grass valley

Encore
CONTROL SYSTEM

Control Panels Operation Manual

SOFTWARE VERSION 1.7.3

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NOVEMBER 2007

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The www.thomsongrassvalley.com web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Download software updates, drivers, and patches.

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END-OF-LIFE PRODUCT RECYCLING NOTICE

Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive, the United States Environmental Protection Agency, and U.S. state and local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight. However, you are responsible for the removal of the equipment from your facility and packing the equipment to make it ready for pickup.

For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the U.S. and Canada please call 800-547-8949 or 530-478-4148, and ask to be connected to the EH&S Department. Additional information concerning the program can be found at: www.thomsongrassvalley.com/environment

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Contents

Preface

About This Manual

This *Encore Control Panels Operation Manual* is designed for operators of a Grass Valley Encore control system who are not involved in Encore system configuration or servicing.

Documentation Set

The basic Encore documentation set consists of:

- *Installation and Service Manual*,
- *Configuration Manual*,
- *Control Panels Operation Manual*, and
- *Release Notes*.

The *Installation and Service Manual* contains information about installing Encore system hardware, maintaining Encore system components, and configuring network communications used by the system.

The *Configuration Manual* contains information about configuring an Encore system to meet the needs of your facility. Background information about Encore system design is included, and a description of the Encore Operator User Interface (OUI); which is used to configure, test, and operate the system; is also provided.

The *Control Panels Operation Manual* provides operating information for the control panels used with the Encore Control System.

The *Release Notes* contain information about new features and system enhancements for a specific software version. Software installation procedures are also provided. Always review the Release Notes for your current system software before you begin working with your Encore system.

Additional Documentation

Documentation for various Encore system options is also available:

- *Encore Soft Panels Instruction Manual*, and
- *Encore Salvo Editor Instruction Manual*.

Software engineering documentation, intended for third-party developers and in-house software engineers, is also available:

- *Routing Products Protocols Manual*.

Section 1

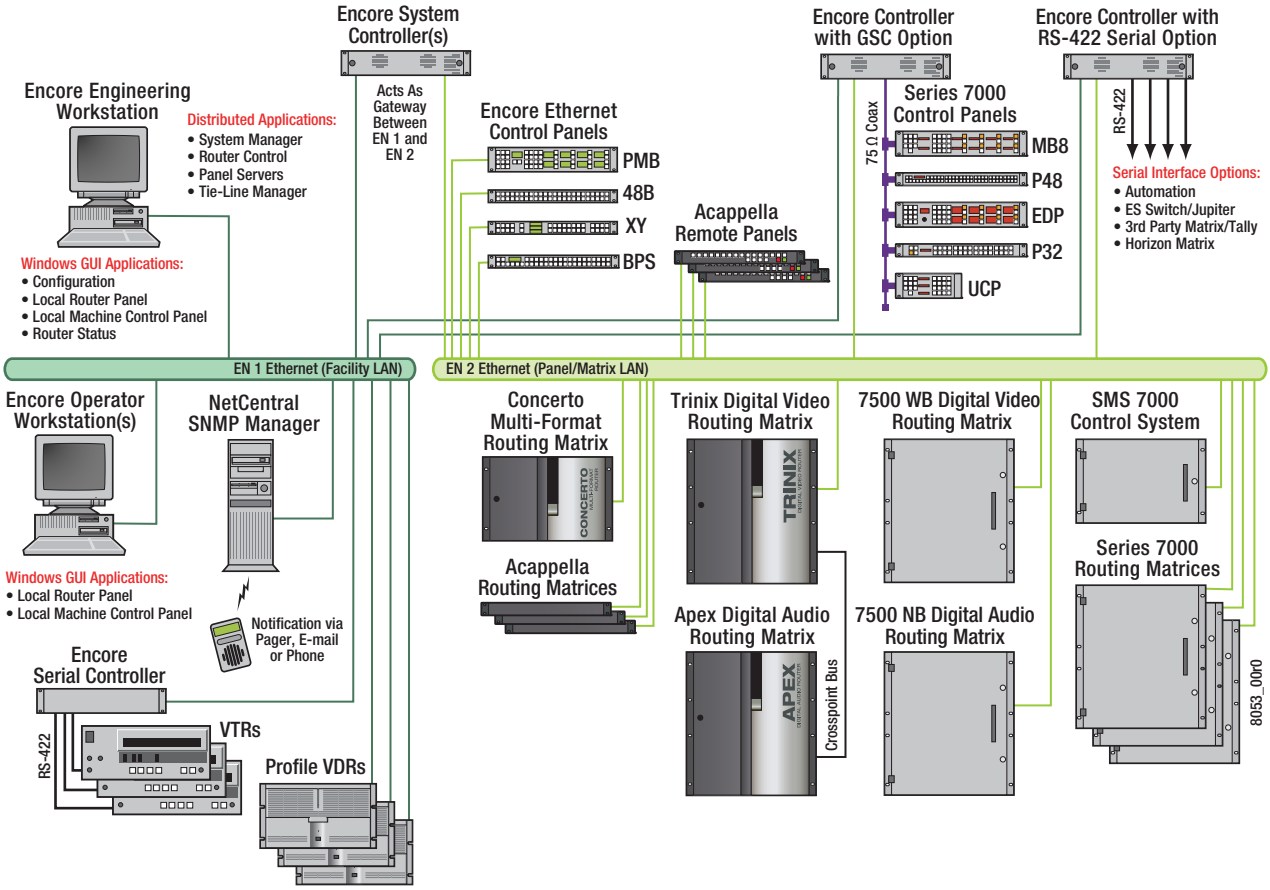
Encore System Overview

Note This same Overview section is included in several Encore manuals. If you are familiar with this material you can skip to the next section.

Introduction

The Encore system is an open, scalable platform for full router and facility control. Featuring tight integration with Grass Valley router matrices, third-party routers, automation systems, and other equipment, the Encore system can consolidate media assets under a single, unified control system.

Figure 1. Encore Facility Control System



The Encore system modular design lets broadcasters and other high-quality content creators select just the level of control they need. At its most basic, the Encore system can configure and control the crosspoints of a single routing matrix, but it can be expanded to control multiple matrices.

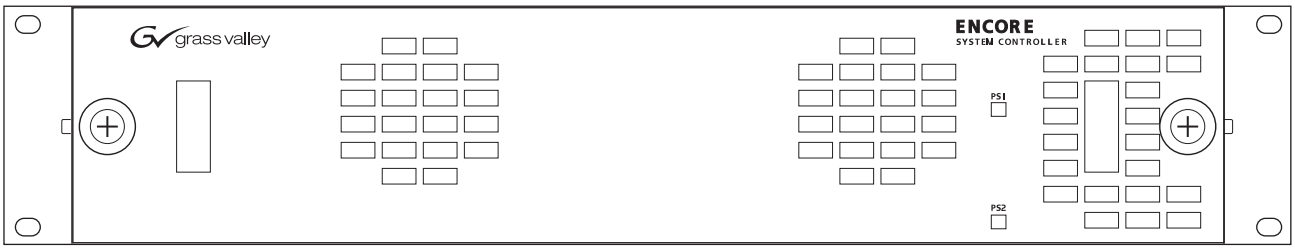
Controlled Hardware

Encore can control a wide range of Grass Valley routers including Trinix, Apex, Concerto, Acappella, 7500 WB, and 7500 NB using Ethernet. Legacy 7000 Series and Horizon routers can be serially controlled. In addition, Encore can control the popular Grass Valley Venus routers with a serial interface to a VM-3000 protocol translator. A wide range of third party routers can also be controlled through a number of supported serial interfaces. Users can also add tally and machine control via Ethernet or serial interfaces.

Encore System Controller Frame

The two rack-unit Encore System Controller Frame supports up to two System Controller Board (SCB) modules and two power supply modules for redundancy. A standard Encore System Controller Frame is equipped with one SCB and one power supply. All modules are front removable and hot pluggable. Cooling is built into the frame so no external cooling units are required.

Figure 2. Encore System Controller Frame



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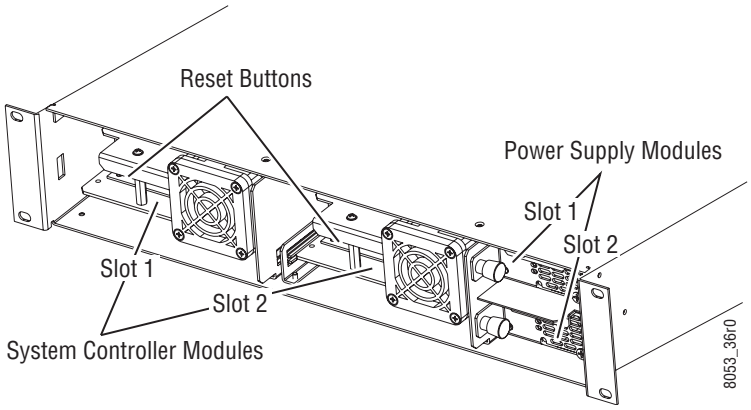
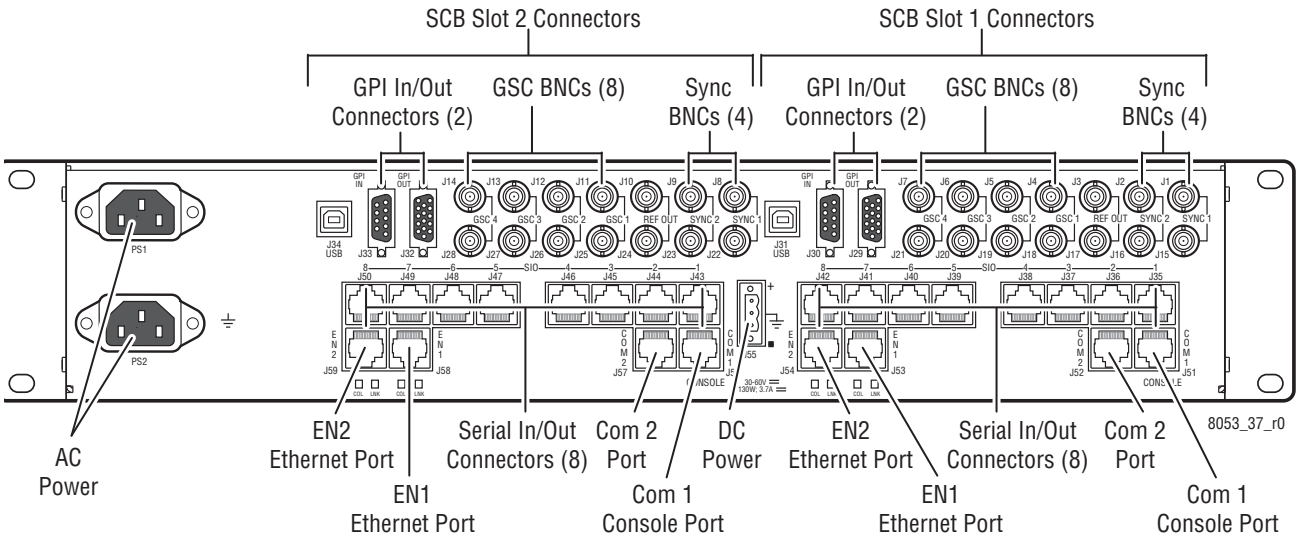
The System Controller Frame has two slots for SCBs and two slots for Power Supply modules, located behind the front cover/air filter. Status indicator LEDs and a reset button are located on each SCB (Figure 3).

Figure 3. System Controller and Power Supply Modules



Cabling and power connectors are located on the rear of the System Controller Frame (Figure 4).

Figure 4. System Controller Frame Rear View



Multiple Encore System Controller Frames can be used to support large systems and to increase throughput by dividing tasks among the controllers. SCBs in the same frame can be configured to control different hardware or to operate redundantly. An SCB in one frame can even operate redundantly with an SCB in a different frame.

Control Panels

A wide variety of hardware control panels are available that can work across the room or across the country via IP LAN/WAN connections. Many Grass Valley legacy hardware control panels can also be used with optional serial interfaces. Optional PC control panel software is also available that emulates many of these hardware panels.

The control panel operator views and selects Sources and Destinations by name and does not need to be concerned with the actual physical cabling or numbers of inputs and outputs.

Two representative Encore control panels are illustrated below.

Figure 5. Encore Paging Multi Bus (PMB) Control Panel

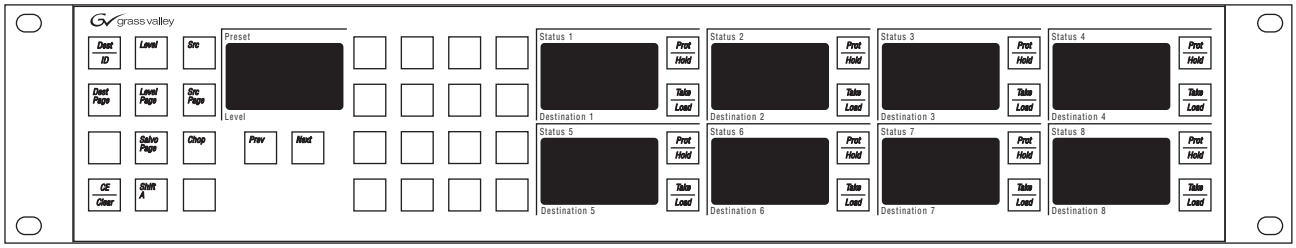


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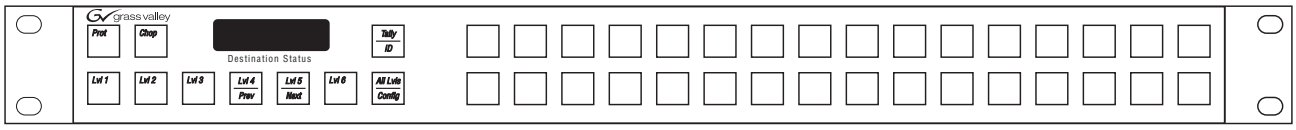
Figure 6. Encore Button Per Source (BPS) Control Panel



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An Acappella control panel and an SMS7000 control panel, both originally developed for other routing systems but able to be configured to work with Encore, are illustrated below.

