

Encore

CONTROL SYSTEM

Release Notes

A diagram consisting of a vertical line with an upward-pointing arrow and a horizontal line with a rightward-pointing arrow, intersecting at a small red circle.

SOFTWARE VERSION 1.7.3.1

071815308
FEBRUARY 2008



Affiliate with the N.V. KEMA in The Netherlands

CERTIFICATE

Certificate Number: 510040.001

The Quality System of:

Grass Valley, Inc.

400 Providence Mine Road
Nevada City, CA 95945
United States

15655 SW Greystone Ct.
Beaverton, OR 97006
United States

10 Presidential Way
3rd Floor, Suite 300
Woburn, MA 01801
United States

Nederland B.V.
4800 RP BREDA
The Netherlands

Weierstadt, Germany
Brunnenweg 9
D-64331 Weierstadt
Germany

Rennes, France
Rue du Clos Courtel
Cesson-Sevigne, Cedex
France

Technopole Brest Iroise
CS 73808
29238 Brest Cedex 3
France

17 rue du Petit Albi-BP 8244
95801 Cergy Pontoise
Cergy, France

2300 South Decker Lake Blvd.
Salt Lake City, UT 84119
United States

7140 Baymeadows Way
Suite 101
Jacksonville, FL 32256
United States

Including its implementation, meets the requirements of the standard:

ISO 9001:2000

Scope:

The design, manufacture and support of video hardware and software products and related systems.

This Certificate is valid until: June 14, 2009
This Certificate is valid as of: August 30, 2006
Certified for the first time: June 14, 2000

H. Pierre Sallé
President
KEMA-Registered Quality

The method of operation for quality certification is defined in the KEMA General Terms And Conditions For Quality And Environmental Management Systems Certifications. Integral publication of this certificate is allowed.

KEMA-Registered Quality, Inc.
4377 County Line Road
Chalfont, PA 18914
Ph: (215)997-4519
Fax: (215)997-3809

CRT 001 073004

Accredited By:
ANAB



Encore

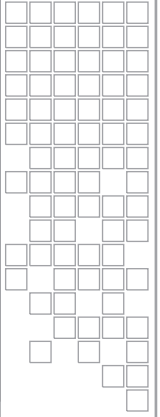
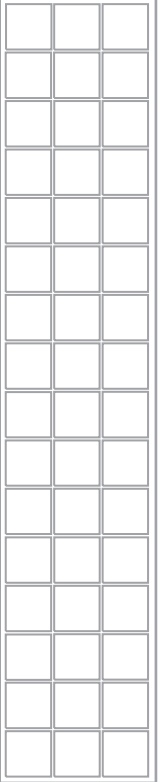
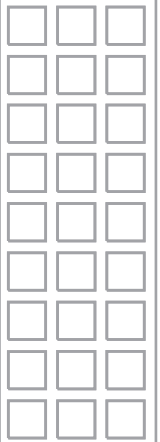
CONTROL SYSTEM

Release Notes



SOFTWARE VERSION 1.7.3

071815308
FEBRUARY 2008



Contacting Grass Valley

International Support Centers	France 24 x 7	+800 8080 2020 or +33 1 48 25 20 20 +800 8080 2020 or +33 1 48 25 20 20	United States/Canada 24 x 7	+1 800 547 8949 or +1 530 478 4148
Local Support Centers (available during normal business hours)	Asia	Hong Kong, Taiwan, Korea, Macau: +852 2531 3058 Indian Subcontinent: +91 22 24933476 Southeast Asia/Malaysia: +603 7805 3884 Southeast Asia/Singapore: +65 6379 1313 China: +861 0660 159 450 Japan: +81 3 5484 6868		
		Australia and New Zealand: +61 1300 721 495	Central/South America: +55 11 5509 3443	
		Middle East: +971 4 299 64 40 Near East and Africa: +800 8080 2020 or +33 1 48 25 20 20		
	Europe	Belarus, Russia, Tadzikistan, Ukraine, Uzbekistan: +7 095 2580924 225 Switzerland: +41 1 487 80 02 S. Europe/Italy-Roma: +39 06 87 20 35 28 -Milan: +39 02 48 41 46 58 S. Europe/Spain: +34 91 512 03 50 Benelux/Belgium: +32 (0) 2 334 90 30 Benelux/Netherlands: +31 (0) 35 62 38 42 1 N. Europe: +45 45 96 88 70 Germany, Austria, Eastern Europe: +49 6150 104 444 UK, Ireland, Israel: +44 118 923 0499		

Copyright © Grass Valley. All rights reserved.

This product may be covered by one or more U.S. and foreign patents.

Grass Valley Web Site

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.



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



Contents

Encore Release Notes	7
Introduction	7
New Features in Encore Release 1.7.3.1	7
New Features in Encore Release 1.7.3	8
Changes in Encore Release 1.7.3	9
Acappella Matrix Control	10
Visual Status Display	11
NetConfig ID of Devices	12
Automatic Detection of Database Match	13
Redundancy Independent of SCB Frame Slot	13
SCB Reference Count Server	14
Router Controller Enhancements	15
Database Validation	15
Database Validity Indications	16
Invalid Router Database Restrictions	16
Invalid Router Database Resolution	16
Validate Database Button Locations	17
No Matrix Indication	18
No Matrix Status Reporting	19
Selecting No Matrix Status Text	19
Park Unavailable Assigned Data Levels	20
No Router Indication	20
Control Panel Server Enhancements	21
Quick Control Panel Server Salvo Startup	21
Reasons for Loss of Redundancy Sync Displayed	21
Redundancy/Supervisor Indication on the SCB	22
Non-Latching Joystick Override Regression	22
RCL Server Enhancements	22
Destination Exclusion Set Support	22
Datatek SID Support	23
RCL Protocol Enhancements	23
Unsupported Protocol Commands	24
RCL Commands Not Supported by Encore	24
NP Commands Not Supported by Encore	24
Tie Line Manager Enhancements	25
TLM Health Check	25
TLM Logging	26
TLM Assignment	26
McCurdy Intercom System Support	28
Salvo Editor Lock/Protect	28
Salvo Lock/Unlock Flags	29
Salvo Lock and Unlock Behavior	29
Unlock	30
Lock	30
Lock and Unlock	30

Lock or Unlock Without Changing Crosspoints	30
Salvo Lock/Unlock Example	30
Soft Panels Enhancements.	31
Dynamic Keycap Legends.	31
Legacy COS and MCO Soft Panels.	31
Under Monitor Displays	31
SNMP Enhancements	32
Concerto Native Protocol Support.	33
MCO and COS Custom Control Panel and RIB Support	34
Additional Information	35
Auto Detect Time Code Reference	35
P32 Panel Enable Assignment Limitation	35
Tie Lines and New Router Configurations.	35
GSC Panel Conversion from Encore Control Back to SMS7000 Control	35
Incorrectly Named Salvo Recovery	36
Salvo created with a File name different than the Keycap name.	36
Salvo created with special characters not supported in VxWorks.	37
Salvo created with a filename of more than 8 characters.	38
Horizon Interface Limitations.	38
Software Update.	39
Introduction.	39
Update Only Existing Encore Systems.	39
Update Only From Version 1.6.5.4 and later to Version 1.7.3.x Software.	39
Update With the Encore Sharer PC	39
SCB Flash Memory Available Space Requirement	39
Have Sharer On-Line When Booting SCB Running CPS	40
Encore Software Compatibility	40
External System Compatibility	41
Version 1.7.3 Software Update Procedure	41
Ensure The Encore Database is Consistent	41
Manually Backup the Encore Database	42
Install Software Components On The Sharer PC	42
Restart Sharer.	48
About NetConfig.	48
Launch NetConfig.	49
Update Encore SCB Software	50
Redundant SCB Update From v1.7 Simplified Procedure	50
Redundant SCB Update From v1.6.5.4 Procedure	50
Redundant v1.7 SCB Update Procedure Continued	53
Route Table (Multi-Area Systems Only)	53
Update Matrix Software.	54
Update Control Panel Software	55
Confirm Sharer Mode.	56
Restore Full System Operation	56
Manually Updating SCB Flash Memory.	57
Flash Purchased from Grass Valley	57
Flash Purchased Locally	57

Encore Release Notes

Introduction

This document describes product enhancements provided by Encore software releases 1.7.3 and 1.7.3.1. It also describes the installation procedure used to upgrade an Encore system from version 1.6.5.4 to 1.7.3 (see [page 39](#)).

CAUTION Encore SCBs only support flash memory up to 512MB. Do not attempt to use higher capacity flash because corrupted data may result.

New Features in Encore Release 1.7.3.1

Note Encore v1.7.3 software was not widely released, due primarily to a Tie Line Manager (TLM) upgrade issue. Encore v1.7.3.1 corrects the TLM issue and includes new enhancements listed below. The remainder of this document (originally written for Encore v1.7.3) also pertains to v1.7.3.1 software.

- A **Hold Breakaway** flag has been added to the Panel Server application for all control panel types. When enabled, that panel will retain Level breakaway settings even when new Destinations are selected or the router configuration changes Destinations configured levels. Note that if the user presets Levels and selects a Destination that does not support any of the preset Levels, the user must manually preset Levels to match the controllable Levels for the new Destination. The Panel Server will not change the preset Levels automatically to match the Destinations controllable Levels when this flag is enabled and a Level preset change has been effected. The Hold Breakaway feature is not available on MCO, COS, CLNT, and SVR panels (the flag is grayed out).
- A Prev/Next Area search capability has been added which can be used for multi-Area systems with duplicated name sets. This feature allows quick searches of all Areas using a specific Source name, using the new assignable button types **PrevArea** and **NextArea**.

- An Autofill feature has been added, which permits finding unique source names by auto filling a matching unique system source name when keypad prefix/suffix entries are used.
- The Salvo Lock feature will now only prevent scrolling and execution of Salvos from scrolling Salvo mode access. Salvo Select operations are no longer affected by this configuration flag.
- The Encore OUI has been enhanced to allow rapid configuration of page sets using multiple pick option lists to create a Destination or Salvo Page.
- The control panel Alpha Sort feature now employs a new sorting method that uses a weighted character sort versus an ascii sort. Alpha+numeric names (e.g. VTR1, VTR2, VTR10, VTR100) will now sort correctly in ascending numeric order. The previous ascii sort required leading zeros in names (e.g. VTR001, VTR002, VTR010, VTR100).
- The Encore RCL Server now drops automation Ethernet client applied Protects if an Ethernet client disconnects from the server due to a broken Ethernet connection.
- The Encore RCL Server now provides a console warning message and disconnects any automation client that exerts excessive load on the server. This prevents a mis-behaved automation client from adversely affecting the rest of the Encore system. After a serial client has been disconnected, the RCL Server connection status indicator for the dropped port will go red. Selecting that disconnected client and executing **Resync Comms** reinitializes the port, and if successful its indicator goes green.

