frame cannot be captured.

  ~ If **BG A**, **BG B**, or the **DSK** is selected on **Preview** (and *none* of those three layers are on **Program**), a frame *can* be captured.

  ~ If you select a **layer** on **Preview** or **Program**, a frame *can* be captured — provided that **BG A**, **BG B**, or the **DSK** is not on **Program**.

  ~ In order to capture a frame from **BG A**, **BG B**, or the **DSK**, the background input "type" must be set to Analog or DVI.

  Note — Because all grabs are full screen captures, when you capture a layer, you will capture the selected PIP with no borders, and with black as the background.

  Once captured, a frame can be assigned as the input “type” for **BG A**, **BG B**, or the **DSK** in the **Background Properties Dialog** or the **DSK Properties Dialog**, respectively.

- **Permanent Frame Stores** — The Encore GC enables you to store up to 100 frames in non-volatile memory.

  Please note:

  ~ Frames in permanent storage are not lost when the VP powers down.

  ~ Permanent frames can be overwritten, deleted (flagged for deletion only), or erased (permanently deleted).

  ~ Any frame in permanent memory can be named.

Capturing Frames from a Background or DSK Input

Use the following steps to capture a frame from a background or DSK input:

1. Select the desired **Destination Control Tab**.
2. Ensure that the background (or DSK) input from which you want to capture is properly set up as an Analog or DVI input.

   ~ In Chapter 6, refer to the "**Background Setup**" section on page 158 for background setup instructions.

   ~ In Chapter 6, refer to the "**DSK Setup**" section on page 160 for DSK setup instructions.
3. Ensure that **BG A**, **BG B** or the **DSK** are not on Program. If these layers are on Program, transition them off Program in the normal manner.
4. In the **Layer Control Section**, on Preview, enable the background (or DSK) from which you want to capture a frame.
5. Right-click the Palette’s background layer to display the pop-up menu:

   ~ To capture from a background, select **Background Properties** to display the **Background Properties Dialog**.

   ~ To capture from the DSK, select **DSK Properties** to display the **DSK Properties Dialog**.

6. For widescreen destinations only:
   - ~ Enable the **All** check box to capture a frame across all video processors.
   - ~ Disable the **All** check box to capture individual frames for different video processors. In this case use the **Processor** drop-down menu to select the specific processor for which you want to capture a frame.

Note

When you select a Processor, the frame will be grabbed only for that Processor — leaving the other "wide screen" portions of that frame store available.

7. If the background is in motion, click **Freeze** if desired.
8. Use the drop-down menu (adjacent to the **Capture** button) to select the frame buffer into which you want to grab the frame (**Buffer 1**, **2** or **3**).
9. Click **Capture**. The captured frame now resides in the selected frame buffer.

Note

To view data about the captured frame, click the **Still Tab**. In the **Still Frame Buffers** section, the still will be listed below the selected frame buffer's radio button, along with the label "Unsaved" and the frame's resolution.

10. Repeat the procedure to capture additional frames from a background (or DSK) input. Remember that you can always overwrite the selected frame buffer.

Please note:

- The captured frame(s) can now be assigned as the background or DSK "type" for **BG A**, **BG B** or the **DSK**.
- To save frames in permanent memory, refer to the "**Saving and Naming Frames in Permanent Memory**" section on page 187.
- Only "saved" frames can be named.

Capturing Frames from a Layer

- Use the following steps to capture a frame from a layer.

1. Select the desired **Destination Control Tab**.
2. Ensure that **BG A**, **BG B** or the **DSK** are not on Program. If these layers are on Program, transition them off Program in the normal manner.
3. In the **Layer Control Section**, on Preview, click the layer from which you want to capture a frame. The layer's raster box blinks. Note that you can not capture multiple layers simultaneously.
4. Adjust the PIP or Key's size and position. Remember that:
   - ~ The system will capture the "selected" layer in its *current size and position*, with no borders, and with black as the background.
   - ~ If you have two layers on Preview, only the active (selected) layer will be captured, regardless of image priority.
   - ~ If the layer is a Key, the original source will be captured — and *not* the keyed effect.
5. If the layer is in motion, click the **Freeze** button in the **Tool Bar**, if desired.

6. Right-click the **Grab** button, and use the pop-up menu to select the frame buffer into which you want to grab the frame (**Buffer 1**, **2** or **3**).
7. Click the **Grab** button. The captured frame now resides in the selected buffer.

Note

To view data about the captured frame, click the **Still Tab**. In the **Still Frame Buffers** section, the still will be listed below the selected frame buffer's radio button, along with the label "Unsaved" and the frame's resolution.

8. Repeat the procedure to capture additional frames from a layer. Remember that you can always overwrite the selected frame buffer.

Please note:

- The captured frame(s) can now be assigned as the background or DSK "type" for **BG A**, **BG B** or the **DSK**.
- To save the grabbed frames in permanent memory, refer to the "**Saving and Naming Frames in Permanent Memory**" section below.
- Only "saved" frames can be named.

Saving and Naming Frames in Permanent Memory

- Use the following steps to save a captured frame into permanent memory.