Figure 7. Acappella 16x16 Remote Panel

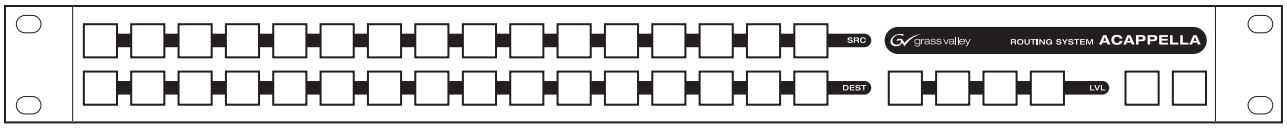

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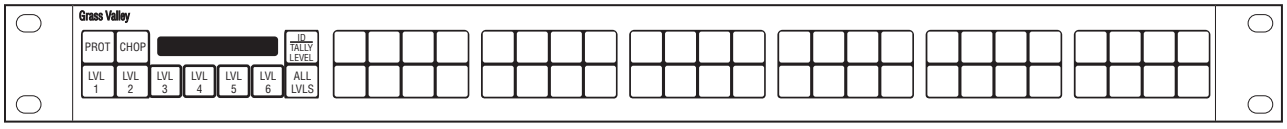
Figure 8. SMS7000 P48 Control Panel



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Encore System Control Fundamentals

Distributed Control System

The Encore system uses a distributed control networked architecture. Various Encore software components are installed on different hardware locations to perform different tasks. This design provides extraordinary system power and flexibility. Configuration files are downloaded over the network to target devices, permitting rapid configuration changes while the Encore system remains operational. User-specific system-wide access privileges can also be established to restrict system control as appropriate.

Encore Database

Information vital to Encore system operation resides in a collection of data files, collectively called the Encore database. These files model the routing matrix hardware being controlled, name input Sources and output Destinations, determine matrix Levels, and specify the operational capabilities of the control panels. The Encore database is created when the system is commissioned and is typically maintained by facility engineering staff. The Encore database resides on the same PC as the Sharer.

Sharer Application

The Sharer application automatically downloads configuration information to Encore system components when they are power up or reboot. The Sharer application runs on a PC, and must be running when the Encore system is configured. The Sharer does not need to be running to sustain control panel operation. However, we recommend the Sharer application run at all times, as this makes it easier to resume configuration procedures.

CAUTION An Encore system can have only one Sharer application running on the network at any time. This is important to remember during software installation, or if a notebook PC with the Sharer is moved to different locations.

Configuration PC

An Encore system is configured using a standard PC installed with the appropriate Encore software. Once configured, Encore control panels will be able to switch crosspoints on routing matrices even if the configuration PC is turned off or disconnected from the network. Typically the configuration PC also has the Encore Sharer application installed, but this application can reside on any PC on the network.

Sharer PC

The Sharer PC is the PC on which the Sharer is installed. Typically the configuration PC and Sharer PC are the same, but separate PCs can be used.

Routing Basics

Terminology

Area - An Area is a defined group of Sources and Destinations. Takes are restricted to connecting Sources and Destinations within the same Area (unless Tie-Lines are used). Defining multiple Areas makes it possible to assign the same easily identifiable Source and Destination names (like VTR_1, VTR_2) for use by different devices at different locations in the facility.

Breakaway - A Take operation that switches a Source on at least one Level that is different from the Sources selected on the other Levels.

Channel - The communication path used to control the crosspoint group by the Router Control Engine over a selected protocol such as Serial or Ethernet paths.

Chop - A variation of a Take command that alternately connects each of two different Sources to a single Destination (flip-flopping) at a designated switching rate (the chop rate).

Crosspoint - An electronic switch that allows a signal to pass from an input to an output when the switch is closed.

Destination - The location to which Source signals are routed. A Destination may include one or more outputs across multiple Levels.

Exclusion Set - User-determined set of items excluded from control by a particular control panel. Exclusion sets can be created for Areas, Destinations, Levels, or Salvos. An exclusion set may be shared by more than one panel.

Flag - A parameter that can be set in a control panel template to control how a panel operates.

Level - A grouping of signals of a particular type, such as digital video, audio right, audio left, Red, Green, or Blue, etc. This grouping becomes an independently controllable stratum of signals within a routing system.

Matrix - A configuration of potentially intersecting inputs and outputs. In routing switchers, a matrix is signal switching hardware configured such that any input may be switched to any output.

Preset - Selecting an item (for example a Source or Destination) in preparation for an action.

Protect - A control function that prevents control panels or devices from changing the current Source selection for the specified Destination.

Salvo - A named, system-wide preset which, when executed, can change crosspoints on multiple Destinations at the same time.

Source - An input signal or collection of input signals generally associated with a particular device (like a VTR or DDR). A Source may contain signals from multiple Levels.

Take - The direct, immediate switching of a different Source to a Destination. The Take occurs during the vertical interval for a clean transition.

Template - A set of parameters that can be applied to a control panel's configuration. The same template can be applied to multiple panels.

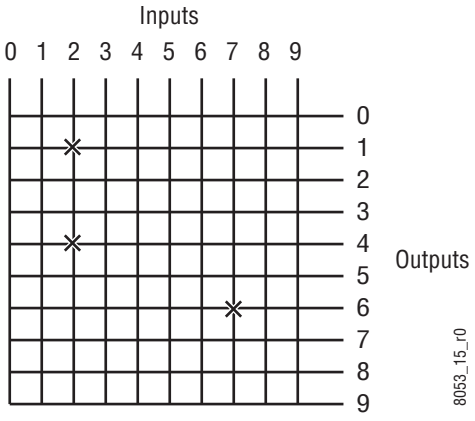
Tally - A status acknowledgment returned to a control panel or terminal that an operation has been executed. Typically this will light up a button, but a Tally may report text (for example a Source name).

Tie-Line - A system tie-line is a physical connection used to give a Destination connected to the output of one matrix access to Sources connected to the input of another matrix. A signal which passes through two or more matrices; more specifically the path (consisting of one or more Tie Wires) which links a Destination of one matrix to a Source of another matrix. A local tie-line is a special type that has Sources and Destinations in the same matrix, usually sending the signal out of the matrix for external processing.

Matrix Crosspoints and Levels Description

Each router matrix can be broken down into a number of switching matrices. A single switching matrix controls the switching (or routing) of a particular type of electrical signal (e.g. digital video, analog video, audio, data, etc.). These different signal formats are referred to as Levels. When a connection is made, a path is formed between a unique Source (logical grouping of physical inputs) and a unique Destination (logical grouping of physical outputs). The physical connection is accomplished using crosspoint circuitry. Figure 9 illustrates how a single switching matrix operates.

Figure 9. A Single Switching Matrix



Any of the 10 inputs (numbered 0 to 9) can be routed to any of the 10 outputs (numbered 0 to 9). One input can also be routed to more than one output. All the possible routes are represented by the intersections of the horizontal and vertical lines in the illustration. The points where the lines meet (crosspoints) can be thought of as switches that allow the inputs to be connected to the outputs. In this example, three crosspoints are on (as indicated by the **X** symbols), and the following routes are made:

- Input 2 is routed to Output 1 and Output 4.
- Input 7 is routed to Output 6.

Sources and Destinations Description

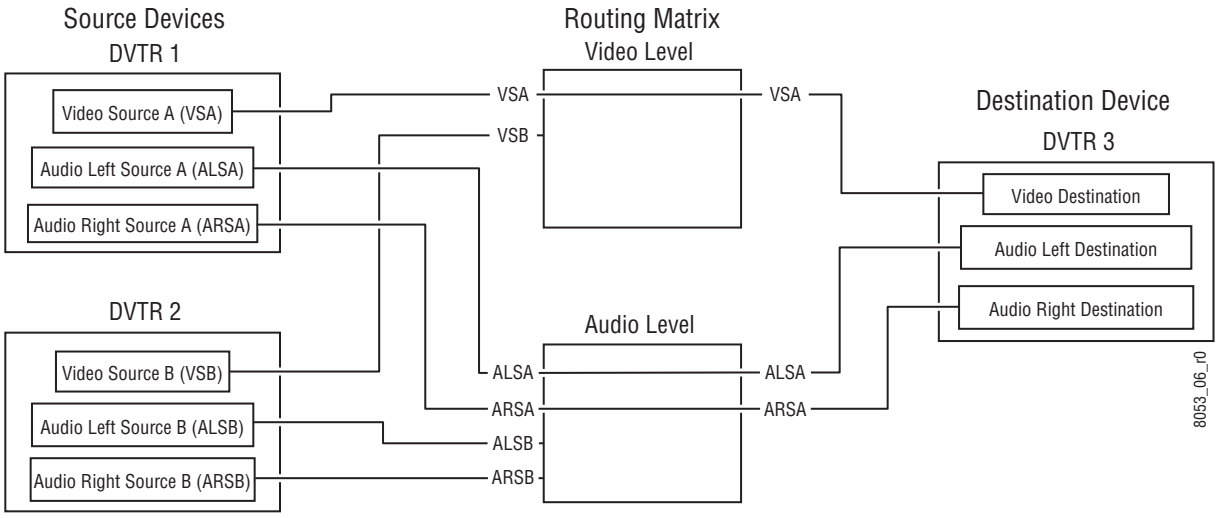
Sources consist of input signals to the router, and Destinations are output signals from the router. An individual Source or Destination may contain more than one signal. For example, a Source may consist of a video and a key signal; be separate Red, Green, and Blue video signals; or have a video signal and several associated audio signals. Each signal type is considered a Level. In general, a Source and Destination need to be configured with same number and type of Levels in order for Takes connecting them to be successful.

Multi-Level Switching Description

All Level Take

An all Level Take switches the same input number on all Levels, to the controlled Destination, as shown in Figure 10.

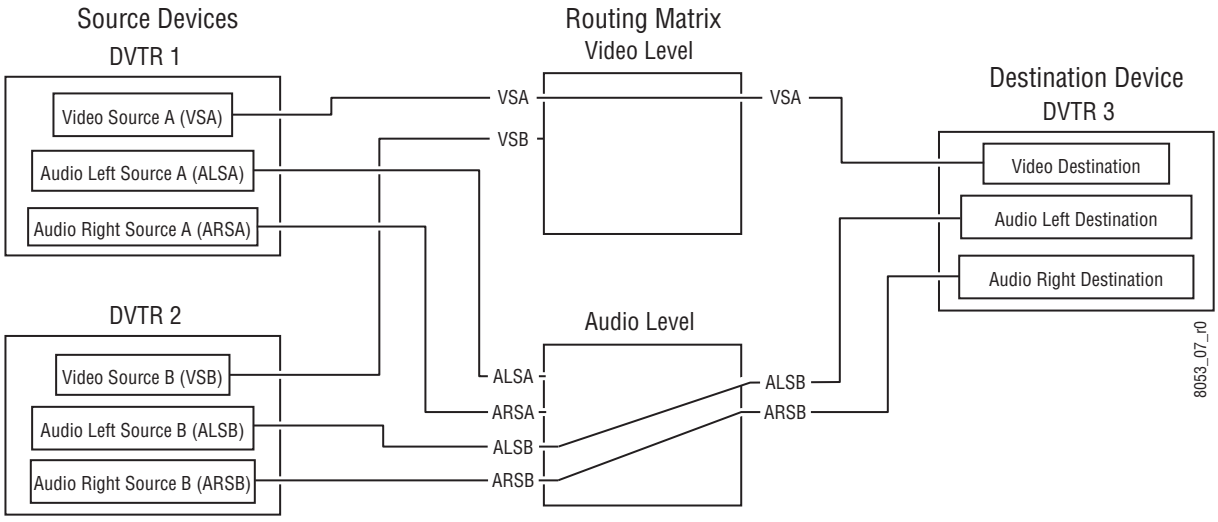
Figure 10. Traditional All Level Take



Breakaway Take

A Breakaway Take is performed by selecting a Source different from the others (on at least one Level) to the controlled Destination. Breakaways allow a Destination to use different Sources (Figure 11).