New Features in Encore Release 1.7.3

- Support for Acappella as an Encore Matrix type ([page 10](#))
- Visual Status Display (VSD) application ([page 11](#))
- Encore Device ID with NetConfig ([page 12](#))
- Router Controller Enhancements
 - Automatic Detection of Database Match ([page 13](#))
 - Redundancy Independent of SCB Frame Slot ([page 13](#))
 - SCB Reference Count Server ([page 14](#))
 - Router Controller Database Validation ([page 15](#))
 - No Matrix Indication ([page 18](#))
 - No Router Indication ([page 20](#))

- Control Panel Server (CPS) Enhancements
 - Quick CPS Salvo Startup ([page 21](#))
 - Loss of Redundancy Reason Displayed ([page 21](#))
 - Redundancy/Supervisor Indication([page 22](#))
 - Non-Latching Joystick Override Regression ([page 22](#))
- RCL Server Enhancements
 - Destination Exclusion Set Support ([page 22](#))
 - RCL Protocol Enhancements ([page 23](#))
- Tie Line Manager Enhancements
 - Tie Line Manager Health Check ([page 25](#))
 - TLM Logging ([page 26](#))
 - TLM Assignments ([page 26](#))
- Salvo Editor Lock/Protect ([page 28](#))
- Soft Panels Enhancements
 - Soft Panels Dynamic Keycap Legends ([page 31](#))
 - MCO and COS Panel Support ([page 31](#))
- Under Monitor Display Support ([page 31](#))
- SNMP Enhancements ([page 32](#))
- Concerto Matrix Controller Native Protocol (NP) support. This feature is intended for third party developers ([page 33](#)).
- MCO and COS Custom Control Panel and RIB Support ([page 34](#)).

Changes in Encore Release 1.7.3

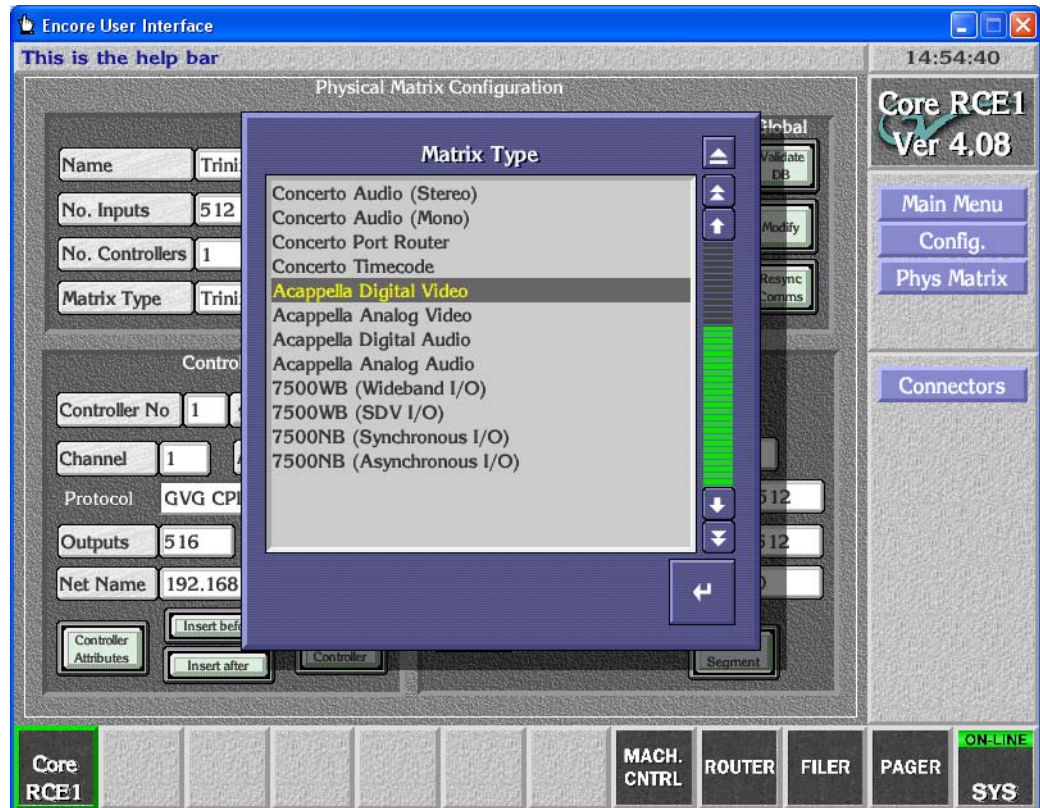
- TLM messages are now time stamped when logged to the console, which can assist with troubleshooting.
- Probel Swp08 protocol support added for Routers that use this protocol. The protocol is listed as an available communication protocol in the Router Controller Channels configuration screen.
- Matrix crosspoint control is now restored faster if a change-over occurs between redundant Encore SCBs that are controlled by an SMS7000 system. Previously the process could take up to 30 seconds.

Also see [page 35](#) for additional information.

Acappella Matrix Control

Version 1.7.3 Encore software supports Acappella matrices. You can choose Acappella in the Router Controller Physical Matrix Configuration Screen. Acappella matrices are located at the bottom of the scrolling Matrix Type list (Figure 1).

Figure 1. RCE Physical Matrix Configuration Screen



An Acappella matrix is configured for control by Encore using the same procedures as other matrix types. However, each Acappella frame can be configured with only one video level and one audio level. Multiple video or audio levels (up to four each) require multiple Acappella frames.

Encore, SMS7000, and Acappella remote panels used to control Acappella matrices are configured the same as panels controlling other matrix types. If you use Acappella remote panels to control multiple frame Acappella matrices (multiple levels), you will also need to use Acappella frame web pages for configuration.

Refer to the separate *Encore Configuration Manual* and *Acappella Instruction Manual* for specific information.

Visual Status Display

The Encore Visual Status Display (VSD) is a stand-alone application that shows the current status of the system's Source-to-Destination connections. Large routing systems can have many Destinations and complex paths, making it impossible to see the status of the entire system on a single screen. VSD permits grouping subsets of the Encore system into Views. Different Views can be created to quickly display the current status of various portions of the system.

VSD information is updated automatically. For example, when a Destination's routing changes, if that Destination is currently displayed its status will be updated on the screen within five seconds. In addition, if desired the VSD screen can automatically update if the Encore router configuration is modified (for example, changes in the names of existing Sources or Destinations).

The Encore VSD is an option that is registered by entering a license key, obtained from Grass Valley Customer Service. The license key is valid for only a specific PC, and only one VSD instance can run on that PC at a time. An unregistered VSD operates in trial mode, which limits the maximum number of Destinations supported per View to five.

The Encore VSD operates only with Encore 1.7.3 and higher software. See the separate *Visual Status Display Instruction Manual* for more information.

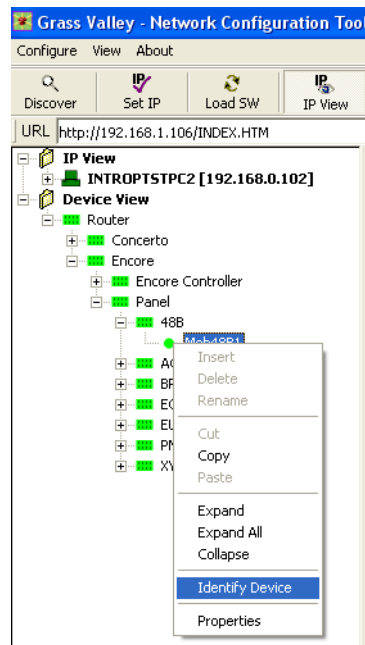
NetConfig ID of Devices

Encore SCBs, control panels, and Concerto matrix controllers can now be identified with the NetConfig application. This can help locate and identify devices. Panels are identified by alternatively blinking their buttons. SCBs and Concerto Matrix controllers are identified by flashing their amber colored Busy LED. Devices ID for 20 seconds by default.

To Identify a Device:

1. Open the NetConfig application.
2. From NetConfig IP, Device, or Facility view, locate the device you wish to identify on the hierarchy display on the left.
3. Right click on the device's icon and chose the **Identify Device** menu item (Figure 2).

Figure 2. NetConfig Device ID



4. The selected device will then blink its buttons or LED.

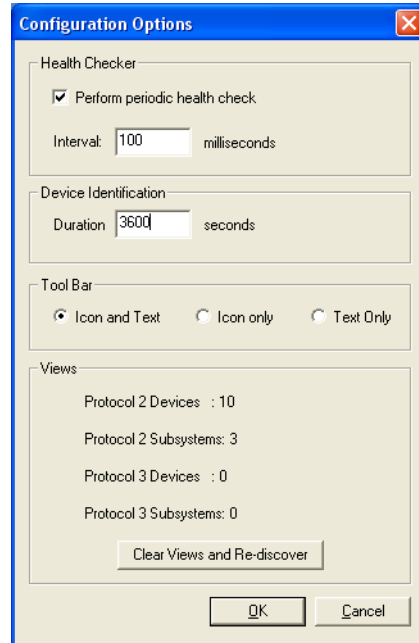
Changing the Device ID Duration

To make devices flash longer than 20 seconds (useful if the device is installed at a distant location) do the following:

1. In NetConfig, click on the **Options** button. A dialog box opens.

2. Change the ID time by entering a duration (in seconds) in the **Device Identification** section of the dialog box and click OK (Figure 3).

Figure 3. NetConfig Options Screen



Automatic Detection of Database Match

The Encore 1.7.3 software has been enhanced to automatically detect whether the Sharer and SCB flash memory have correctly matching databases, and automatically go to Sharer mode if they are identical.

If the Sharer shuts down on the network, each Router Controller and Control Panel Server goes to **Local** filing mode. Now, whenever the Router Controller or Control Panel Server detects the Sharer, they check the copy of the database on the SCB Flash against the Sharer database. If the databases match, these applications automatically go back to **Sharer** filing mode.

This check is also performed when the Router Controller or Control Panel Server starts up. If the databases match, the Sharer database is not downloaded, which significantly reduces the time delay to full operation.

Redundancy Independent of SCB Frame Slot

In earlier versions of Encore software, Master or Mirror redundancy mode was partially determined by the IP address of the SCB as well each SCB's flash memory. However, the IP address is associated with the SCB slot, not the controller card. This lead to inconsistent and unpredictable behavior if

the SCBs are swapped and started up without the Sharer running. This affected all applications capable of redundant operation (Control Panel Server, Router Controller, and Tie Line Manager).