1. Capture a frame as outlined in the previous two sections.
   - ~ "**Capturing Frames from a Background or DSK Input**" on page 185.
   - ~ "**Capturing Frames from a Layer**" on page 186.
2. Click the **Stills Tab**, and in the **Still Frame Buffer** section, click the radio button for the frame you wish to save.
3. In the right-hand **Still Frame Files** table, highlight the row for the file (**ID**) into which you want to save the frame. You can highlight an empty line, or a line in which a frame already is stored.
4. Click **Save to File >>** to save the captured frame into the highlighted file. The row turns green to indicate that a frame is now stored in the register.

Note

Remember that you can always overwrite a frame in permanent memory.

5. To name the still frame file (or re-name any still frame file in memory), double-click in the appropriate "**Name**" cell, and type the desired name.
6. Repeat the procedure to save additional frames.

Recalling Frames from Memory

- Use the following steps to recalled a frame from memory back into a still frame buffer:

1. Click the **Stills Tab**, and in the **Still Frame Buffer** section, click the radio button for the frame buffer into which you want to recall a frame.
2. In the right-hand **Still Frame Files** table, highlight the row for the frame that you want to recall.

3. Click **Recall from File <<** to recall the frame from memory into the selected buffer.
4. Repeat the procedure to recall additional frames.

Erasing and Deleting Frames

Please remember the following rules regarding erasing and deleting frames:

- The "**Delete File**" procedure enables you to *mark* a selected frame as deleted — but the "**Erase File**" function is *still required* for permanent deletion. You can consider "**Delete File**" as a quick delete function.
- The "**Erase File**" procedure is a destructive process that enables you to *permanently* erase a selected frame.

- Use the following steps to delete a saved frame.

1. Click the **Stills Tab**, and in the right-hand **Still Frame Files** table, highlight the row for the frame that you want to delete.
2. Click **Delete File**. The selected row changes back to the default gray or white.
3. Repeat the procedure to delete additional frames.

- Use the following steps to permanently erase a saved frame.

1. Click the **Stills Tab**, and in the right-hand **Still Frame Files** table, highlight the row for the frame that you want to erase.
2. Click **Erase File**. The selected row changes back to the default gray or white.
3. Repeat the procedure to erase additional frames.

Backing Up and Restoring Configurations

The Encore GC system enables you to backup and restore your system configuration into a user-specified location on your PC or laptop. The following topics are discussed:

Backing up the Configuration

This procedure enables you to back up the ECU configuration. Please note:

- When you back up the configuration, multiple system files are stored in a folder of your choice.
- To store multiple system configurations, create and name separate folders, e.g., **Sys Config 1**, **Sys Config 2**.

Use the following steps to back up the configuration:

1. On your PC or laptop, create a folder in which you want to store the system configuration.
2. In the **Menu Bar**, click **ECU > Backup Configuration** to display the **Save Configuration Files In Dialog**.
3. Navigate to the desired "save in" folder in the normal way.
4. In the dialog, click **Save**. If backup files already exist in the selected folder, you will be asked to confirm the overwrite procedure. Click **Yes to All** to continue.
5. The **File Transfer Status** window appears, which summarizes the status of the backup. Click **OK** to complete the procedure.

Restoring the Configuration

Use the following steps to restore your configuration:

1. In the **Menu Bar**, click **ECU > Restore Configuration** to display the **Get Configuration Files From Dialog**.
2. Navigate to the folder in which the configuration is saved.
3. In the dialog, click **Open**.
4. The **File Transfer Status** window appears, which summarizes the status of the restore operation. Note that the connection to the ECU is lost during the restore process. When the process is complete, the **Reconnect Dialog** appears. Click **Yes** to complete the procedure.

At the conclusion of this procedure, your system is completely restored — exactly the way that you left it when you performed a complete system “backup.”

External Control

For external control, third party controllers such as Crestron or AMX can be connected to the ECU network. In this configuration, presets are programmed and stored using the Encore GC, downloaded to the ECU, and then triggered externally.

When you installed your Encore GC software, a "**Documents**" folder was also installed which contains the Encore GC protocol document:

- (Typical) Location: **C:\Program Files\Barco\Encore GC\Documents**
- Filename: **Encore Controller Protocol Specification - Rev #.pdf**

This document contains all the required remote commands and protocols for connecting your external control system to the ECU network.

A. Specifications

In This Appendix

This appendix provides detailed technical specifications for the Encore GC and ECU. The following topics are discussed:

Physical and Electrical Specifications

The table below lists OCU physical and electrical specifications.

Table A-1. OCU Physical and Electrical Specifications

Parameter	Detail	Specification
Mechanical	Chassis	**H:** 1.73 in. (4.39 cm), 1 RU rack mount
		W: 16.79 in. (42.64 cm), 19.06 in. (48.38 cm) including ears
		D: 18.00 in. (45.72 cm)
Power	Connector	Standard IEC, integral on/off switch
	Power	100-240 VAC, 50-60 Hz, 1.5 - 0.75A
Temperature	Range	0 - 60°C (32 - 140°F)
Humidity	Operation	5% - 95% non-condensing
Weight		7.25 Kg (16 pounds)

Agency Specifications

The table below lists OCU agency specifications.