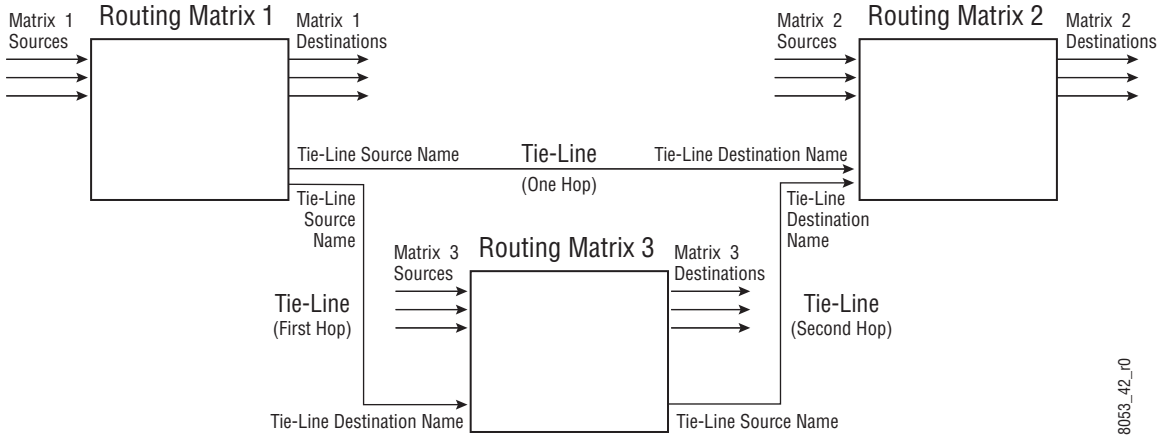
Figure 11. Breakaway Take



Tie-Line Description

Tie-lines can be used to link different matrices, allowing Sources in one matrix to be routed to Destinations in another matrix. Each tie-line has a Source Name and a Destination Name that defines the signal path. A tie-line Source is actually a Destination of the first matrix, and the tie-line Destination is a Source of the second matrix. Routes that employ more than one tie-line are called multi-hop tie-lines (Figure 12).

Figure 12. Tie-Lines



Once configured on an Encore system, actual tie-line operation is transparent to the operator. The Tie-Line Manager application automatically creates and releases tie-line paths as needed.

Section 2

Control Panels Overview

Control Panel Hardware Types

An Encore system supports many types of hardware control panels, several of which were originally developed for other routing systems.

Encore Control Panels

- Paging Multi-Bus (PMB)
- Forty-Eight Button (48B)
- Button-Per-Source (BPS)
- XY Panel (XY)

SMS 7000 Control Panels

- Eight Destination Paging (EDP)
- 48 Button-Per-Source (P48)
- Universal (UCP)
- Programmable Multibus 8 (MB8)
- 32 Button-Per-Source (P32)

Kalypso Remote Aux Panels

- KAL-32AUX1
- KAL-32AUX2

Acappella Control Panels

- Several different hardware models, ranging from 16x16 to 8x1

Soft Panels

Besides hardware control panels, software emulations of control panels are also available. Soft Panels are virtual versions of physical control panels that can run on PCs connected to an Encore network. Soft Panels feature a Graphical User Interface (GUI) that represents the various specific panel types supported. Once configured, each Soft Panel type operates the same as the corresponding hardware panel. Soft Panels are sold separately from the Encore system and are individually licensed.

See the separate *Encore Soft Panels Instruction Manual* for more information.

Control Panel Communications Interfaces

Encore, Acappella, and Kalypso panels use Ethernet and require the use of Ethernet switches and Cat 5 Ethernet cabling.

SMS 7000 control panels use Global Serial Channel (GSC) communications, and require installation of a GSC mezzanine in the Encore System Controller and 75 Ohm coaxial cabling for operation.

Refer to the separate *Encore Installation and Service Manual* for more information.

Control Panel Software

Encore control panels ship from the factory with Encore software installed and will be ready for network and operational configuration. You may need to update Encore control panel software to the latest version, however, particularly if you use previously purchased Encore panels with your Encore system.

Control panels developed for other systems will need to have their software updated for use with Encore. These panels can then be configured using the Encore system OUI.

This manual, intended for operators, assumes the control panels being used have already been updated with the correct software and configured for operation. Software installation and upgrade procedures for specific Encore software releases are covered in the separate *Encore Release Notes*. Control panel configuration procedures are covered in the separate *Encore Configuration Manual*.

Control Panel Configuration

The configuration of a particular control panel defines how that panel behaves. For example, the panel configuration determines which Destinations and Levels a panel can control, which buttons perform which functions, and how the control panel accomplishes other operations.

Template files are available that can be used as a starting point for panel configuration. When a new control panel is added to an Encore system, it automatically receives configuration information from a default template for that type of panel. This configuration can then be saved with the name of that panel, and be modified to change the behavior of that panel. That configuration is then used by that control panel, unless it is modified or a different template file is loaded to that panel.

Some operations described in this manual may be limited by system or panel configuration constraints. Refer to the *Encore Configuration Manual* for system and control panel configuration instructions.

Control Panel Defaults (Factory and Facility)

Encore systems ship with factory default control panel templates. This allows a control panel to be taken out of its box and used immediately.

Encore systems support different control panel default templates. The factory defaults cannot be edited by the user. Custom templates can be created for each type of panel, and you can specify these defaults are to be used when a new panel of that type is added to the Encore system.

Note Different Encore software versions may have factory panel default files with different settings, resulting in different behavior for new panels added to a system, depending on the version of Encore software being run.

Factory Default Templates and Areas

Control panel factory defaults are based upon the default Area (Area 1) configuration. Areas create hierarchies within the Encore Control System which makes it easier to group Sources and Destinations in a large system. The default Area is where control panels find their defaults. If Area 1 has been configured with Sources, Destinations, and Levels, then the control panels will operate using the Area 1 defaults. Once an Area is defined, an Area prefix is automatically assigned to each Source and Destination in the Area by the router engine. The Area prefix is part of the system name and can be displayed on certain panels. Typically, in most installations, a single Area is used.

If multiple Areas are used at a facility, some or all of the control panels may need to be re-configured before they can be used.

Control Panel Basic Functions

Protect and Lock

In general, the Protect function (enabled/disabled during panel configuration) locks the Source selections for all the levels of a Destination. When a Destination has been Protected by a panel, other panels in the facility will not be able to change that Destination's Source selections (unless that other panel has been configured with a Protect Override). The panel which initiated the Protect can still be used to change Sources for a Destination that panel has protected, and that panel can also remove the protection from that Destination.

There are actually several different Protect and related Lock parameters that provide different capabilities that interact with each other. These include Hard Lock, Soft Lock, and Lock/Protect Override. The actual behavior of a specific panel depends on the setting of these parameters.

Refer to *Section 7-Panel Operation Variations* and the separate *Encore Configuration Manual* for more information.

Salvos Excluded

Salvos can switch multiple Sources to multiple Destinations with a single button press. Default Encore panel configurations exclude all Salvos, to prevent accidentally changing multiple crosspoints on an existing Encore system when a new panel is installed.

The default setting for Encore control system panels excludes all Salvos. To use Salvos with a control panel, its configuration must be edited and reloaded to that panel. Refer to the separate *Encore Configuration Manual* for specific instructions.

CAUTION Be sure you understand what a Salvo will do before you use it, and only fire a Salvo when it is appropriate to do so. Changing multiple Destinations with a Salvo can have far-reaching consequences, including possibly disrupting on-air operations.

Chop Inactive

The Chop feature allows rapid switching between two sources (typically used for timing purposes or picture quality comparisons).

The default setting for Encore control system panels has Chop deactivated. Panels will need to be reconfigured to use the Chop feature.

Section 3

Encore Control Panels

Introduction

Key Features

- Web browser-based setup,
- 10/100Base-T Ethernet RJ-45 control interface, includes active and collision indication,
- Internal auto-ranging AC mains power supply,
- Back-lit buttons for use in low-light conditions with display intensity adjustments, and
- Simple name-based identification.

Panel ID

Encore panels equipped with alphanumeric displays can report the following information for that panel (as appropriate).

- Panel IP Address
- Panel Name
- Controlled Destination Area Name
- Controlled Destination Name
- Name of the Current Active Level
- Protect Override, if set
- Tieline Name, if used

With default panel configurations, pressing the **Dest/ID** button on PMB and XY panels when these buttons are already illuminated, or holding down the **TallyLvl/ID** button on BPS panels, will activate the panel ID mode. On PMB and XY panels, pressing the **Src** button when it is illuminated reports additional information in the various displays on the panel.

You can interrupt the ID display sequence at any time by pressing a different mode button. It is not necessary to let the identification routine finish. Pressing a button during the ID display does not execute that button's function, but instead cancels the ID reporting.

PMB Panel

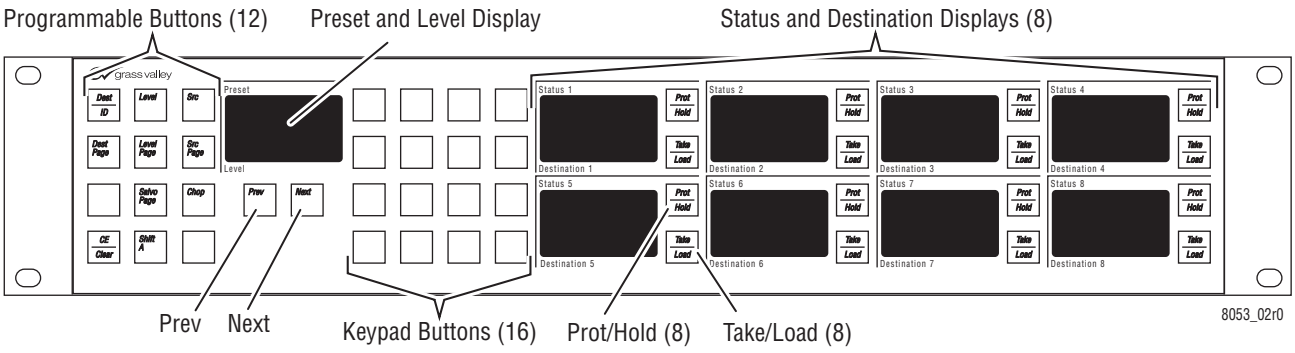
PMB Panel Features

- 2RU rack mount,
- Multi bus display of both Source and Destination,
- Individual protects per Destination,
- Paging mode offers the ability to scroll through pages of Sources, Destinations, Levels, and Salvos,
- Previous / Next scrolling within prefix group,
- 12 user-defined programmable buttons, and
- 16 button user-defined prefix /suffix keypad, with shift capability to support up to 32 prefixes and suffixes.

PMB Panel Description

The PMB (Paging Multi-Bus) panel has a group of programmable buttons and a display for **Preset** and **Level** on the left, a programmable keypad in the center, and eight **Status** and **Destination** displays on the right (Figure 13).

Figure 13. PMB Panel

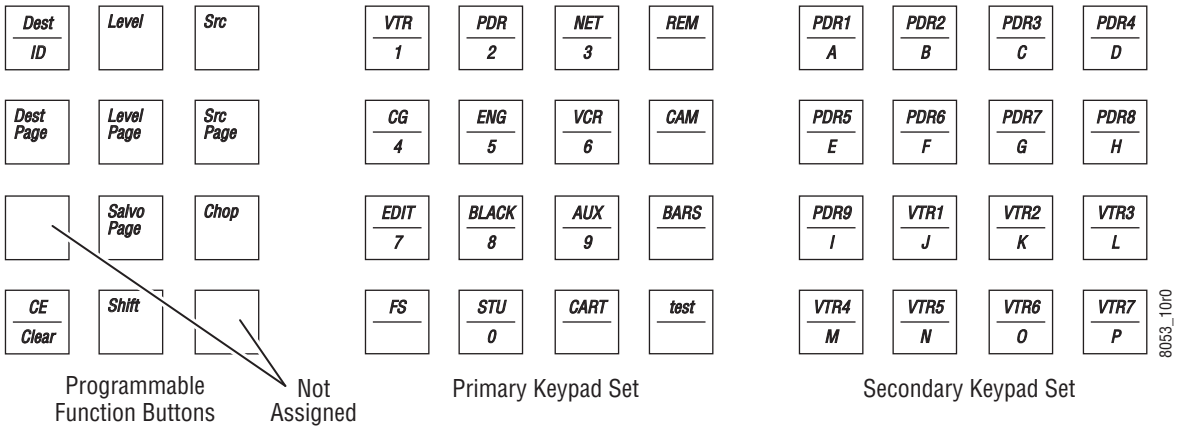


PMB Panel Default Button Assignments

The default button configuration for the PMB panel is shown in Figure 14.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 14. PMB Panel, Default Button Configuration and Keypad Sets



The Keypad is initially assigned the Default Keypad Sets, with the Primary keypad set active. To access the Secondary keypad set, press the **Shift** function button.

Default panel configurations have the Chop feature inactive.

Taking a Source to a Destination (PMB Panel)

The Take operation connects an incoming Source to an outgoing Destination. The PMB panel is able to control multiple Destinations (statuses for eight destinations are displayed simultaneously). You will choose which Destination you wish to change, preset the desired Source, and then perform the Take.