With Encore 1.7.3 software, redundancy mode information is also stored in the memory of the frame and validated. This results in redundancy mode always being tied to the frame slot, solving the above problem.

SCB Reference Count Server

Earlier versions of Encore software required connection of a common VITC for redundant operation for synchronized Takes. Encore 1.7.3 software has a reference count server that eliminates the need for VITC for redundant operation. However, VITC is required to perform timed Takes from automation clients.

This feature works by having one SCB broadcast a reference count, and all other SCBs synchronize to it. Since all the SCBs use a common reference count, they can be configured and operated as redundant pairs without VITC. In case of failure of the server SCB, another SCB takes over broadcasting the reference count.

If VITC is provided to a system running with the reference count server enabled, the reference count server and client software within the SCBs automatically go to sleep and use VITC for synchronizing Take operations.

To operate an Encore system with Router Controller and Control Panel Server redundancy without VITC embedded in the reference signal, follow the steps below.

1. Go to the web page of Encore SCB (you can use NetConfig). Go to the **Application Configuration** page and scroll to the **Reference Count Server** section. Enable the **Reference count server**. Repeat this step for each of the SCBs in the network.
2. If you have Concerto or Acappella matrixes controlled by the redundant Encore SCBs above, their equivalent internal reference count mechanisms must be turned off so they don't conflict. Go to the web pages of Concerto and Acappella matrixes and do the following:
 - For Acappella, go to the **Reference Config** page and in the **Reference Time Server** section disable the **Broadcast field rate time reference** option.
 - For Concerto, go to the **Reference Config** page and in the **Reference Count Server** section disable the **Broadcast frame count** option.

Note All SCBs and all controlled Matrices must have their Reference server settings set properly for non-VITC operation synchronized Takes.

Reference count mode changes are immediate (no reset is required). Once enabled the reference count status is reported on the screen (e.g. Client).

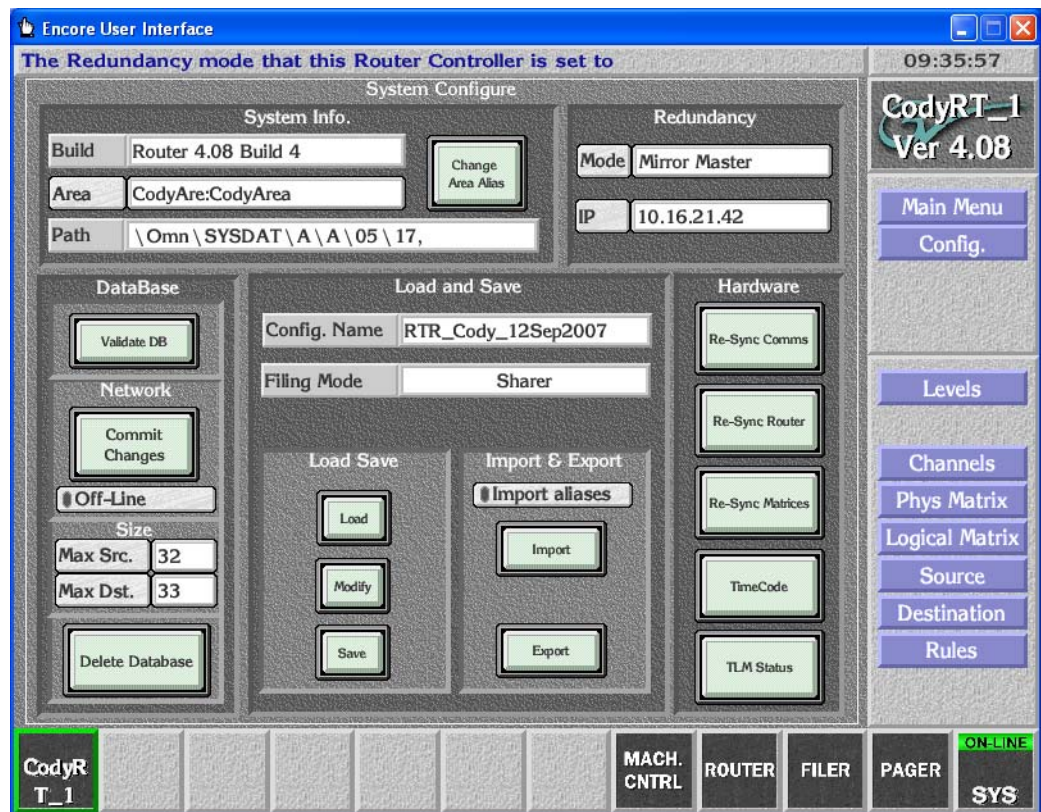
Router Controller Enhancements

Database Validation

The Router Controller application has been enhanced with a database validity feature.

A **Validate DB** button has been added in the Config screen of the Router Controller (Figure 4). This button indicates the current state of the Router database and can be used to regenerate the database, which may correct the problem.

Figure 4. Router Controller Config Screen Validate Database Button



Database Validity Indications

The **Validate DB** button has three states.

- **Normal** - Uncolored background: Indicates the database has no discrepancies in the configured source and destination configuration.
- **Warning** - Yellow background: Indicates minor inconsistencies are present in the configuration. For example, a particular source or destination may not have a valid connector.
- **Invalid** - Red background: Indicates the database has serious inconsistencies within the internal data and references. In this state it is recommended to take the Router Controller immediately offline and use the **Validate DB** button to regenerate the database and internal references.

Invalid Router Database Restrictions

When the router configuration is invalid (**Validate DB** button is red) the following actions are not allowed:

- Increasing the start input and the start output of the segment(s) in the Physical Matrix screen.
- Decreasing the end input and the end output of the segment(s) in the Physical Matrix screen.
- Adding or deleting elements in the Logical Matrix screen.
- Changing the I/O connector or the Level mapping in the Sources and Destinations screens.

Invalid Router Database Resolution

An invalid router configuration can result if inconsistent references exist between the internal data and sources or destinations. Resolution procedures are listed below.

1. Take the Router Controller offline.
2. Click on the **Validate DB** button. The Router Controller will regenerate its internal references and display the sources and destinations lacking proper connector numbers.

You can click on a listed source or destination to go directly to the source/destination screen and make a correction.

Note If more than 100 sources or destinations have invalid connector numbers on one or more levels, only the first 100 sources or destinations will be displayed.

3. The **Validate DB** button may turn Yellow at this time if the Router Controller was able to regenerate all its internal references

4. With the indicator colored Yellow, you can now correct or reconfigure the source and destination connectors. Click on the Router Controller Physical Matrix **Connectors** button to check the validity status of all the configured sources and destinations. Sources and destinations without connectors are shown as **Not Associated** and sources sharing connectors are shown with an * (asterisk). These statuses can be used to identify and correct any discrepancies.

The **Validate DB** button returns to the uncolored normal state only when all sources and destinations have valid connector numbers on all levels.

Validate Database Button Locations

Besides the Router Controller Config screen, the Validate Database buttons is present on the following screens:

Figure 5. Router Controller Channels Validate DB Button

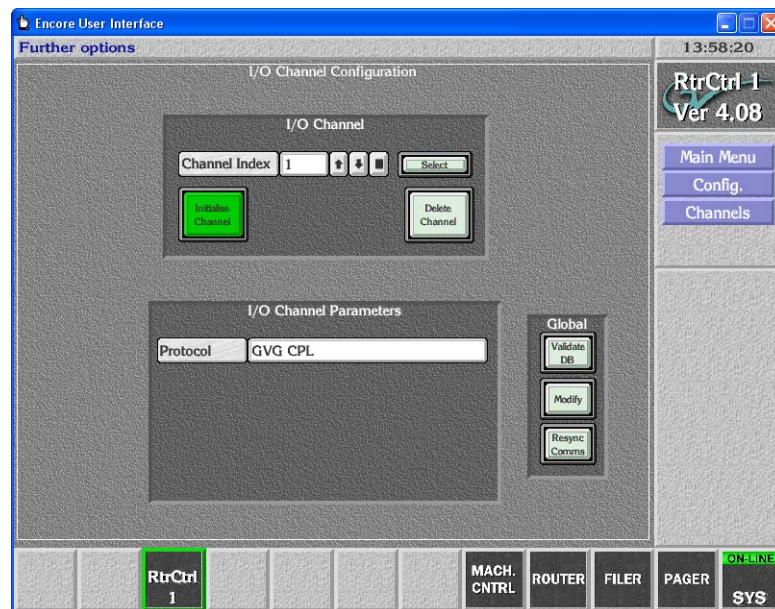


Figure 6. Router Controller Physical Matrix Screen Validate DB Button

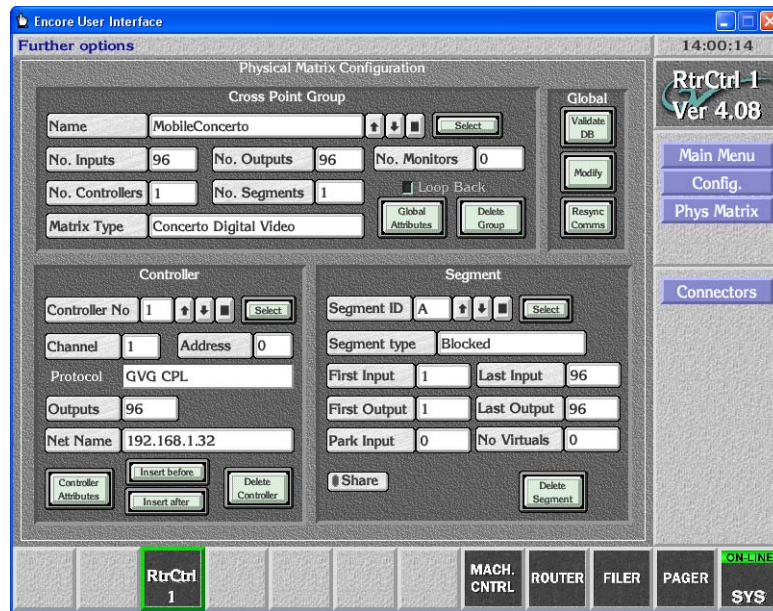
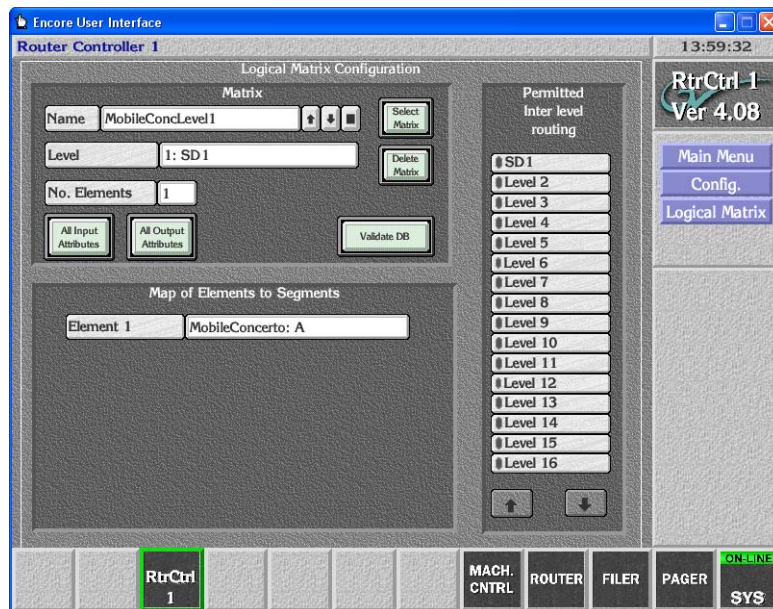


Figure 7. Router Controller Logical Matrix Screen Validate DB Button



No Matrix Indication

With Encore 1.7.3 software, the Router Controller and the Control Panel Servers have been enhanced to immediately report the loss of communication with a matrix and update destination and level statuses.