Table A-2. OCU Agency Specifications

Parameter	Detail	Specification
Emissions	Conforms to:	
	EN-55022;1998/A1:2000/A2:2003	Class A, Conducted Emissions, 150kHz to 30MHz
	EN-55022;1998/A1:2000/A2:2003	Class A, Radiated Emissions, 30MHz to 1GHz
	EN 61000-3-2:2000	Harmonic Current Emissions
	EN 61000-3-3:1995/A1:1998	Voltage Fluctuations and Flicker
Immunity	Conforms to:	
	EN 55024:1998/A1:2001/A2:2003	
	EN 61000-4-2:1995/A1:1998/ A2:2002	Electrostatic Discharge, 8kV Direct Air, 4kV Direct and Indirect contact
	EN 61000-4-3:2002/A1:2002	Radiated RF Immunity, 80MHz-1000MHz, 3V/m, 80% AM 1kHz
	EN 61000-4-4:2004	EFT, 1kV Power, 0.5kV I/O
	EN 61000-4-5:1995/A1:2001	Surge Immunity, 1kV Differential Mode, 2kV Common Mode
	EN 61000-4-6:1996/A1:2001	Conducted RF Immunity, 150kHz - 80 MHz, 3Vrms, 80% AM 1kHz
	EN 61000-4-11:2004	Voltage Dips and Interruptions
Safety	Conforms to:	
	EN 60950-1 (2001)	Electrical Safety Testing

Connectivity Specifications

The table below lists OCU connectivity specifications.

Table A-3. OCU Connectivity Specifications

Parameter	Detail	Specification
USB Ports	4	Two on front, two on rear
Ethernet Ports	2	Rear panel (LAN1, LAN 2), Dual PCIE x 1GbE
Serial Ports	2	Rear panel (COM 1, COM 2), 2 x RS-232
VGA Port	1	Rear panel, HD-15
Keyboard Port	1	Rear panel, PS-2

Input and Output Resolutions

The Encore GC and ECU supports a variety input and output resolutions, as specified in the supported video processors, such as the Encore VP and the ScreenPRO-II. For details, refer to the appropriate processor's User's Guide.

B. Contact Information

In This Appendix

The following topics are discussed in this Appendix:

Warranty

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

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

Return Material Authorization (RMA)

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

- (888) 414-7226

RMA Conditions are listed below:

a. Prior to returning any item, you must receive a Return Merchandise Authorization (RMA) number.

b. All RMA numbers must appear on their return-shipping label.

c. All shipping and insurance charges on all RMAs must be prepaid by the customer

Contact Information

Barco, Inc.
11101 Trade Center Drive
Rancho Cordova, California 95670
USA

- Phone: (916) 859-2500
- Fax: (916) 859-2515
- Website: **www.barco.com**

Sales Contact

- Direct: (916) 859-2505
- Toll Free: (888) 414-7226
- E-mail: folsomsales@barco.com

Barco N.V.
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- Phone: +32 56.36.82.11
- Fax: +32 56.35.16.51
- Website: **www.barco.com**

Technical Support

- Tech Line: (866) 374-7878 — 24 hours per day, 7 days per week
- E-mail: folsomsupport@barco.com

C. Upgrading Software

In This Appendix

The following topics are discussed in this Appendix:

- **Downloading Software**
- **Installing Software**

Downloading Software

Two different methods can be used to download Encore GC system software:

- **Via FTP Site**
- **Via Web Site**

Via FTP Site

Barco's FTP site address is: **ftp.folsom.com**

■ To download from the FTP site:

1. Create a target folder on your PC (e.g., Encore GC).
2. If you are using an FTP client, logon to our site as follows:
   - ~ **User name**: anonymous
   - ~ **Password**: your email address
   - ▲ **Example**: johndoe@somecompany.com

   If you are using a web browser to access our FTP site, point the browser to:

   ftp://ftp.folsom.com
3. Once logged on, navigate to the following directory:

   ftp://ftp.folsom.com/Image Processing/EncoreGC/Released/
4. Transfer the following file to the target folder on your PC:

   EncoreGCInstall.exe
5. Please continue with the "**Installing Software**" section on page 198.

Via Web Site

Barco's web site address is: **www.barco.com**

- To download from the web site:
  1. Create a target folder on your PC (e.g., Encore GC).
  2. On the web, navigate to:

     http://www.barco.com
  3. Navigate to the “Events” home page:

     http://www.barco.com/events
  4. Log in to the **Barco Partnerzone**. Note that a user name and password are required.
  5. Navigate to the “**Software Updates**” link.
  6. Click the **Folsom Image Processing** tab.
  7. Download the latest version of **Encore GC** software.
  8. When the **File Download Dialog** appears, click **Save** to save the file to your computer.
  9. When the **Save As Dialog** appears, navigate to the target folder and click **Save**.

Installing Software

- To install software:
  1. With the software download complete, in Chapter 4, follow the software installation steps that are outlined in the “**Installing Encore GC Software**” section on page 46.

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