1. If the desired destination is not already shown in one of the eight Status displays on the right, load that destination to a status display.
   a. Press the **Dest/ID** button to enter Destination mode.
   b. Assign the desired Destination to the Preset display. You can either:
      - Use the **Prev** or **Next** buttons (holding down the button to scroll), or,
      - Enter the prefix and suffix with the keypad (if the panel configuration supports this operation). With a prefix selected, you can use the **Prev** and **Next** buttons to scroll through the available items with that prefix, or you can use the keypad to enter suffix numbers. The **CE/Clear** button is used to incrementally clear keypad entries.

c. Load that preset Destination to one of the Status displays on the right by pressing the **Take/Load** button for that display. These buttons are illuminated (and active) only when Preset has a valid item.

Note A panel's configuration may exclude control of some Destinations or Levels. Excluded items will not be selectable in the Preset display.

2. Select the desired Source in the Preset display.
   a. Press the **Src** button to enter Source mode.
   b. Assign the desired Source to the Preset display (use the same procedure as Step b of *Taking a Source to a Destination (PMB Panel) on page 27*).
3. Press the **Take/Load** button on the Status display on the right for that Destination to take that preset Source. The name of the new Source will be displayed in that Destination's status display.

Note If Destination and/or Source pages have been configured, the **Dest Page** and **Src Page** buttons can be used to browse successive groups of eight items.

Breakaway Take (PMB Panel)

A breakaway Take switches Sources on only some Destination Levels, leaving the other Levels for that Destination unchanged. You will preset the Destination, examine the status for that Destination's Levels, select the Level(s) to be changed, select the Source, and then Take that Source to only those Destination's levels.

Note Destinations with active breakaways display an asterisk (*) in their Destination Status displays.

1. Assign the Destination on which you wish to perform a breakaway Take to the Preset display.
   a. Press the **Dest/ID** button to enter Destination mode.
   b. Assign the desired Destination in the Preset display (use the same procedure as Step b on page 27).
2. Press the **Level Page** button to enter Level mode. In this mode the Status displays on the right show the status of only the preset Destination (not eight different Destinations). The current sources of each Level for that Destination are shown.
3. Illuminate the **Take/Load** buttons for only the Destination Levels you wish to change by toggling these buttons on or off. At least one Level must be selected.
4. Press the **Src** button to enter Source mode.

5. Assign the desired Source to the Preset display (use the same procedure as Step b on page 27).

6. Press the **Take/Load** button on the Status display on the right for the desired Destination. The name of the new Source will be displayed in that Destination's status display and an asterisk will indicate it has a breakaway.

Note After setting up Levels for a breakaway, subsequent Take operations will change only those Levels for any currently selected Destination, not just the preset Destination.

Note The default panel configuration retains the Levels selected for a breakaway Take for all subsequent Take operations, until the Level selections are changed or a different Destination is selected.

Level Tally (PMB Panel)

When a PMB panel displays the status of eight Destinations, each Destination reports only one Source. When Destinations have multiple levels and breakaways are active, you may wish to choose which Level's Source will be reported for each Destination.

1. Press the **Level** button to go to Level status selection mode.

2. Use the **Prev** and **Next** buttons to cycle through the available levels and leave the name of the desired level displayed.

Note If `ALLLVL` is selected the panel will report the Default Tally Level configured for that panel.

3. Press the **Src** button to return to Source mode. Now Sources for the level you selected will be reported on the Destination Status displays.

Protect (PMB Panel)

Note With default panel configurations, only the control panel that set the Protect can unprotect that Destination. When a Protect has been set, the **Prot** button on the panel that set the Protect will blink, and the **Prot** buttons on other panels accessing that destination will be illuminated without blinking.

Note Pressing and holding a steadily illuminated **Prot** button on a panel with a text display will report the name of the panel that set the Protect.

To Protect a Destination

1. If the desired destination is not already shown in one of the eight Status displays on the right, load that destination to a status display (use the same procedure as Step 1 on page 27).
2. Press the **Prot** button located to the right of the Status display for the Destination you wish to Protect. The **Prot** button will blink on that panel. The **Prot** buttons will also illuminate steadily on all other Encore panels in your system with that Destination selected, indicating it is protected.

To Unprotect a Destination

1. If the desired destination is not already shown in one of the eight Status displays on the right, load that destination to a status display (use the same procedure as Step 1 on page 27).
2. Toggle the blinking **Prot** button so it is no longer illuminated.

Note PMB panels do not report Protects for Destinations not currently assigned to the Status displays. Care should be taken to relinquish all unneeded Protects before changing Destinations on these panels. You should also remember to free up all Destinations no longer requiring protection before you leave the vicinity of the PMB panel.

Salvo (PMB Panel)

When a PMB panel has been configured with Salvo capabilities, you will be able to select a Salvo and execute it.

CAUTION Be sure you understand exactly what a Salvo will do before you use it, and only fire a Salvo when it is appropriate to do so. Changing multiple Destinations with a Salvo can have far-reaching consequences, including possibly disrupting on-air operations.

1. Press the **Salvo Pg** button to enter Salvo mode. The first page of available Salvos will be displayed in the Status displays on the right.
2. If multiple pages of Salvos have been configured, use the **Prev** and **Next** buttons to move through the available pages of Salvos.
3. When the desired Salvo is displayed, press the **Take/Load** button on that Status display to execute the Salvo.
4. Press the **Src** button to return to Source mode. If Destinations involved in that Salvo are displayed, their Status displays will report their new Sources.

XY Panel

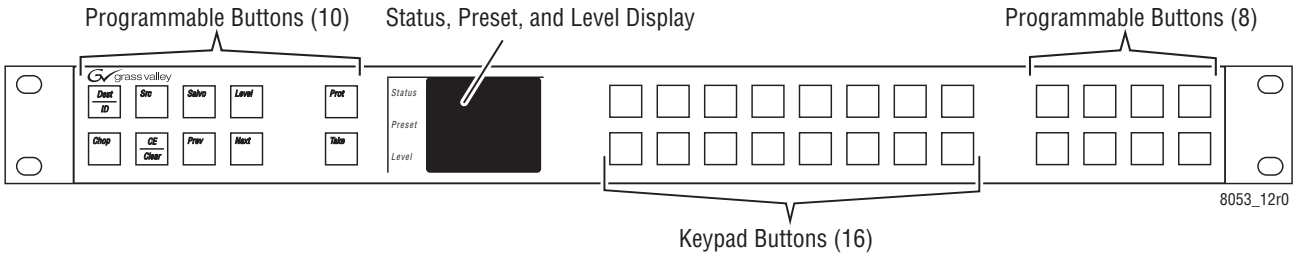
XY Panel Features

- 1RU rack mount,
- Status, Preset, and Level display with three 8-character readouts,
- 16 button user-defined prefix /suffix keypad (2 rows of eight), and
- 18 programmable buttons.

XY Panel Description

The XY panel's name represents the fact that all inputs (X) mapped to the panel are available to all outputs (Y) mapped to that panel. The XY panel has a display for **Status**, **Preset** and **Level**, a programmable keypad, and two groups of programmable buttons on the far left and right (Figure 15).

Figure 15. XY Control Panel

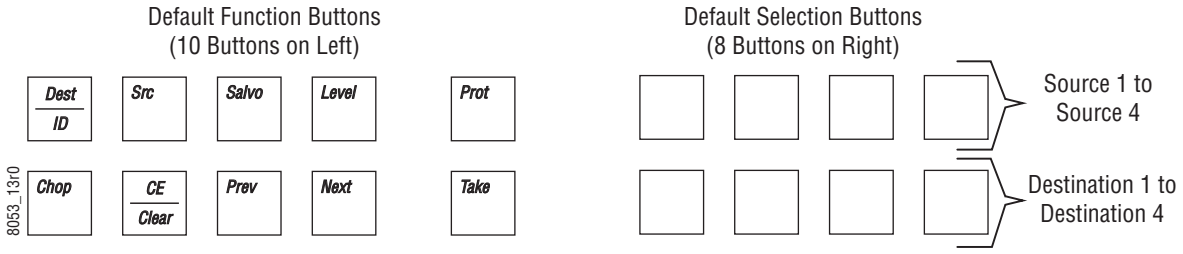


XY Panel Default Button Assignments

The default function and selection button configuration for the XY panel is shown in Figure 16.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 16. XY Default Button Configuration



The default Keypad set for the XY panel is shown in Figure 17.

Figure 17. XY Default Keypad Configuration

Status Display Reporting of Source and Destination

The state of one destination at a time can be reported in the XY panel status display. The display can also report Source and Destination names for the dedicated XY panel buttons.

- When a dedicated Destination selection button is pressed and released so it is illuminated, the name of the current Source for that Destination is shown in the status display.
- Holding down a dedicated Destination button displays the name of that Destination. This lets you confirm the panel's Destination button configuration before use.
- When a non-dedicated Destination has been loaded to the Preset display, pressing the **Src** button to go to Source mode will make the Status display report the name of the current Source for that Destination.

Taking a Source to a Destination (XY Panel)

The Take operation connects an incoming Source to an outgoing Destination. An XY panel can switch any source to any destination (provided the panel's configuration has not excluded them from control). XY panels can also be configured with dedicated Source and Destination buttons.

Using Dedicated Destination and Source Buttons

If the XY panel has buttons dedicated for the Destination and Source you wish to connect, simply touch the Destination button so it is illuminated, then touch the desired Source button. The name of the new source will be reported in the status display.

Switching Non-Dedicated Sources to Destinations

Destinations not mapped to XY panel buttons will need to be loaded to the preset display. You then select a Source and perform the Take.

Note A panel's configuration may exclude control of some Destinations and Levels. Excluded items will not be selectable in the Preset display.

1. Press the **Dest/ID** button to enter Destination mode.
2. Assign the desired item to the Preset display. You can either:
   - Use the **Prev** or **Next** buttons (holding down the button to scroll), or,
   - Enter the prefix and suffix with the keypad (if the panel configuration supports this operation). With a prefix selected, you can use the **Prev** and **Next** buttons to scroll through the available items with that prefix, or you can use the keypad to enter suffix numbers. The **CE/ Clear** button is used to incrementally clear keypad entries.
3. Load that Destination to preset by pressing the **Take** button. The name of that Destination will be reported in the display.
4. Press the **Src** button to enter Source mode.
5. Select the desired Source on the preset display (use the same procedure as Step 2 above).
6. With the name of the desired Source displayed, press the **Take** button. The connection will be made and the name of the new Source will be reported in the status display.

Note If the desired Source is mapped to an XY panel button, pressing that button in Source mode with the Destination preset will simultaneously select that source and perform the Take.

Breakaway Take (XY Panel)

A breakaway Take switches Sources on only some Destination Levels, leaving the other Levels for that Destination unchanged. You will preset the Destination, select the Level(s) to be changed, select the Source, and then Take that Source to only those Destination's levels.

Note A destination with an active breakaway displays an asterisk (*) in the Status display.

1. Assign the Destination on which you wish to perform a breakaway Take to the Preset display (see Step 1 through Step 3 of *Switching Non-Dedicated Sources to Destinations* on page 33).
2. Press the **Level** button to enter Level mode. In this mode you use the **Prev** and **Next** buttons to cycle through the available Levels for that Destination.
3. Illuminate the **Take** button for only the Destination Levels you wish to change by toggling the button on or off as you cycle through the levels with the **Prev** and **Next** buttons. At least one Level must be selected.

4. Press the **Src** button to enter Source mode.

5. Select the Source for the breakaway Take, using the same procedure as Step 2 of *Switching Non-Dedicated Sources to Destinations* *on page 32*).

6. Press the **Take** button. The new Source will be connected to only the selected Levels and an asterisk will appear in the Status display to indicate it has a breakaway.

Note The default panel configuration retains the Levels selected for a breakaway Take for all subsequent Take operations, until the Level selections are changed or a different Destination is selected.

Protect (XY Panel)

Note With default panel configurations, only the control panel that set the Protect can unprotect that Destination. When a Protect has been set, the **Prot** button on the panel that set the Protect will blink, and the **Prot** buttons on other panels accessing that destination will be illuminated without blinking.

Note Pressing and holding a steadily illuminated **Prot** button on a panel with a text display will report the name of the panel that set the Protect.

With the desired Destination selected, either by pressing its dedicated Destination button or assigning it to the Preset display, toggle the **Prot** button to turn Protect On (illuminated) or Off for that Destination.

Note XY panels do not report Protects for Destinations not currently assigned to the Status display. Relinquish all unneeded Protects before changing Destinations on these panels. Also remember to free up all Destinations no longer requiring protection before you leave the vicinity of the XY panel.

Salvo (XY Panel)

When an XY panel has been configured with Salvo capabilities you will be able to select a Salvo and execute it.

CAUTION Be sure you understand exactly what a Salvo will do before you use it, and only fire a Salvo when it is appropriate to do so. Changing multiple Destinations with a Salvo can have far-reaching consequences, including possibly disrupting on-air operations.