Note It is not possible to detect loss of communication with certain serially controlled Matrices.

In earlier software versions, if the Router Controller lost communication with a Matrix, the control panels, RCL/NP server, and Router Controller OUI would continue to show the last known status of the affected destinations and levels. Loss of matrix control would only be discovered when attempting to perform a Take on the affected destinations and levels. The Take would fail and only then would the reported status change to No Xpt. This enhancement keeps users better informed of the operating state of the Encore system.

Note The Router Controller can take varying amounts of time to detect a Matrix going offline. A CPL protocol controlled Matrix (such as Grass Valley Concerto or Trinix) can detect loss of communication within 3 seconds. An NP protocol controlled Matrix (NP Matrix) can take 2 to 30 seconds to detect loss of communication.

No Matrix Status Reporting

If a Matrix hosting the active tally level of a selected destination has lost communication with the Router Controller, the No Matrix status is updated in the following ways:

- All control panels with displays show **NoMatrix** or **Undef**. Panels without displays (such as the 48B) will low tally their destination select buttons. GSC panels report this condition by flashing their LEDs. Source Takes cannot be performed on panels that are in this condition.
- RCL Server also reports **NoMatrix** as the status for 'query destination status by name' commands. For 'query destination status by Index' commands, the status returned is:

"0xFFFFB" for RCL Protocol

"0x FFFE" for Native Protocol

The RCL Server also sends out a notification (NY,DS) for RCL Clients that have subscribed for destination status change notifications. Notification is sent for each of the destinations affected to a matrix going offline.

Selecting No Matrix Status Text

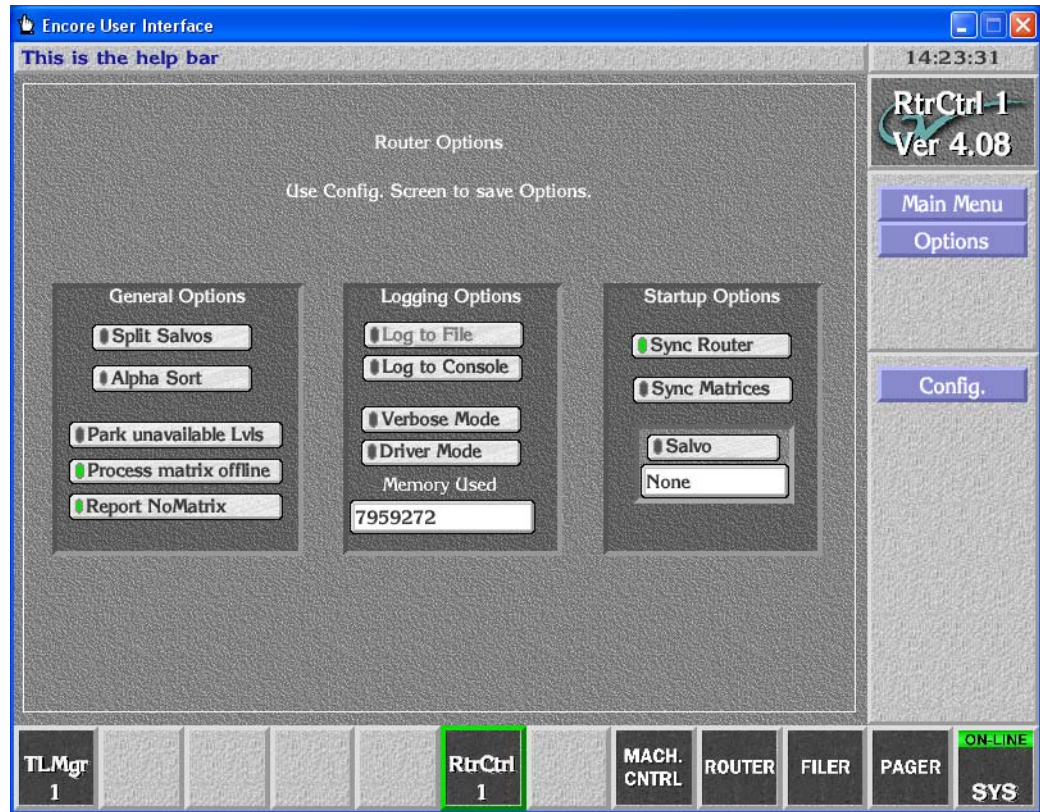
To be notified of Matrices going off line and select what status text is displayed (**NoMatrix** or **Undef**):

1. Log on to the Router Controller OUI and go to the **Options** screen.
2. Turn ON the **Process matrix offline** flag.
 - Turn ON the **Report NoMatrix** flag to see status as **NoMatrix**.
 - Turn OFF the **Report NoMatrix** flag to see status as **Undef**.

Turn OFF the **Process matrix offline** flag to see the previously taken source as the status of destinations (the previous system behavior).

The [Figure 8](#) shows the Router Controller Options screen with these flags selected.

Figure 8. Router Controller No Matrix Reporting Setting



Park Unavailable Assigned Data Levels

If a Data Level assignment exists and a multi-Level Take involving it fails, the Data Level Destinations will be parked, provided the **Park unavailable levels** flag is ON. This flag is available in the Router Controller application Options screen ([Figure 8](#)).

No Router Indication

With Encore V1.7.3 software, Control Panel Servers can detect the loss of a Router Controller and dynamically report this condition to control panels and RCL clients in their Area.

Note A Control Panel Server may take a up to 90 seconds to recognize the loss of a Router Controller.

The loss of a Router Controller is reported in the following ways:

- Control panels display **NoRouter** for all destinations of the failed Router Controller.
- RCL Servers send a notification about the loss of the Router Controller to all subscribed clients.
- The Control Panel Server running on the SCB sends out SNMP notifications to all the registered SNMP Managers.

Control Panel Server Enhancements

Quick Control Panel Server Salvo Startup

The Encore Control Panel Server (CPS) has been enhanced to skip loading Salvos at startup if the copies of Salvos stored in flash memory match those stored on the Sharer. If they match, the copies of Salvos on the flash are used. This significantly speeds up CPS start up.

Note Launch the Sharer with the Watchdog application, not directly, to ensure the Quick CPS Salvo Startup feature is active.

A new Salvo Monitor application must be running to enable this feature. That application is launched automatically by the Watchdog startup application, and runs continuously in the background.

The Sharer PC must also be registered as an Engine to run the program. This registration is usually already in place on established Encore systems, but should be confirmed. If the Sharer PC is not registered, follow the procedure described in the latest *Salvo Editor Instruction Manual*.

Reasons for Loss of Redundancy Sync Displayed

Control Panel Servers can now display the reasons why a redundant pair of CPSs are not in sync. If the mirror and master CPSs report **No Sync** on the Panel Server screen of the OUI, clicking on the **Status** text box opens a pop-up window. This window lists the reason(s) preventing synchronization. Users should check both the Master and Mirror CPS to get an accurate and comprehensive list of reasons.

If any panels are connected to only the Mirror or Master CPS, the panel names will be displayed in the popup window. A possible solution to this situation is to go to the Panel Network web page of each panel and ensure that the Primary and Secondary server IP addresses are specified correctly.

When a CPS starts up or is placed on-line, and when a control panel signs on, the CPSs will go out of sync briefly. The CPSs will indicate an approximate time (in seconds) needed to regain synchronization in the popup window.

Redundancy/Supervisor Indication on the SCB

Now an Encore SCB running a CPS turns on its busy LED if the CPS is either operating standalone or is the supervisor in a Master Mirror pair. A supervisor is the CPS that drives the displays and tally lamps of the control panels connected to it.

Non-Latching Joystick Override Regression

Releasing a non-latching joystick overrides now steps back through previous overrides in the reverse order of their selection. The last selected override will be restored when another override is released. In earlier Encore software versions, releasing an override with multiple overrides active restored the original non-overridden source.

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.

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

RCL Server Enhancements

Destination Exclusion Set Support

Many automation clients (both NP and RCL Clients) use QN, ID or QN,D commands at start up to obtain the list of destinations. If the Encore system has, for example, 1000 destinations, details of all the destinations are sent to the client. Similarly, clients send QD/QJ or a variant of destination status query command at the start up. Most of the client issue QD/QJ commands without any specific area or destination. The CPS sends out all the status of all the destinations in the system causing a large amount of TCP/IP traffic. In most cases, however, the automation client (such as Master Control system) is probably interested in only a few destinations.

With Encore 1.7.3 software, a Destination Exclusion set can be configured and applied to an RCL/NP client configuration. The RCL Server will then only respond to the client with information related to destinations that are not excluded. The RCL Server sends appropriate error codes when RCL/NP clients try to perform operations involving excluded destinations. This can reduce network traffic and reduce device work load by preventing the server and clients from processing information for unwanted destinations.

To create and/or apply a destination exclusion set to an RCL/NP Client:

1. Log on to the Control Panel Server OUI (the master if configured as a master-mirror pair). Make sure that CPS is in Sharer filing mode.
2. Go to **RCL Server** screen and choose the RCL/NP Client for the destination exclusion set to be configured.
3. Go to the **Flags and Parameters** screen and click on the **Dest Exclusion Set** button. This brings up a screen similar to that used by a Panel for configuring exclusion set. Exclusion sets already created can be used or a new exclusion set can be created.