1. Press the **Salvo** button to enter Salvo mode.

2. Use the **Prev** and **Next** buttons to move through the available pages of Salvos.

3. When the desired Salvo is displayed, press the **Take** button on that Status display to execute the Salvo.

BPS Panel

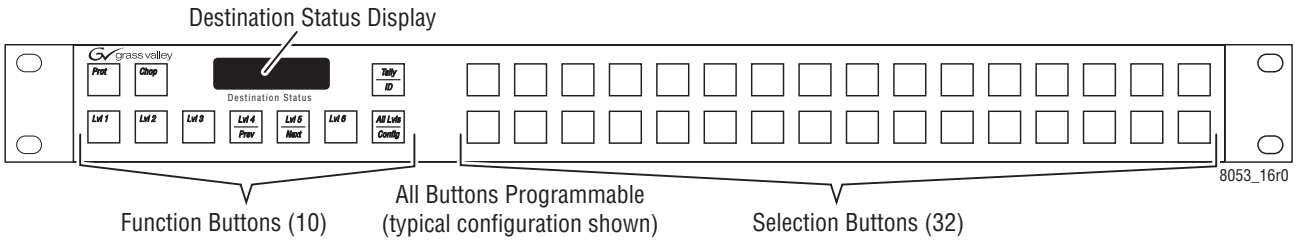
BPS Panel Features

- 1RU rack mount,
- Eight character Destination Status display,
- 42 user-defined programmable buttons, and
- Panel self configuration for alternative Source selection.

BPS Panel Description

The BPS panel has a Destination Status Display on the left and two groups of programmable buttons (Figure 18).

Figure 18. BPS Control Panel

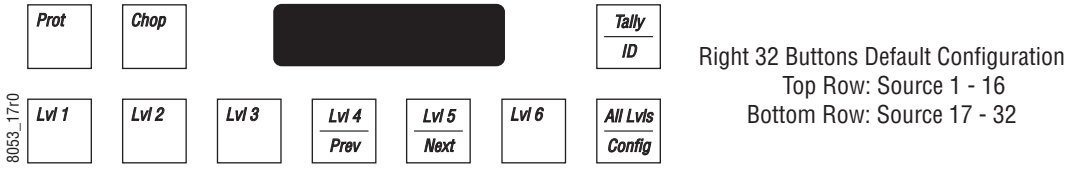


BPS Panel Default Button Assignments

The default function and selection button configuration for the BPS panel is shown in Figure 19.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 19. BPS Default Button Configuration



Default BPS Single Destination Operation

The default configuration for a BPS panel limits the scope of its control to a single destination. For example, this panel can be dedicated to control

inputs to a particular VTR. Operating procedures for the default single destination configuration are be described in this section.

BPS panels are not limited to single destination control, however. All of the buttons on the BPS panel can actually be programmed for any function or source selection (except these panels do not support keypads). This makes it possible to configure a BPS panel with capabilities similar to an XY panel, except it will lack a keypad and have limited status reporting.

Taking a Source to a Destination (BPS Panel)

On a default single Destination BPS, Sources are selected by pressing the desired Source selection button on the right. The Source is immediately taken to that Destination and the name of that source is reported in the Destination Status display.

Breakaway Take (BPS Panel)

A breakaway Take switches Sources on only some Destination Levels, leaving the other Levels for that Destination unchanged. You will select the Level(s) to be changed, then Take that Source to only those Destination's levels.

Note A destination with an active breakaways displays an asterisk (*) in the Status display.

1. Toggle the **Lvl** buttons to illuminate the Levels of that destination you wish to change.
2. Press the desired Source selection button. That Source will be taken to only the selected levels, and an asterisk will appear in the Status display to indicate it has a breakaway.

Note The default panel configuration retains the Levels selected for a breakaway Take for all subsequent Take operations until the Level selections are changed or a different Destination is selected.

Protect (BPS Panel)

Note With default panel configurations only the control panel that set the Protect can unprotect that Destination. When a Protect has been set the **Prot** button on the panel that set the Protect will blink, and the **Prot** buttons on other panels accessing that destination will be illuminated without blinking.

Note Pressing and holding a steadily illuminated **Prot** button on a panel with a text display will report the name of the panel that set the Protect.

Toggle the **Prot** button to turn Protect On (illuminated) or Off for that Destination.

Salvo (BPS Panel)

The default configuration for a BPS panel does not include any Salvo buttons. If your panel has been configured for this feature a Salvo is fired simply by pressing the Salvo button configured for this purpose.

Self Configuration (BPS Panel)

More than 32 Sources can be accessed by the BPS panel using the Self Configuration feature. This features allows BPS panel buttons to be remapped using the panel itself. BPS panel Level and Salvo buttons can also be self configured.

The normal reconfiguration process (using the Encore Panel Server application running on a PC to edit that panel's configuration file) is not required to make these changes. The changes made with the Self Configuration are saved to that panel's configuration file when the mode is exited and are persistent. Resetting a BPS panel after a Self Configuration will not change those settings.

The BPS panel default has the Self Configuration feature enabled. This feature can be disabled and so may not be available on a specific BPS panel.

Source Self Configuration

1. Press and hold down the **All Lvls/Config** button for five seconds. The panel will enter Self Configuration mode and all the Source selection and Level buttons will be illuminated.
2. Press an illuminated Source button. That button will blink.
3. Use the **Prev** and **Next** buttons to select a different Source for that button.
4. Press the blinking Source button to assign it that new Source.
5. Press the **All Lvls/Config** button to exit Self Configuration mode.

Level Self Configuration

Use the procedure above, but press an illuminated **Lvl** button and then choose an alternative Level with the **Prev** and **Next** buttons.

Salvo Self Configuration

If your panel is configured with Salvo selection buttons use the procedure above, but select an illuminated Salvo button and then choose an alternative Salvo with the **Prev** and **Next** buttons.

48B Panel

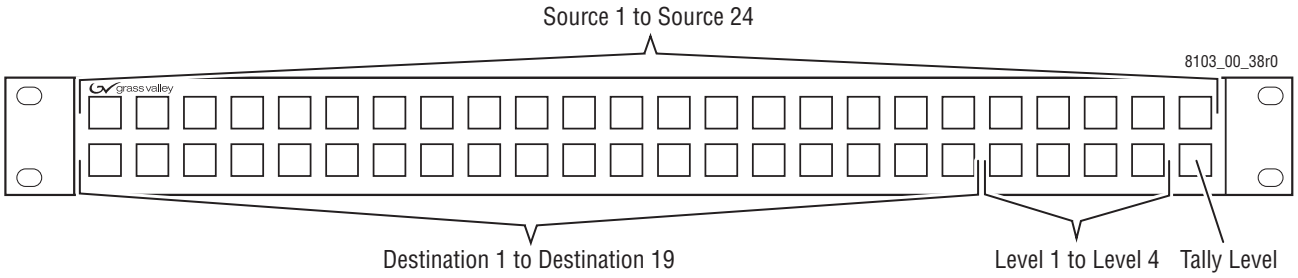
48B Panel Features

- 1RU rack mount,
- 48 user defined buttons,
- Default X-Y functionality, program row of Sources and row of Destinations,
- Allows Destination ganging (ideal for tape duplication), and
- Grouping with other panels to expand functionality.

48B Panel Description

The 48B (Forty-Eight Button) panel only has programmable buttons and does not have an alphanumeric display (Figure 20).

Figure 20. 48B Control Panel and Default Button Configuration



48B Panel Default Button Assignments

The default function and selection button configuration for the 48B panel is shown in Figure 20.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Taking a Source to a Destination (48B Panel)

1. Press the desired Destination button so it is illuminated.
2. Press the desired Source button. That Source will be immediately taken to that Destination.

Breakaway Take (48B Panel)

A breakaway Take switches Sources on only some Destination Levels, leaving the other Levels for that Destination unchanged. You will select the Level(s) to be changed, then Take that Source to only those Destination's levels.

1. Press the desired Destination button so it is illuminated.
2. Toggle the **Lvl** buttons to illuminate the Levels you wish to change.
3. Press the desired Source button. That Source will be immediately taken only to the selected levels of that Destination.

Note The default panel configuration retains the Levels selected for a breakaway Take for all subsequent Take operations until the Level selections are changed or a different Destination is selected.

Auto Tally and the Tally Level Button

The Auto Tally feature automatically tallies the first valid and enabled Level for a Destination. This is useful for breakaway Takes on panels lacking alphanumeric displays, since only one Source button is illuminated at a time. The Auto Tally configuration flag can be turned on and off, and the factory default setting for this feature is ON for 48B panels. When Auto Tally is ON, the Tally Level button, if present on a panel, is disabled.

You can Tally the Source for each Level of a Destination when Auto Tally is ON by disabling the other Levels. The Source button for that remaining enabled Level will be illuminated on the panel.

The priority order of Tally Level reporting when multiple Levels are active is the top down order of Levels in the router configuration. Typically this top down priority order corresponds to a left right order of Level buttons on a panel (Level 1, Level 2, Level 3, etc.). So, for example, if only Levels 2 and 3 are enabled and they are listed in that top down order, Auto Tally would illuminate the Source button for Level 2. Disabling Level 2 in this situation would make the Source button for Level 3 illuminate.

Tally Level Button

The Tally Level button is used to change the Tally Level for the panel. Only the currently selected Level will be tallied.

Note On 48B panels the default setting for Auto Tally flag is ON, which disables the Tally Level button. Make sure Auto Tally is OFF on the configuration being used by the panel if you wish to use the Tally Level button.

Turning the Auto Tally flag OFF activates the Tally Level button, which is assigned to the lower right button by the factory default configuration (see Figure 20 on page 38).

To change the Tally Level of the panel, hold down the **Tally Level** button and press the **Level** button of the desired Level. The panel will use that Level for button tally until another Level is selected (or the Auto Tally flag is enabled).

Protect (48B Panel)

The default configuration for a 48B panel does not include a Protect button. If your panel has been configured for this feature you can protect and unprotect the currently selected Destination by toggling the **Prot** button On or Off. The button is illuminated when a Protect is active on the selected Destination.

Salvo (48B Panel)

The default configuration for a 48B panel does not include any Salvo buttons. If your panel has been configured for this feature a Salvo is fired simply by pressing the Salvo button configured for this purpose. Salvo pages are not supported on 48B panels. A separate Salvo button is configured for each specific Salvo.

Universal Control Panel (ENC-UCP)

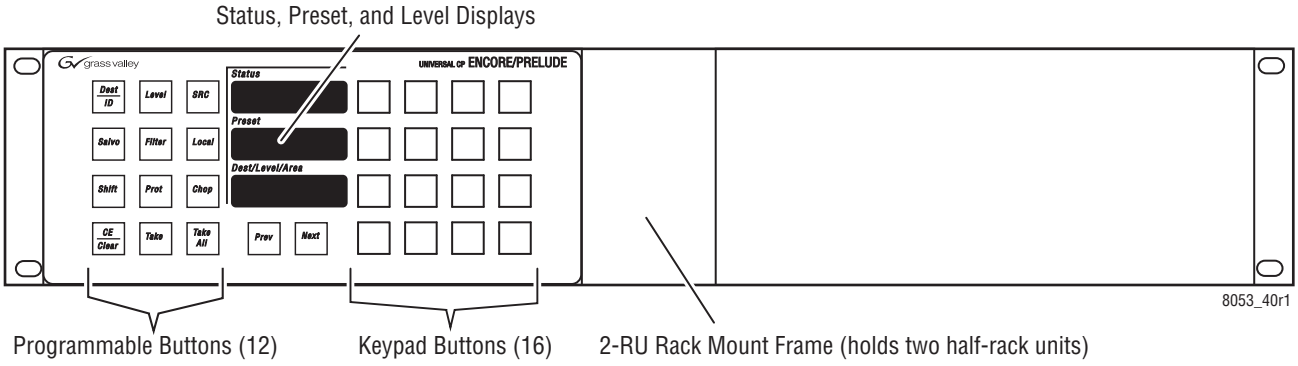
ENC-UCP Panel Features

- 2RU half-rack mount,
- Status, Preset, and Level display with three 8-character readouts,
- 16 button user-defined prefix /suffix keypad (4 rows of four),
- **Prev** and **Next** buttons,
- 12 programmable buttons, and
- Two looping RS-485 ports with RJ-45 connectors (for Jupiter control using MPK protocol).

ENC-UCP Panel Description

The ENC-UCP panel functions the same as the Encore XY panel, except for fewer programmable buttons, different button locations, and a different 1/2 rack form factor (Figure 15).

Figure 21. ENC-UCP Control Panel

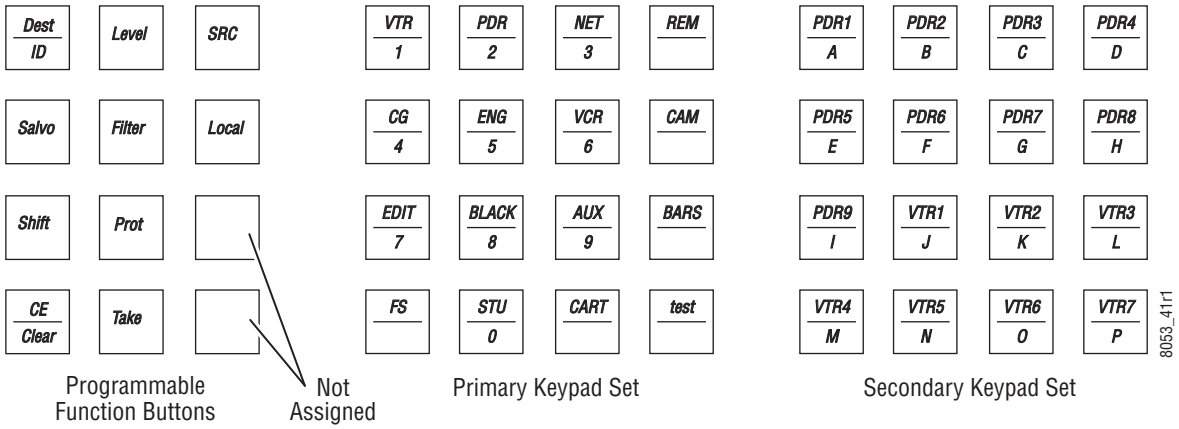


ENC-UPC Panel Default Button Assignments

The default function and selection button configuration for the ENC-UCP panel is shown in Figure 16. The **Prev** and **Next** buttons have fixed functions not configurable by the user.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 22. ENC-UCP Default Button Configuration



ENC-UCP Operation

The ENC-UCP panel operates the same as the Encore XY panel, but with relocated buttons. Refer to *XY Panel* *on page 31* for operating instructions.