Datatek SID Support

The RCL Server has been enhanced to support the Datatek SID Protocol over RS422 to get the status of the eight configured destinations. This permits elimination of the SID-RIB panels.

RCL Protocol Enhancements

The RCL Protocol has been enhanced with new commands, modifications to some existing commands, and additional error codes. These protocol changes are designed for third party developers interested in using RCL to integrate their products with Encore operation.

Refer to the latest version of the *Routers Protocols Manual* for specific information about command parameters, responses, and error codes.

The RCL protocol enhancements include:

Tie lines - RCL Server provides a command to retrieve a list of tie lines and destination status information with tie lines (QN and QK commands).

Rooms - RCL Server provides commands to query list of rooms and room details (QN and QR commands).

Assignments - Assignments reserve a source to destination routing path without doing an actual Take. RCL provides the commands to perform operations on assignments (AS, DA, and QA commands).

Alias - RCL Server provides the commands to query alias for a source/destination and change alias for a source/destination (QN, CA, and CM commands).

Revised Status Responses

The RCL Server provides commands to get destination status by name/index. If a source for a destination is undefined, parked, or missing, RCL Server status commands by index (QJ, QI and QK) will now return the pre-defined indices (Undef, Parked and No_XPT) in place of source index to indicate these conditions.

New Error Codes

Newly created RCL Server error codes have been added, and are listed in the *Level 4 Error Codes* appendix of the latest *Routing Products Protocol Manual*.

Unsupported Protocol Commands

RCL Commands Not Supported by Encore

Table 1. Unsupported RCL Protocol Commands

Command	Description
CH	Chop
BK	BK,f,Protect flag

NP Commands Not Supported by Encore

Table 2. Unsupported NP Commands

Command	Description
CH	Chop
BK,R	Protocol processor software revision
BK,t	Native protocol software version
QN,T	Query tie line
QN,M	Query tie line names
QN,Y	Query tie line types
QL & QI	Query destination status with tie line information
QT	Query date and time
ST	Set date and time
BK,f	BK,f,Protect flag and BK,f,Redundantswitchover

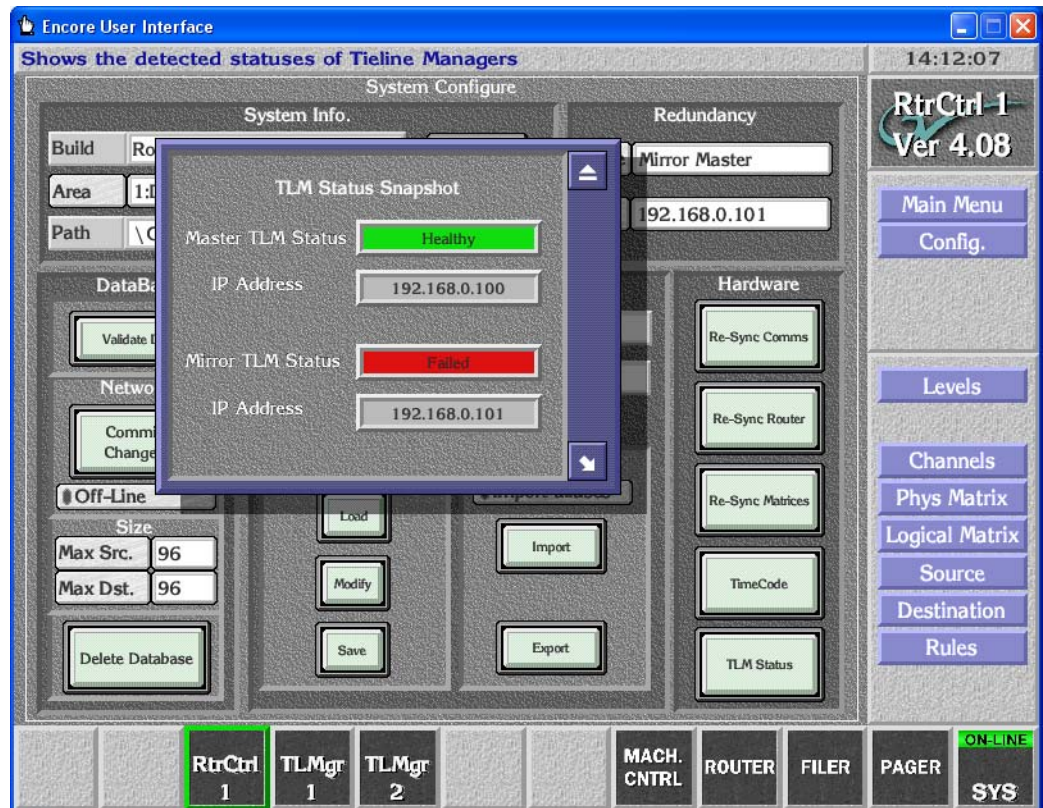
Tie Line Manager Enhancements

TLM Health Check

The Router Controller and Tie Line Manager (TLM) have been enhanced to monitor and report the status of the TLM. This can reduce the delay in identifying failures of Tie Line Takes if the TLM is not functioning properly.

A **TLM Status** button has been added to the Router Controller Config screen. Clicking on this button displays a TLM Status Snapshot window that reports the state of TLM at the time the button was pressed (Figure 9). Closing and reopening the window refreshes the status information.

Figure 9. Router Controller Config Screen TLM Status



This window indicates the health of both the Master and (if present) Mirror TLM on the network, and also displays the IP addresses of SCBs where each is running.

The Master/Mirror TLM Status text button reports three conditions:

- Healthy (green): A TLM is up and running.
- Failed (red): The RE did recognize the TLM service in the past, however, right now, the TLM is not responding.
- Not Detected (red): The TLM is not running on the network, or the TLM is in Disabled mode.

If the Router Controller detects failure of a TLM (either Mirror or Master), an unsolicited message appears on the Router Controller OUI to indicate the change in TLM status.

Figure 10. TLM Failure Message.



TLM Logging

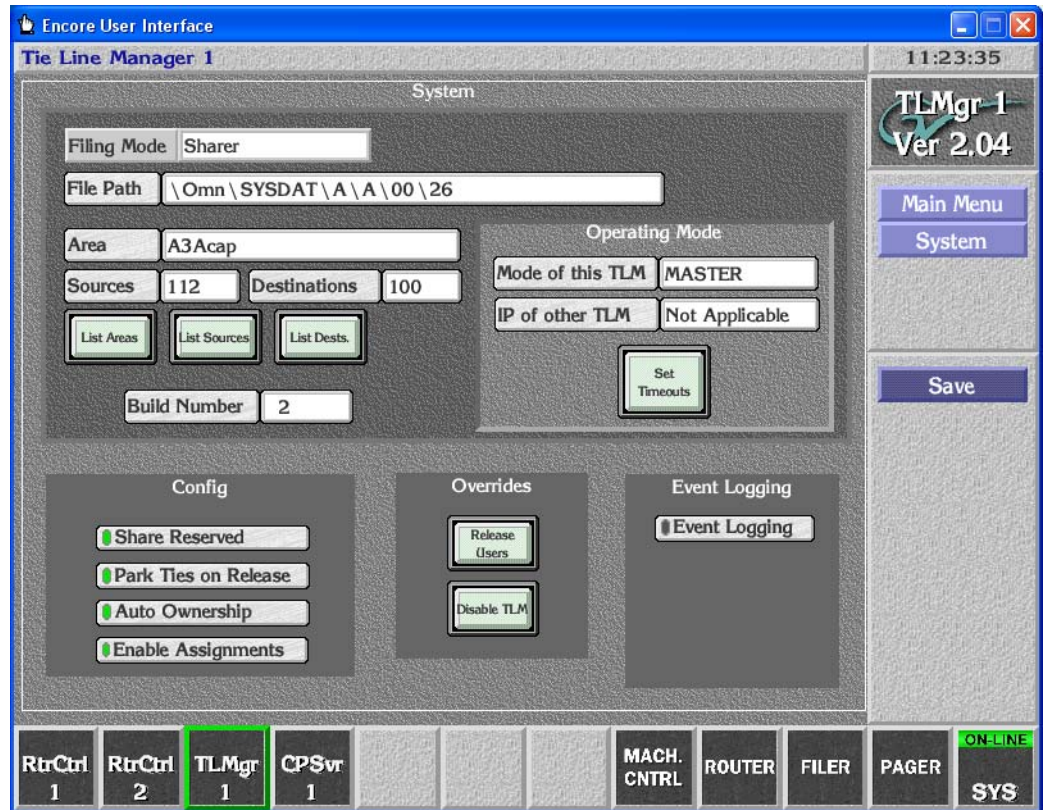
TLM messages are now Time Stamped when they are logged to the console. This feature can help with system configuration, service, and troubleshooting.

TLM Assignment

Tie Line and Machine Control Assignments can now be created between Rooms. Assignments reserve a Source to Destination routing path without doing an actual Take. Assignment is a customized feature that does not apply to most existing or new Encore facilities. Assignment is activated

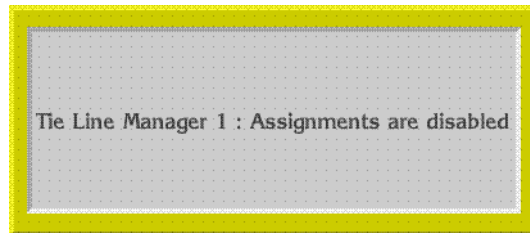
with the **Enable Assignments** button on the Tie Line Manager System screen (Figure 11).

Figure 11. TLM System Screen, with Assignments Enabled



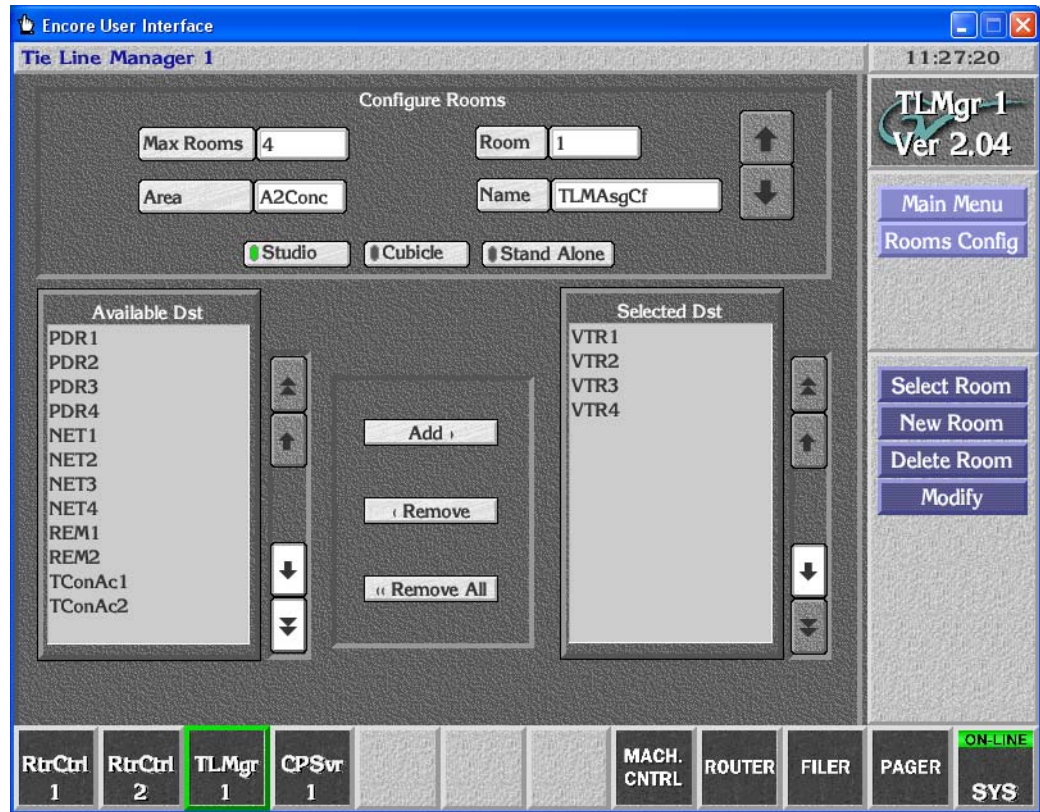
If the Assignments feature is disabled a message is displayed.

Figure 12. TLM.



Once enabled, the Tie Line Manager Config screen changes for custom operation (Figure 13).

Figure 13. TLM Custom Rooms Config Screen



Assignments are created and released using the Visual Status Display (VSD) application. See the separate *Visual Status Display Instruction Manual* for more information.

McCurdy Intercom System Support

The RCL Assignment activity is reported to the McCurdy Intercom system on a timed interval of every 15 seconds.

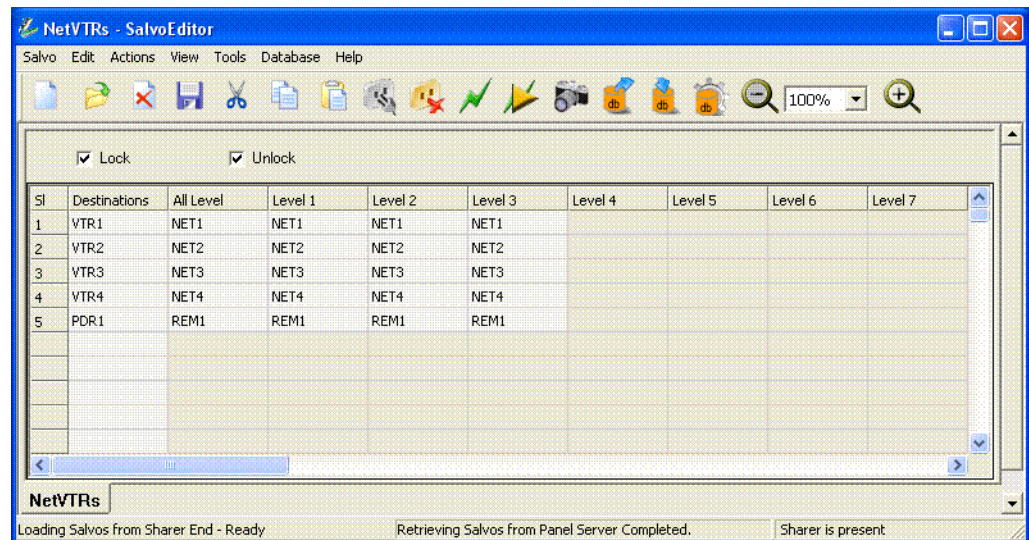
Salvo Editor Lock/Protect

Salvo Editor supports creating Salvos with Pre Unlock/Post Lock capabilities. Encore 1.7.3 CPS and Router Controller software support Salvo lock-protect/unlock-unprotect from control panels and protect/unprotect from automation clients. For automation clients, only Protects are used to lock destinations. The Encore system does not support Soft locks or Hard locks for automation clients.

Salvo Lock/Unlock Flags

Check boxes to set a Salvo Lock and Unlock are located at the top of the Salvo Editor screen (Figure 14).

Figure 14. Salvo Editor Lock and Unlock Settings.



Salvo Lock and Unlock Behavior

The exact behavior of Salvos with these settings depends on how the device issuing the Salvo is configured. For example, if a control panel is not configured with Protect functionality, Salvos with a Lock issued by that panel will still change Destination crosspoints, but will not Protect them.

Pre Unlock and Post Lock actions as well as any Salvo Takes will fail for any Destinations in the Salvo that are already locked by other devices. This is always the case for Salvo Editor issued commands. This also applies to a panel issuing a Salvo with Lock or Unlock set even if the panel has the **Force Unlock/Unprotect** and/or **Lock/Protect Override** flags turned on. Only single Destination Take operations issued by a panel configured with override capabilities can change a Destination that is locked or protected by another device.

The Lock and Unlock check boxes apply to all the Destinations in the Salvo. To Lock or Unlock specific Destinations, create a Salvo containing only those Destinations and then set the desired check boxes.

If only some of the Destinations in a Salvo are Protected by another panel, a Salvo issued with Salvo with Unlock checked will not change Protected Destinations. However, any Unprotected Destinations will be changed. There is no notification of a partially executed Salvo, but a snapshot can be taken to see all the current Sources.

Unlock

When a Salvo's **Unlock** is ON (checked) and the Salvo is saved, executing that Salvo first unlocks or unprotects all the destinations, if locks or protects are present and the device issuing the Salvo has permission to do so. Then the Salvo performs the Takes. A Salvo does not require any sources be specified, and can only have a Lock or Unlock specified. This allows a Salvo to lock/protect or unlock/unprotect multiple destinations without changing any crosspoint statuses.

Lock

When **Lock** is ON for a Salvo in the Salvo Editor application and the Salvo is saved, a control panel executing that Salvo will Lock or Protect all destinations in the Salvo after the Salvo is executed (depending on the option enabled in the panel's configuration). A control panel can be configured with Protect, Soft Lock, or Hard Lock options from the OUI.

Lock and Unlock

When both boxes are checked and the Salvo is saved, executing that Salvo will first Unprotect any Protected Destination, Take the specified Sources to those Destinations, and then Protect the Destinations.

Lock or Unlock Without Changing Crosspoints

To Lock or Unlock Destinations and retain their current Source selections, create a Salvo that has blanks in the Source column for the desired Destinations.

Salvo Lock/Unlock Example

If destinations VTR1 to VTR10 are in a Salvo named "VTRSalvo" and that Salvo's "Lock" flag is checked, when a Panel "DubbXY" executes Salvo VTRSalvo, the CPS executes the Salvo. Post execution, it also issues Protect/Lock (depending on the option enabled in the panel configuration) for destinations VTR1 to VTR10.

Similarly, if the Salvo "VTRUnLock" is created with the same set destinations VTR1 to VTR10 and the "Unlock" flag is checked, it can be used to unprotect/unlock all the destinations with one button push. To do this, execute the Salvo VTRUnLock from the same panel (DubbXY). In this case, the CP Server will pre unlock the destinations involved in the Salvo and execute the takes if any.

Soft Panels Enhancements

Dynamic Keycap Legends

The separate Soft Panels application (provided with Encore 1.7.3 software) supports automatic loading of keycap legends. This removes the need to manually enter the legends that have already been specified in the panel configuration.

See the separate *Soft Panels Instruction Manual* for detailed information.

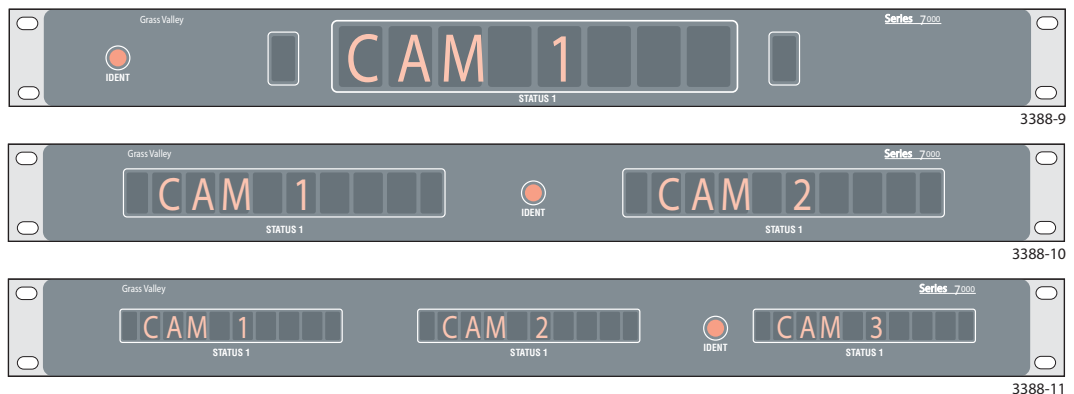
Legacy COS and MCO Soft Panels

The Custom SMS7000 COS and MCO panels are now supported. These custom panels are not widely used and do not apply to most existing or new Encore systems.

Under Monitor Displays

Legacy SMS7000 Under Monitor Displays (UMD) are supported by Encore version 1.7.3 (Figure 15).

Figure 15. Legacy Under Monitor Displays



The single Under Monitor Display (UMD) has an eight-character display that indicates the video source currently being displayed on the associated monitor. A single LED is at each end of the eight-character display; one LED is green, the other is red. The LEDs are software configured to provide Tally indications.

The dual UMD has two eight-character displays with corresponding red and green LEDs and is intended to rack-mount beneath two video monitors (one display per associated monitor). A triple UMD is also available.

All three UMDs have a single, recessed **IDENT** button. Pressing this button makes the UMD display its configuration and software version.