Section 4

SMS7000 GSC Control Panels

Introduction

SMS7000 Global Serial Channel (GSC) control panels can be used with an Encore version 1.7 or higher system. The control panel's internal software needs to updated for use with Encore and a GSC mezzanine must be installed in the Encore System Controller. SMS7000 GSC control panels connect to Encore via the GSC BNC connectors on the rear panel of the Encore System Controller frame. Each of the four GSC busses support up to 16 SMS7000 control panels for a total of 64 per Encore System Controller.

Because the GSC panels do not use Ethernet these panels are not visible to the Grass Valley NetConfig application. GSC panel software cannot be updated using NetConfig, but instead a PC and a direct serial connection are used. See the *Encore Release Notes* for the latest installation and software update procedures.

Once installed with the Encore software, GSC panels are configured the same as other Encore panels, using the Encore Panel Server application. See the *Encore Configuration Manual* for additional information.

In general, SMS7000 panel functionality under Encore does not mimic functionality under SMS7000 control; rather it is based on the existing functionality of the equivalent Encore control panel type.

Because the GSC panels use older hardware and communication methods, their operating response will be slower than newer Encore control panels.

UCP Panel

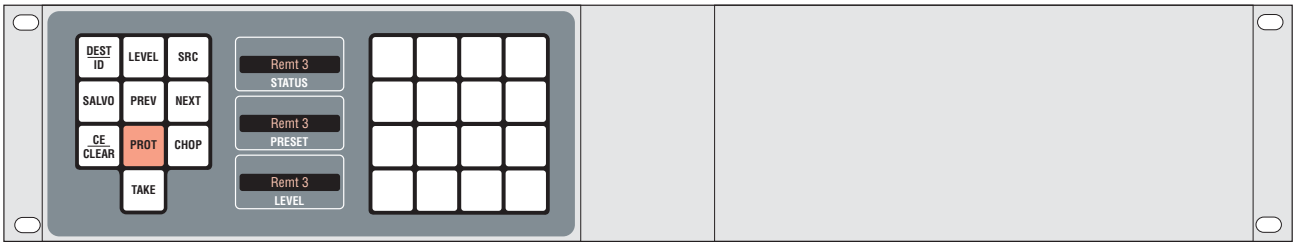
UCP Panel Features

- 2RU half-width rack mount,
- Status, Preset, and Level alphanumeric displays,
- Access to all Destinations and Sources,
- 16 button user-defined prefix /suffix keypad, and
- Previous / Next scrolling within prefix group.

UCP Panel Description

The UCP (Universal Control Panel) has a group of programmable buttons on the left, three alphanumeric displays in the center, and a programmable keypad on the right (Figure 23).

Figure 23. UCP - Universal Control Panel

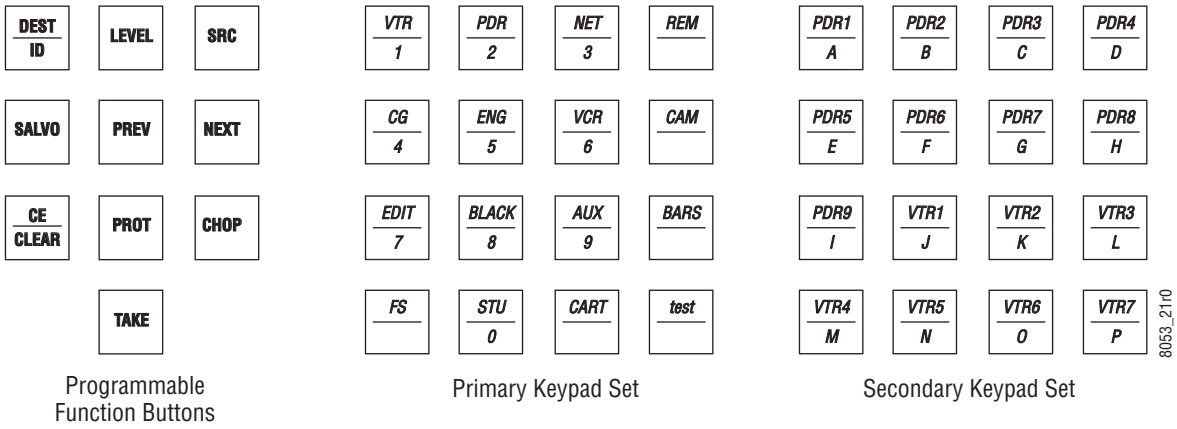


UCP Panel Default Button Assignments

The default button configuration for the UCP panel is shown in Figure 24.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 24. UCP Panel, Default Button Configuration and Keypad Sets



The Secondary Keypad set will only be available on the panel if the default configuration is changed to include a Shift button.

Note The PREV and NEXT buttons are not equipped with LEDs and so will not tally if programmed for a different function.

Taking a Source to a Destination (UCP Panel)

1. Press the **DEST/ID** button to enter Destination mode.
2. Use the **PREV** and **NEXT** buttons to show the desired Destination on the Preset display.
3. Press the **TAKE** button to assign that Destination to the Status display.
4. Press the **SRC** button to enter Source mode.
5. Use the **PREV** and **NEXT** buttons to show the desired Source on the Preset display.
6. Press the **TAKE** button. The new Source is taken to that Destination and that Source's name is reported in the status display.

Note A panel's configuration may exclude control of some Sources, Destinations, and Levels. Excluded items will not be selectable in the Preset display.

Breakaway Take (UCP Panel)

1. Press the **DEST/ID** button to enter Destination mode.
2. Use the **PREV** and **NEXT** buttons to show the desired Destination on the Preset display.
3. Press the **TAKE** button to assign that Destination to the Status display.

4. Press the **LEVEL** button to enter Level mode.
5. Use the **PREV** and **NEXT** buttons to show each Level in turn on the Level display. Press the **TAKE** button so it is illuminated to select the Levels you wish to change for that Destination. At least one Level must be selected.
6. Press the **SRC** button to enter Source mode.
7. Use the **PREV** and **NEXT** buttons to show the desired Source on the Preset display.
8. Press the **TAKE** button. The new Source is taken only on the selected Levels of that Destination.

Protect (UCP Panel)

Note With default panel configurations, only the control panel that set the Protect can unprotect that Destination. When a Protect has been set, the **PROT** button on the panel that set the Protect will blink, and the **PROT** buttons on other panels accessing that destination will be illuminated without blinking.

Note Pressing and holding a steadily illuminated **PROT** button on a panel with a text display will report the name of the panel that set the Protect.

1. Press the **DEST/ID** button to enter Destination mode.
2. Use the **PREV** and **NEXT** buttons to show the desired Destination on the Preset display.
3. Toggle the **PROT** button to turn Protect On (illuminated) or Off for that Destination.

Note UCP panels do not report Protects for Destinations not currently assigned to the Status display. Care should be taken to relinquish all unneeded Protects before changing Destinations on these panels. You should also remember to free up all Destinations no longer requiring protection before you leave the vicinity of the panel.

Salvo (UCP Panel)

When a UCP panel has been configured with Salvo capabilities, you will be able to select a Salvo and execute it.

CAUTION Be sure you understand exactly what a Salvo will do before you use it, and only fire a Salvo when it is appropriate to do so. Changing multiple Destinations with a Salvo can have far-reaching consequences, including possibly disrupting on-air operations.

1. Press the **SALVO** button to enter Salvo mode.

2. Use the **PREV** and **NEXT** buttons to show the desired Salvo on the Preset display.
3. Press the **TAKE** button to fire the selected Salvo.

P32 Panel

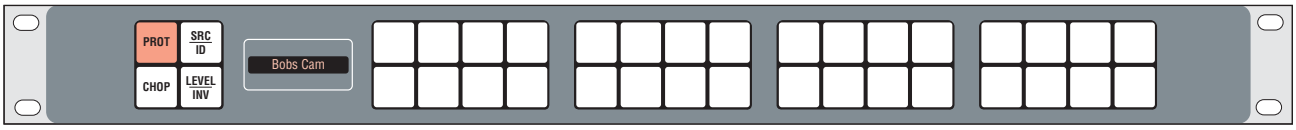
P32 Panel Features

- 1RU rack mount,
- Alphanumeric status display, and
- 36 user-defined programmable buttons.

P32 Panel Description

The P32 (Programmable 32 button) panel was originally designed to control the routing of a limited number of Sources to a single Destination with a single button press. The default configuration has a minimal number of function buttons on the left, a single alphanumeric display, and Source selection buttons on the right (Figure 25).

Figure 25. P32 - Programmable Button-Per-Source Control Panel



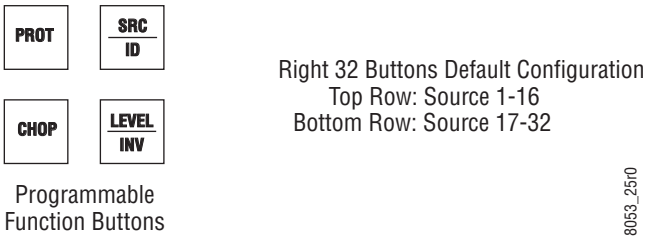
Under Encore control all the P32 panel buttons can be programmed for different functions or source selections, including the selection of Destinations. This section describes only the panel's default behavior of controlling a single Destination.

P32 Panel Default Button Assignments

The default button configuration for the P32 panel is shown in Figure 26.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 26. P32 Panel, Default Button Configuration and Keypad Sets



Taking a Source to a Destination (P32 Panel)

Press the button for the desired Source. It will immediately be taken to the Destination and the name of the Source appears in the status display.

Breakaway Take (P32 Panel)

1. Press the **LEVEL/INV** button to enter Level mode. In this mode the buttons on the right no longer select Sources. The first upper row buttons now correspond to the Levels available and will be illuminated when they have been selected.
2. Press the selection buttons to toggle the desired Levels On or Off.

Note Pressing the **LEVEL/INV** button when it is illuminated will swap the Level selections (On Levels go Off, and Off Levels go On).

3. Press the **SRC/ID** button to enter Source mode.
4. Press the desired Source button. The new Source is taken only to the selected Levels of that Destination.

Protect (P32 Panel)

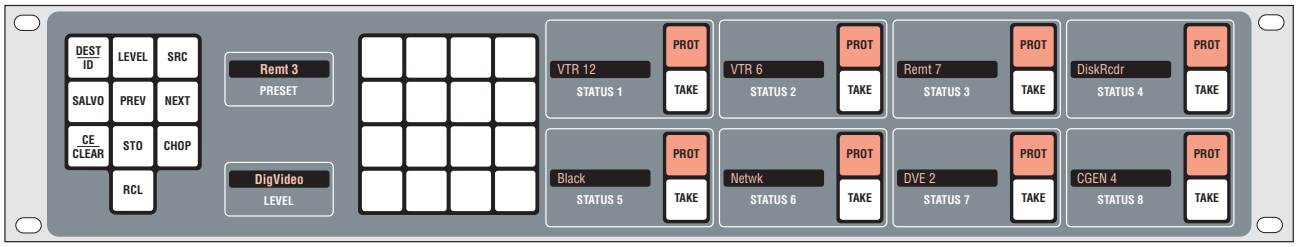
Toggle the **PROT** button to turn Protect On (illuminated) or Off for that Destination.

Note With default panel configurations only the control panel that set the Protect can unprotect that Destination. When a Protect has been set the **PROT** button on the panel that set the Protect will blink, and the **PROT** buttons on other panels accessing that destination will be illuminated without blinking.

Note Pressing and holding a steadily illuminated **PROT** button on a panel with a text display will report the name of the panel that set the Protect.