SNMP Enhancements

Encore SCB SNMP monitoring has been enhanced to report:

- Status and events of CPL Matrices connected to the Encore SCB.
- Panel related information and events. Events include Panel disconnect and re-connect to the Panel Server application running on an SCB. A panel disconnect event will be generated after a 30 second delay of the Panel disconnect, and a re-connect event will be generated without any delay. This delay ensures that a software update to a panel (resulting in a panel reboot) is not treated as a panel disconnect.
- Events detected by a Mirrored Panel Server and a Mirrored Router Engine.
- Status and events of NP/RCL clients. Event includes disconnect and re-connect of Ethernet clients from a specific IP address. Disconnect event is sent when all the clients connections from a specific IP address are closed.”
- The Control Panel Server application provides RE IP Address, RE Area, RE Status, RE Redundancy configuration for each Router Controller running in the system.
- “Router Engine absent Error” is generated whenever any configured Sandalone or Mirror and/or Master Router Engine of an Area goes down. This notification is sent in less than 90 seconds.
- An Encore SCB sends notification messages to an SNMP Manager PC configured as a trap target regardless of which network the PC is connected to, either EN1 or EN2 of the Encore network. Connecting the PC to EN1 is recommended to avoid possible excessive message traffic on EN2 that could affect Encore system performance.

Note NetCentral (Thomson Grass valley SNMP Manager) supports auto-discovery, such that any SNMP device present on the network will be added automatically to NetCentral. If the device is connected to EN2 of the Encore network (it will not be detected by auto-discovery if the PC running NetCentral is connected to EN1 network). In such cases, customers have to add devices on EN2 network manually to NetCentral.

Concerto Native Protocol Support

Note The Concerto Native Protocol feature is intended for third party developers. Existing customers should use Standard Control on their Encore systems.

Concerto version 1.7.5 software supports Native Protocol (NP) Index commands. Concerto web pages have been enhanced for local configuration if NP is used. A Concerto matrix can now operate under **Standard Control** (existing functionality), operate only with NP (**Standalone** control option), or allow both standard and NP control. These settings are selected with the **Control Options** located on the Concerto System Configuration web page (Figure 16).

Figure 16. Concerto Standalone Control Setting.

The screenshot shows a web browser window titled 'index.htm - Windows Internet Explorer' with the address bar showing 'http://192.168.1.32/INDEX.HTM'. The page content includes a navigation menu on the left with links for Matrix Description, Matrix System, Matrix Network, Reference Config, Factory Default, Local Configuration, Matrix Applications, and Maintenance. The main content area is titled 'Matrix Controller System Configuration' and contains the following sections:

- System Parameters:** Matrix Device Name: MobCrio1, Asset Tag: none, Location: here.
- Serial Port Configuration:** Console Baud Rate: 115200 (parity=none, databits=8, stopbits=1).
- EXT COM Serial Port Baud Rate:** 115200.
- EXT COM Serial Port Parity:** None.
- Control Options:** Standard Control: Allow Native Protocol Control: Standalone Control: {Local configuration must be enabled for standalone}

At the bottom, a note states 'New settings will take effect after reset of controller.' with a 'Reset Controller' checkbox (unchecked) and a red note: '{If checked controller will reset after new settings are saved}'. There are two buttons: 'Save New Settings' and 'Cancel Changes'.

If the **Local Control** setting is selected and saved, the Concerto Local Configuration web page is available that allows local matrix configuration (Figure 17).

Figure 17. Concerto Local Configuration.

Local Configuration

{Local Configuration is used only for Standalone Control operation}

Physical Matrix Count

Disabled 1 2 3 4

Video Reference Standard

Reference 1 Standard NTSC PAL

Reference 2 Standard NTSC PAL

Physical Matrix Configurations

Matrix #	Type	Board Slot Usage	Size		Offset		A
			Inputs	Outputs	Input	Output	
0	Concerto SD	<input checked="" type="checkbox"/> Slot1 <input checked="" type="checkbox"/> Slot2 <input type="checkbox"/> Slot3 <input type="checkbox"/> Slot4	32	32	0	0	Se
1	Concerto AES	<input checked="" type="checkbox"/> Slot1 <input checked="" type="checkbox"/> Slot2 <input type="checkbox"/> Slot3 <input type="checkbox"/> Slot4	32	32	32	32	Se

New settings will take effect after reset of controller.

Reset Controller: {If checked controller will reset after new settings are saved}

MCO and COS Custom Control Panel and RIB Support

Two legacy custom GSC hardware panels (MCO and COS) and a custom interface (RIB Box) are supported by Encore version 1.7.3. These are customized system enhancement that do not apply to most existing or new Encore facilities.

Additional Information

Auto Detect Time Code Reference

The Encore system now detects the incoming video reference format and reports its format (**PAL**, **NTSC**, **NTSC DF**) on the Router Controller Config screen. Click on the **TimeCode** button to see the standard being used. This setting cannot be changed.

It is recommended that **NTSC DF** VITC be fed to NTSC Encore systems.

P32 Panel Enable Assignment Limitation

P32 SMS style control panels can be set to Level mode. Under SMS7000 control, Level mode makes the 32 buttons on the right side of the panel select Levels instead of Sources.

Under Encore control, functions can be assigned to any button on the P32 panel. However, if the Panel Enable function is assigned to one of 32 buttons on the right, in Level Mode that button will not act as Level select, but instead acts as Panel Enable.

If you assign the Panel Enable function on a P32 control panel, be sure to assign it to one of the four buttons on the left side of the panel.

Tie Lines and New Router Configurations

If the Router Controller contains a configuration without Tie Lines and a new Router Controller configuration is loaded that contains Tie Lines, the RCLNP GUI cannot retrieve the Tie Lines. Automation clients using the RCLNP GUI can retrieve the Tie Lines after they have been saved from the Tie Config screen.

When loading a new configuration with Tie Lines, saving the database (at least once) and rebooting the system will allow automation clients to retrieve the Tie Lines.

GSC Panel Conversion from Encore Control Back to SMS7000 Control

After programming GSC panels within an Encore system the application memory space may become corrupted for use in an SMS7000 MCPUC system. The symptom of this is the panel's name within SMS7000 will have extended DOS characters that are not recognized by the DOS filing system used on the SMS7000 system. The SMS7000 GUI will be unable to see the panel application because the name will not be recognized.

To overcome this name corruption issue, special files named EraseC.mot and EraseE.mot must be loaded from the MCPU to clear this memory space. This then allows the SMS7000 to properly program the control panel and assign the default panel type name.

To correct this issue from the SMS7000 MCPU console interface:

1. FTP the files 'EraseE.mot' and 'EraseC.mot' to the MCPU. Ensure the FTP is done in the 'bin' (binary mode). You will use "EraseE" for EPOS panels and "EraseC" for CSOS panels.
2. From the MCPU console interface program the control panel with the appropriate .mot file. To know which file is appropriate for a given control panel, reset the panel and observe the boot up display of the panel. This will show the control panel's operating system CPOS or EPOS.
3. For a CPOS panel, such as a UCP type the following at the MCPU console interface:

```
prog "EraseC.mot" cp ucp
```

Note Quotes and spaces must be used as shown.

- First parameter is the command 'prog'.
- The second parameter is the file name the device is to be programmed with. To use EraseC and EraseE you must know what type of panel OS is being used for the control panel.
- The third parameter is the device type, in this case 'cp' for control panel device types.
- The fourth parameter is the device sub-type, in this case 'ucp' for Universal Control Panel. This will be specific to the type of control panel being programmed.

Incorrectly Named Salvo Recovery

When new Salvos are created, the new Salvo is displayed in LRP with a Keycap name <filename> that must be the same as the Salvo file name <filename>. If this is not done, problems can occur that require the special recovery procedures described below.

Salvo created with a File name different than the Keycap name.

Scenario

Salvo is created from an existing Salvo using LRP, wherein the Keycap name is duplicate.

Symptoms

Telnet the SCB running the CPS. The console connected to SCB, shall display the following error message when a Salvo is created with the duplicate Salvo keycap name.

```
Error loading Salvo in file <filename>
Duplicate Keycap name, Salvo <filename> has not been
loaded, Rename the Salvo Keycap.
```

When the duplicate Salvo keycap names exist in the system, it will not appear in the Salvo Editor as well as Panel Server.

Recovery

Change the duplicate Salvo Keycap name to be a unique name.

1. Clicking on the **Salvo Keycap** tab.
2. Enter a unique keycap name (same as filename) and modify the Salvo using LRP. The console connected to SCB will then display the following message:

```
Successfully saved Salvo to Flash
```

The Salvo Editor will now list the newly saved Salvo keycap name.

Salvo created with special characters not supported in VxWorks.

Scenario

Salvo is created from an existing Salvo using LRP, with Non-DOS FS2 character in Salvo file name and keycap name. The Salvo file name can be created with the non-DOS FS2 characters. However these Salvos will not be stored in the local drive of the SCB.

FS2 compliant file names are less than 9 characters in length, do not contain special characters like / \ ; : , * ? " < > | , and do not contain any spaces.

Symptoms

When the Salvo is created with the keycap name which contains the non DOSFS2 characters, it will not have any impact on the Salvo operations in the Encore. However the Salvo Editor will not list the invalid names.

The Salvo Editor will shows the error message:

```
COUNT field incorrect
```

Recovery

1. Change the Keycap name to contain only the valid DOS FS2 characters and modify the Salvo from LRP.

2. Save the Salvo with the new name containing valid DOS FS2 characters and delete the old Salvo.

Salvo created with a filename of more than 8 characters.

Scenario

The Salvo file name has no restriction on the number of characters. If the Salvo keycap name is more than 8 characters, the Panel Server will resize it to 8 characters and list. However the Salvo cannot be used for any of the operation.

Symptoms

The console connected to SCB, displays the following error message

```
Keycap name of Salvo <filename>exceeds 8 chars,  
Rename the Salvo Keycap.  
Unknown salvo name - <keycapname>
```

Recovery

1. Rename the keycap name such that it does not exceed 8 characters and modify using LRP.

Horizon Interface Limitations

- Protects sent from Encore panels/OUI to Horizon will not be retained after the Encore SCB is power cycled.
- After a SCB power cycle, only protects done from the Horizon panel will be read back and shown on the Encore Panels/OUI/VSD.
- If an Encore panel attempts to unprotect a destination protected by a Horizon panel, the error message will read as "MatrixLibrary error: Miscellaneous error, src '<Undef>' dest <dest name> on level(s):<levels>. Here the "<Undef>" is only part of the error message text. There is no change on the OUI status screen and the source name on the OUI/Panels remains correct.

Software Update

CAUTION During the software update your Encore system will be taken off-line for a short time while components reset. Existing matrix crosspoints will remain selected, but source to destination changes will not be possible while some system components are off-line.

Introduction

Note Read these instructions carefully and follow all the steps exactly to help ensure your update goes smoothly.