MB8 Panel

Figure 27. MB8 - Programmable Multibus 8 Control Panel



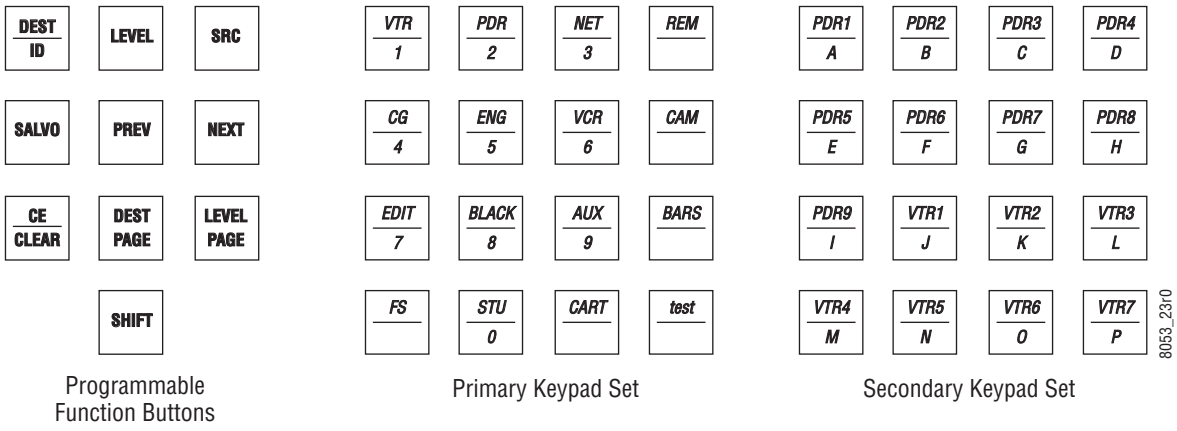
The SMS7000 MB8 (Multi-Bus 8) panel operates essentially the same as an Encore PMB panel, except it has two fewer programmable buttons on the left and the default button configuration is slightly different.

Default Button Configuration (MB8 Panel)

The default button configuration for the MB8 panel is shown in Figure 28.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 28. MB8 Panel, Default Button Configuration and Keypad Sets



The Secondary Keypad set will only be available on the panel if the default configuration is changed to include a Shift button.

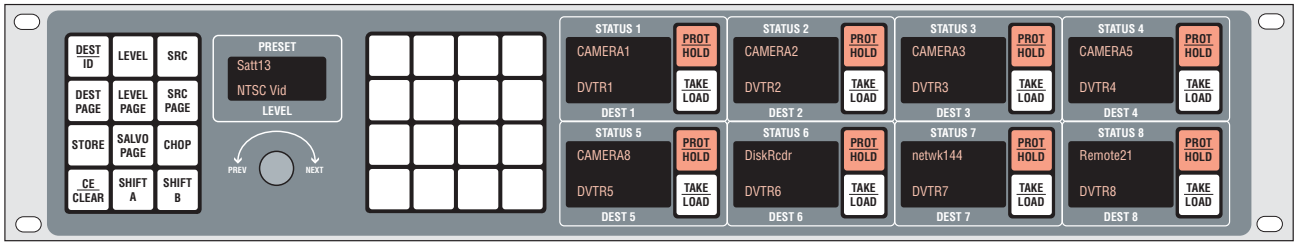
Note The **PREV** and **NEXT** buttons are not equipped with LEDs and so will not tally if programmed for a different function.

MB8 Panel Operation

The procedures for Takes, Protects, and Salvos are the same as those used on an Encore PMB panel. See *PMB Panel on page 26* for operational information.

EDP Panel

Figure 29. EDP -Eight Destination Paging Control Panel



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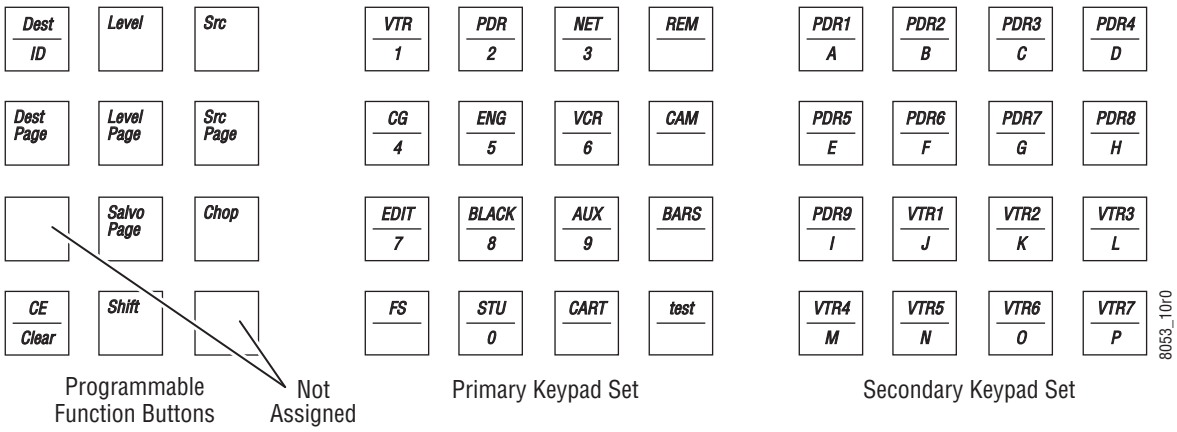
EDP Panel Operation

The SMS7000 EDP (Eight Destination Paging) panel operates essentially the same as an Encore PMB panel. The same default button configuration is used (Figure 30), and the procedures for Takes, Protects, and Salvos are the same, with one exception. The EDP panel uses a knob instead of PREV or NEXT buttons to scroll through the available items.

See *PMB Panel on page 26* for operational information.

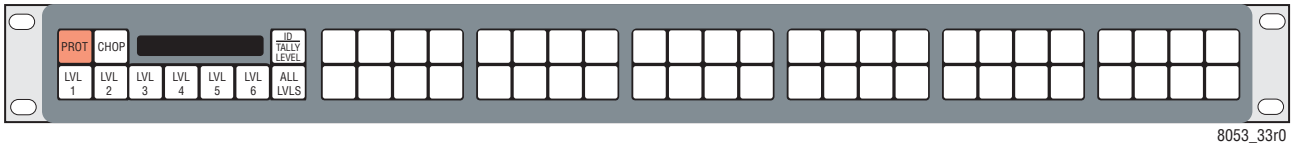
Default Button Configuration (EDP Panel)

Figure 30. EDP Panel Button Defaults (Same as Encore PMB Panel)



P48 Panel

Figure 31. P48 - 48 Button-Per-Source Control Panel



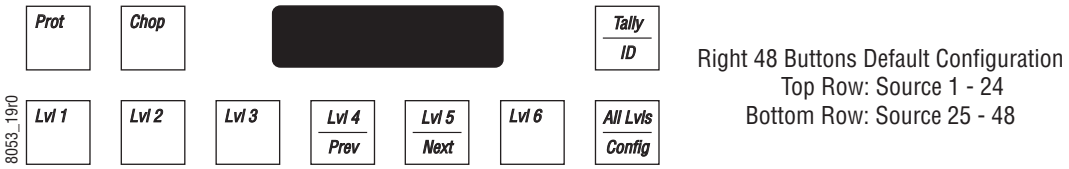
P48 Panel Operation

The SMS7000 P48 (Programmable 48 button) panel operates the same as an Encore BPS panel. The same default button configuration is used (Figure 32), and the procedures for Takes, Protects, and Salvos are the same.

See *BPS Panel on page 35* for operational information.

Default Button Configuration (P48 Panel)

Figure 32. P48 Panel Button Defaults (Same as Encore BPS Panel)



Section 5

Kalypso Remote Aux Panels

Introduction

Kalypso 32 button Remote Aux Panels can be used with an Encore version 1.7 or higher system. Older model Kalypso Aux Panels may need to have their software updated in order to work on an Encore system. See the *Encore Release Notes* for the latest installation and software update procedures. Once installed with the Encore software, Kalypso Remote Aux panels are configured the same as other Encore panels, using the Encore Panel Server application. See the *Encore Configuration Manual* for additional information.

Key Features

- Web browser-based setup,
- 10Base-T Ethernet RJ-45 control interface, includes active and collision indication,
- Internal auto-ranging AC mains power supply,
- Back-lit buttons with display intensity adjustments,
- All buttons programmable, and
- Simple name-based identification.

Remote Aux Panel Model Types

Two different Remote Aux Panel models exist. Different names have been used for the documentation of these panels, depending on whether they are part of a Kalypso system or an Encore system.

- KAL-32AUX1, the original model name used for the 1RU Kalypso Remote Aux Panel, corresponds to the KSD (Kalypso Single Destination) panel when used with Encore.
- KAL-32AUX2, the original model name used for the 2RU Kalypso Remote Aux Panel, corresponds to the KMD (Kalypso Multi Destination) panel when used with Encore.

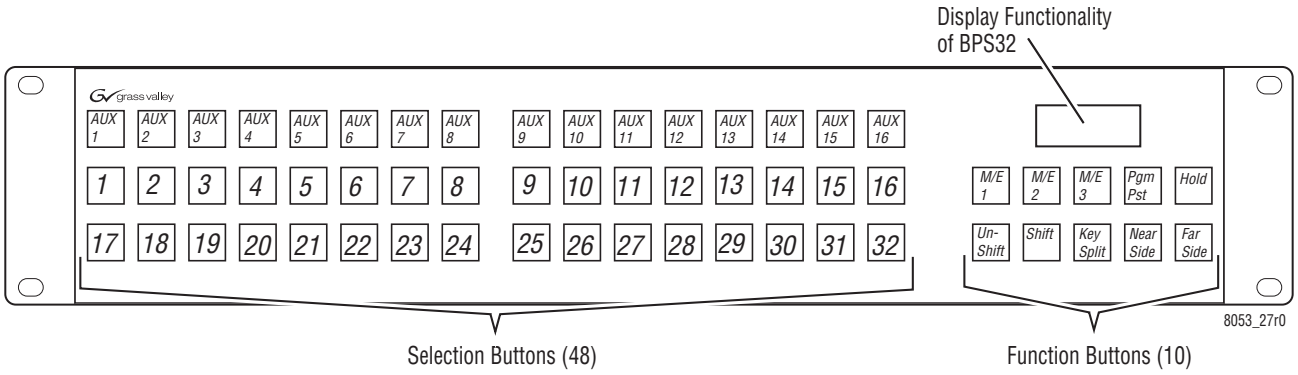
Note Because all the buttons on the KSD and KMD panels are programmable, it is possible to configure either panel for either single or multiple Destination control.

The Encore Panel Server OUI identifies Kalypso panels as KSD or KMD, and these terms are used in this section.

KMD Panel

The KMD panel has a group of 48 programmable buttons on the left (typically used for selections), and a status display and ten programmable buttons on the right (typically used for functions). See Figure 33.

Figure 33. KMD Remote Aux Panel



The control panel button and display functionality of the KMD panel is modeled on the Encore BPS panel.

KMD Panel ID

The KMD panel alphanumeric displays can report the following information for that panel.

- Panel IP Address
- Panel Name
- Controlled Destination Area
- Controlled Destination Name
- Name of the Panel Destination
- Name of the Current Tally Level
- Protect Override, if set

Holding down the **Tally/ID** button activates the panel ID mode.

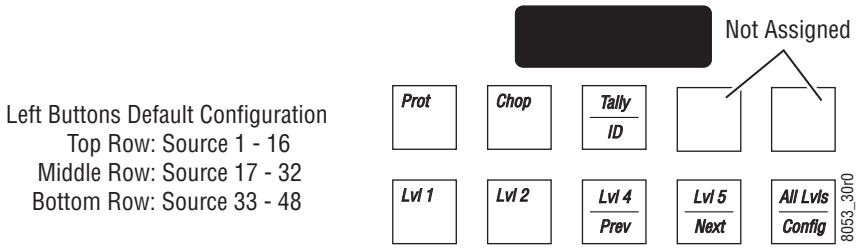
You can interrupt the ID display sequence at any time by pressing any button to resume normal operation. It is not necessary to let the identification routine finish.

Default Button Configuration (KMD)

The default button configuration for the KMD panel is shown in Figure 34.

Note Button assignments for a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 34. KMD Default Button Configuration



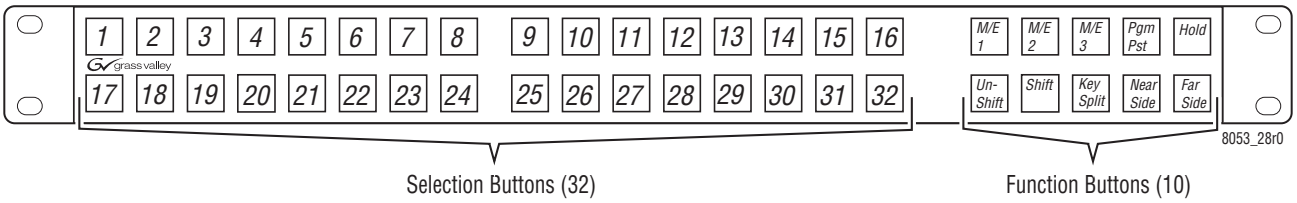
KMD Panel Operation

The procedures for Takes, Protects, and Salvos are the same as those used on an Encore BPS panel. See *BPS Panel on page 35* for operational information.

KSD Panel

The KSD panel has 42 programmable buttons. The 32 on the left are typically used for selections and the ten on the right are typically used for functions (Figure 35).

Figure 35. KSD Remote Aux Panel



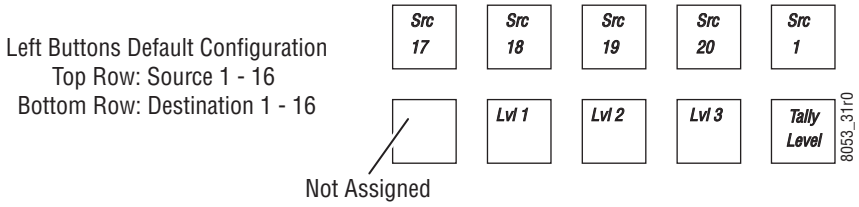
The control panel button functionality for the KSD panel is modelled on the Encore 48B panel except it has six fewer buttons.

Default Button Configuration (KSD)

The default button configuration for the KSD panel is shown in Figure 36.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 36. KSD Default Button Configuration



KSD Panel Operation

The KSD operating procedures are the same as those used on an Encore 48B panel. See *48B Panel on page 38* for operational information.

Section 6

Acappella Control Panels

Introduction

Acappella remote panels can be used with an Encore systems. Older remote panels may need to have their software updated in order to work on an Encore system. See the *Encore Release Notes* for the latest installation and software update procedures. Once installed with the Encore software, Acappella remote panels are handled by the Encore system the same as Encore 48B panels. See the *Encore Configuration Manual* for additional information.

Key Features

- Web browser-based setup,
- 10Base-T Ethernet RJ-45 control interface, includes active and collision indication,
- Back-lit buttons with display intensity adjustments,
- All buttons programmable, and
- Simple name-based identification.

Acappella Remote Panel Types

Several different types of Acappella remote panels exist that are equipped with different sets of source and destination buttons. All Acappella remote panels have four Level buttons, a green Enable button, a red Protect button. Three representative panels are shown below. Figure 37 is a panel with 16 Sources and 16 Destinations. Note that under Encore control all buttons are configurable, and so may perform different functions.

Figure 37. 16x16 Remote Panel

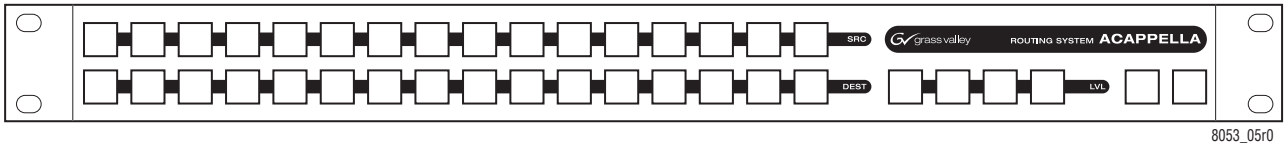


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Figure 38 is a panel with 16 Sources and 8 Destinations.

Figure 38. 16x8 Remote Panel

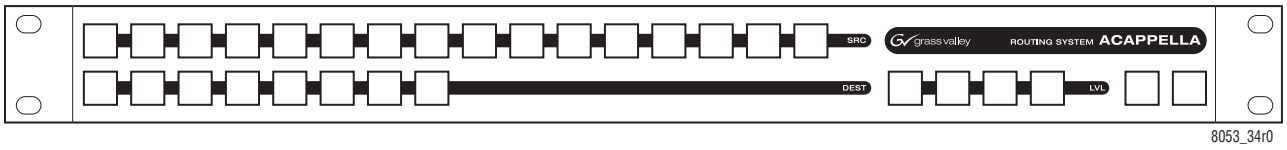
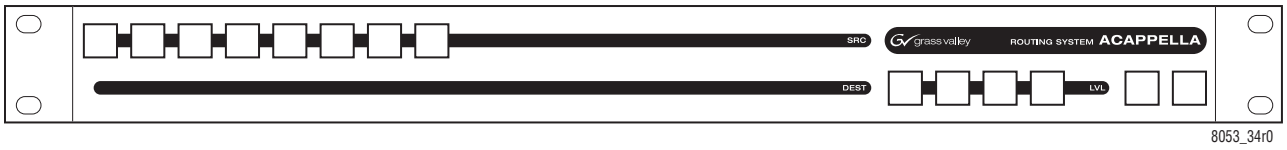


Figure 39 is a panel with 8 Sources and 1 Destination.

Figure 39. 8x1 Single Destination Remote Panel



Acappella remote panels are treated as ENC-48B panels by the Encore system. On-line Acappella remote panels are listed in the Panel Server GUI as ENC-48B panel types. The existing 48B panel configuration editor graphics and templates are used to program these panels, which display the maximum number of buttons.

Acappella Local Panels

An Acappella matrix may be equipped with a local panel. Local panel buttons are incorporated into the front of the Acappella matrix frame.

Though the button layout and appearance of an Acappella local panel is similar to the Acappella remote panels described in this section, they are fundamentally different. Local panels are dedicated to only the Acappella matrix frame they are incorporated into and cannot be configured (except to support Level operation in conjunction with other Acappella matrix frames).

Acappella local panel selection buttons are dedicated to specific Source and Destination connectors on that Acappella matrix, and cannot be used to switch crosspoints on other Encore system matrices.

If an Acappella matrix equipped with a local panel is part of an Encore system, the buttons on the local panel will be functional and can be used to change that matrix's crosspoints. The status of these changes will also be reported on other Encore system panels configured to control the Sources and Destinations of that Acappella matrix.

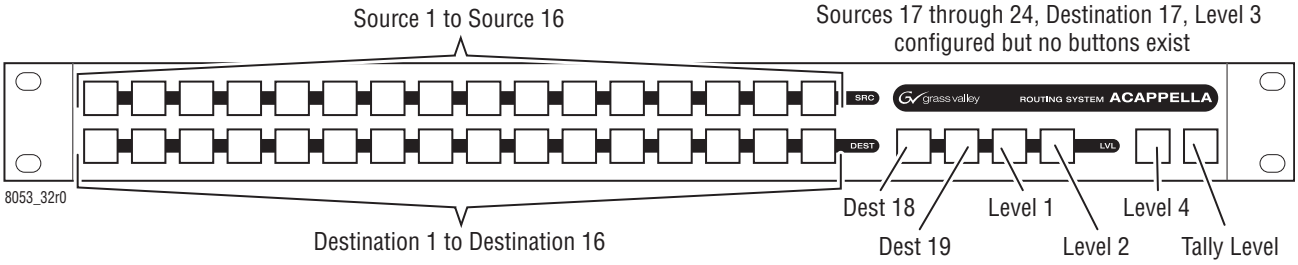
Refer to the separate *Acappella Instruction Manual* for more information about Acappella matrix frames and local panels.

Default Button Configuration (Acappella Remote Panel)

The default button configuration for all Acappella Remote Panels is the same as the Encore 48B panel, as is shown in Figure 40.

Note Button assignments of a particular control panel may be different because the defaults can be changed during configuration. See the separate *Encore Configuration Manual* for more information.

Figure 40. Acappella Remote Panel Default Button Configuration



Buttons not present on a given Acappella panel can be programmed but obviously will not be usable since the buttons don't actually exist. Knowing which buttons are available on a particular Acappella remote panel type is required when these panels are programmed.

Note It may be useful to create control panel templates (from the basic 48B template) for each type of Acappella panel used. The appropriate functions can be assigned to buttons present on the panel, and buttons that do not exist could be configured as Not Assigned.

Acappella Remote Panel Operation

The procedures for Takes, Protects, and Salvos are the same as those used on an Encore 48B panel. See *48B Panel on page 38* for operational information.

Section 7

Panel Operation Variations

Introduction

The previous sections described basic operating procedures for the factory default configurations of various Encore system control panels. Control panels at most facilities are probably configured with different functionality. This section lists some of the more important configuration variations available and briefly describes how they affect control panel operation.

For a complete listing of all the panel configuration parameters, refer to the separate *Encore Configuration Manual*.

Note If you have questions about the operation of a specific Encore control panel at your facility, contact the on-site engineer responsible for configuring and maintaining your Encore system.

Button Functions and Selections

Different functions can be assigned to programmable panel buttons, including Source Selection, Destination Selection, Level Selection, Protect/Lock, Salvo, Previous, Next, Chop, and others.

If a control panel button is assigned a selection function, the specific item (a particular Source, Destination, Level, or Salvo) is configured to be selected by pressing that button.

Exclusion Sets

Sets of items (Area, Destination, Level, Salvo) can be programmed to be unavailable for control by a particular control panel. In larger facilities, limiting the control of some items (on-air Destinations, for example) to only some panels at selected locations can prevent important signals from being changed accidentally by some distant control panel.

Keypad Sets

Alternative keypad sets can be created that change, for example, which prefixes and suffixes are entered for item names. Keypad sets can be shared with multiple panels. Typically the same keypads sets are used throughout a facility so the various panels operate the same, but this is not required.

Page Sets

Panels with multiple displays support page sets, which group items together so they can be called up simultaneously. Page sets exist for Destinations and Salvos.

Attributes and Flags

Some control panel behavior not related to a particular button function or selection can be changed by setting control panel attributes and/or flags during panel configuration. Some of the control panel attributes and flags that significantly affect panel operation are described below.

General Settings

Auto Tally

Sets the Source Tally to the first active and enabled Level of the active Destination.

Note Turning Auto Tally ON disables Tally Level button functionality.

Auto Level Latching

When doing breakaway takes on panels without dedicated level buttons, the selected breakaway levels can be persistent (remain in force for subsequent takes), or can be cleared automatically (revert to all levels after performing a take).

- When the Auto Level Latching flag is on, all levels of the current active destination are enabled after a take or change of active destination, regardless of the previous level enable states(s).
- When the Auto Level Latching flag is off, the current enabled/disabled levels state is applied to any subsequent takes or changes of active destination.

Default Tally Level

Specifies the Level that will Tally by default in panel displays if a Level has not been specifically selected for Tally on that panel.

Display Alias Names

Alternative, or Alias, names can be configured for Sources and Destinations. Setting this flag on will display alias names on control panels with displays.

Dst Change Lock

When on, Dst Change Lock disables the panel's ability to change Destinations.

Level Change Lock

When on, Level Change Lock disables the panel's ability to select individual Levels to perform a breakaway Take.

Protect and Lock Settings

Because the Encore control system uses multiple points of control (various control panels, Encore OUI, automation interfaces) some flags affect how different control panels interact. Specifically, the Protect and Lock features determine how changing sources to destinations can be restricted. This is useful if, for example, a VTR operator needs to ensure that the incoming source remains present for the duration of a recording, and is not switched to another source by some other panel in the facility.

The Protect, Hard Lock, and Soft Lock flags are mutually exclusive. For example, setting a Hard Lock on a panel automatically clears a Protect or Soft Lock flag for that panel, if set.

Protect

The Protect flag allows a control panel to set Protects on Destinations. Once a Protect is set, other panels cannot change the source to that Destination, but the panel that had set the Protect is able to change that Destination's source, with some exceptions. Other panels with Lock/Protect Override or Force Unlock/Protect flags set can change sources on Protected destinations.

Hard Lock

The Hard Lock flag acts like Protect, except even the panel that set the Lock also cannot change a locked Destination's Source. That panel must first remove the lock before the Destination can be switched. Other panels with

Lock/Protect Override or Force Unlock/Protect flags set can change sources on Locked destinations.

Soft Lock

The Soft Lock flag acts like Protect, except any other panel can also remove the Protect from a Destination.

Lock/Protect Override

Lock/Protect Override allows a panel to temporarily remove a Lock or Protect from a Destination, and change the Source to that Destination. The Lock or Protect remains in force after the change to the new Source.

Force Unlock/Protect

Force Unlock/Protect allows a panel to remove a Lock or Protect from a Destination.

Salvo Editor Lock/Protect

The separate Salvo Editor application supports creating Salvos with Lock-Protect/Unlock-Unprotect capabilities. Executing a Salvo with this setting ON can, for example, lock one or more Destinations. A Salvo can also created to unlock one or more Destinations, perform Takes, and then either leave the Destinations unlocked or restore the Lock. Some limitations exist, including the inability to override some Protects, depending on the device issuing the Salvo. See the separate *Salvo Editor Instruction Manual* for specific information.

Control Panel Grouping

Some control panels can be configured to act together as a single larger control panel. Typically a 48B panel is grouped with a panel that has control functions and displays, and the 48B panel is configured with additional sources and/or destinations. See the separate *Encore Configuration Manual* for specific information.

Joystick Override

Some control panels have GPI connectors that can be used for Joystick override. Joystick override permits switching the displayed video to another Source, and then either returning to the previously selected Source or keeping the Override Source displayed. This feature is typically used for camera matching.

Joystick Override Configuration

Joystick override has two operating modes, latching and non-latching. The mode is selected by assigning either the **Source** or **Source (non-latching)** function to the Joystick Source button.

The following control panels support Joystick override:

Table 1. Joystick Override Panel

Encore panels	BPS, 48B
Kalypso panels	KMD, KSD
SMS panels	P48, P32

Note On grouped control panels only the master panel's joystick override can be used.

See the separate *Encore Configuration Manual* and *Encore Installation and Service Manual* for information about setting up panels for Joystick override.

Joystick Override Operation

Activating a non-latching Joystick override (typically done by pressing a button on a camera remote control unit) switches to that Source, and releasing the button restores the last Source. A latching override keeps the override Source displayed until another Source is selected.

If multiple non-latching overrides are active, releasing overrides steps back through previous overrides in the reverse order of their selection. The last selected override will be restored when another override is released. For example, suppose source A is selected for a non-latching override and held, then source B is selected for override and held, and then source C is selected for override and held. In this case, releasing source C override restores source B override, and then releasing source B override restores source A override.

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