If you have any questions regarding software update, contact Grass Valley Customer Support.

Update Only Existing Encore Systems

This procedure is for updating an existing Encore system that has been previously installed, completely configured, and is operating correctly. New Encore systems ship from the factory with the latest version of software already installed, so these systems do not need their software updated. However, new Encore systems will need to be properly configured to operate at your facility.

Update Only From Version 1.6.5.4 and later to Version 1.7.3.x Software

This update procedure is only for Encore systems running the recent version(s) of software indicated above.

CAUTION If your Encore system is running software earlier than 1.6.5.4, you need to update the system to 1.6.5.4 (including NetConfig) first before updating to 1.7.3 or newer software. NetConfig may not be able to discover devices running earlier Encore software. Refer to the 1.6.5.1 Release Notes for earlier software installation instructions.

Update With the Encore Sharer PC

Use the Encore Sharer PC for the software update. This PC should already be configured to operate on the Encore network and you will be able to easily access all the Encore system components.

SCB Flash Memory Available Space Requirement

To accommodate the update process, 15MB of available SCB flash memory is required. Available flash memory space can be ascertained by mapping the SCB drive and opening the properties window for that device.

Note If you purchased flash memory from Grass Valley customer service it will already be formatted and loaded with Encore 1.7.3 software. See *Manually Updating SCB Flash Memory* on page 57 for additional information.

Have Sharer On-Line When Booting SCB Running CPS

Typically the CPS application runs on an SCB. The Sharer should be on-line when the SCB running the CPS is booted when migrating from software version 1.6.5.x to 1.7.3. During start up the CPS loads the DataBase file from the Sharer.

The CPS must start at least once (in case of master-mirror pairs, either the master or the mirror) before performing Save or Load operations.

Encore Software Compatibility

The Encore 1.7.3.1 release has several components with different software versions. Some software has been modified for this release and will have new version numbers, and some components retain their existing version because they were not modified.

CAUTION The latest software versions provided with this release must be run on all system devices for proper Encore system operation. Grass Valley tests only these versions for compatibility. Though some older versions for some components may work, some will be incompatible and cause problems, possibly serious. Grass Valley Customer Service and Grass Valley Engineering will only support customers with the latest versions of software installed.

This Encore release package contains the software listed in [Table 3](#).

Table 3. Encore 1.7.3 Release Components

Component Type	Name	Software Version
Encore	Encore	1.7.3.1
	Encore Panels	1.7.3
	Control Panel Server	1.7.3
Matrices	7500 Matrix Controller Code	1.7.3
	Concerto Matrix Controller Code	1.7.5.1
	Trinix	2.4.2
Accessory Applications	Net config	2.0.9
	Salvo Editor	1.2.0
	Soft Panels	2.2.1
	Encore Visual Status Display	1.0.0
	RCL Test Application	1.7.3
Core Software	Sharer	3.63 patch 9
	System Manager	3.70 debug b7
	Router Controller	4.08 build 5
	Tie Line Manager	2.04 build 3
	OUI	4.30.24

External System Compatibility

An Encore system can interface with many different external devices. As above, only the versions of software for these external systems available at the time of release are tested for compatibility.

CAUTION Software versions listed in [Table 4](#) must be installed on your external systems to help ensure proper Encore system operation. Any hardware components required for these software versions must also be installed, especially any involved with system communications. Grass Valley Customer Service and Grass Valley Engineering will not support the integration of external systems running older software.

Table 4. Tested for Encore System Compatibility

External System	Software Version	Notes
Acappella	2.1.3 Matrix	Available on the v 2.0.5 CRCS Software CD.
	2.1.1 Panel	
Maestro	1.4	
Kalypso	15.0	
Newton	2.0.1	
SMS 7000 (Encore bridge for control of Trinx/Apex)	8.3.2	Apex license required.
SMS 7000 (peer to peer control)	8.3.2	
Jupiter (control of Encore)	7.5	
Jupiter (controlled by Encore)		

Although newer versions of external system software are expected to work with Encore systems running Encore 1.7.3 software, this cannot be guaranteed. Developers generally extend careful efforts to maintain compatibility, but software versions not available at the time of an Encore release obviously cannot be tested.

Version 1.7.3 Software Update Procedure

Ensure The Encore Database is Consistent

1. Using the Encore OUI, log onto Master Panel Server(s), go to the Panel Server screen and use MODIFY to save the database to the Sharer (and the mirror, if present).
2. Log onto the Master Router Controller(s), go to the Configure screen and use MODIFY to save the database to the Sharer (and the mirror, if present).
3. Log onto the Master TLM, go to the System screen and save the database to the Sharer (and mirror, if present).
4. Shut down Sharer, System Manager and OUI

Manually Backup the Encore Database

Because a valid Encore database is essential for system operation, a backup copy should always be available on removable media (CD ROM or floppy disk, USB stick, etc.). The Encore database consists of a series of files located in the OMN folder. Manually backing up this information before you start the software update will provide added security should a power outage or hardware failure occur.

5. Copy the entire OMN folder on the C: drive root directory of the Sharer PC onto removable media, rename the copied folder if desired, and store it in a safe location.

Note If you rename the OMN folder to identify its version or date, before it can be used again by Encore the folder will need to be renamed back to its original OMN name and placed in the C: drive root directory of the Sharer PC.

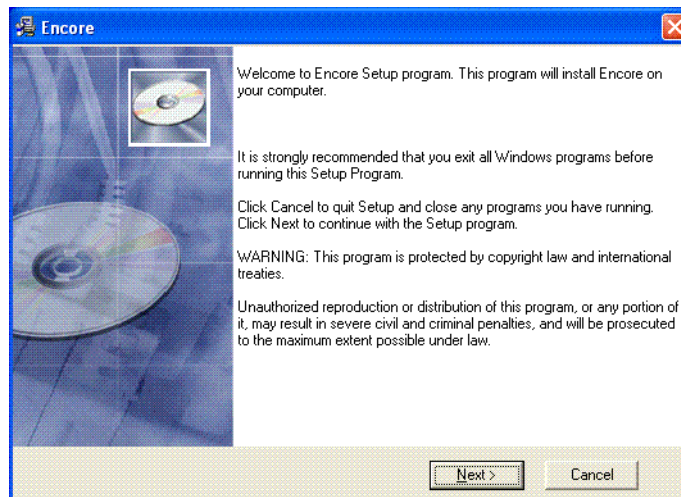
During the software update process you are given the opportunity to create a backup file. We recommend you do this in addition to the manual backup.

Install Software Components On The Sharer PC

Note To help ensure any hidden activity is stopped (for example, Port Mapper) you can restart the computer.

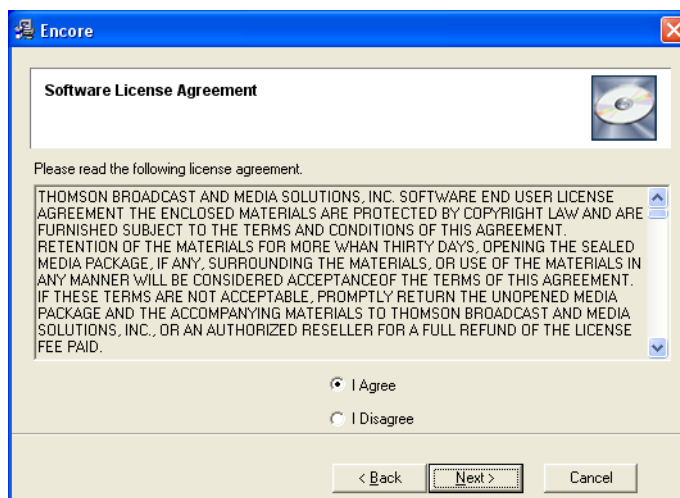
6. Quit all Encore programs on the configuration PC, **including Sharer**, and disable any virus protection programs or firewalls.
7. Insert the Encore System Software CD into the PC. If the Installation Program doesn't start up automatically, double-click **Setup.exe** on the CD. The Encore Installation Welcome screen will be displayed (Figure 18).

Figure 18. Encore Installation Welcome Screen



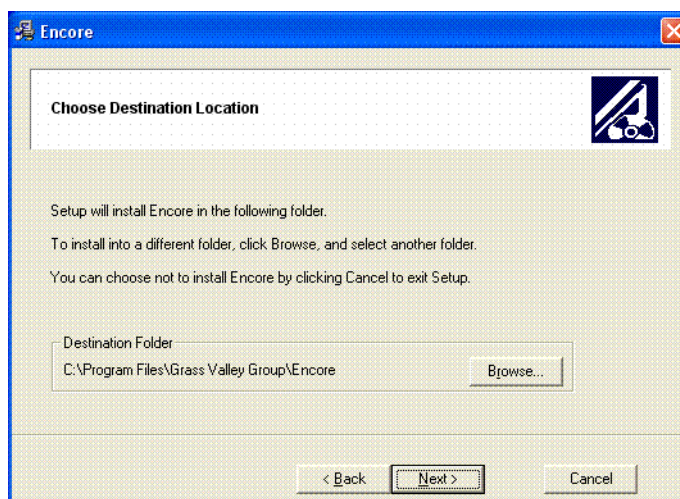
8. Click **Next >**. The Software License Agreement screen appears (Figure 19).

Figure 19. Software License Agreement



9. Click **Yes** to accept the license agreement. The Choose Destination Location screen appears (Figure 20).

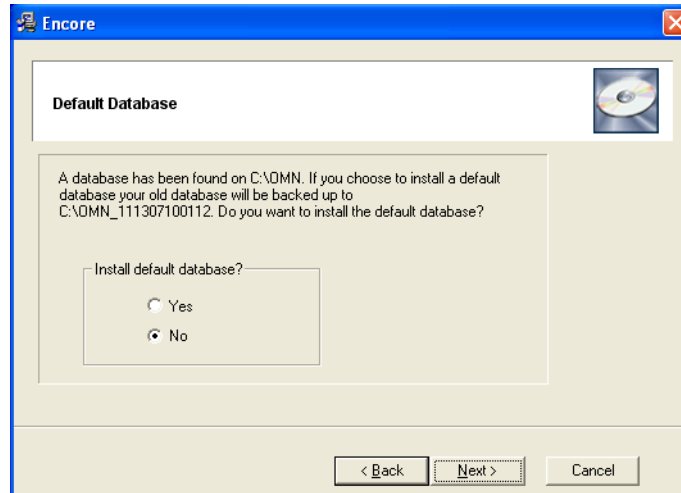
Figure 20. Destination Location Screen



10. Accept the default destination and click **Next >**. Encore software will be loaded onto the Sharer PC.

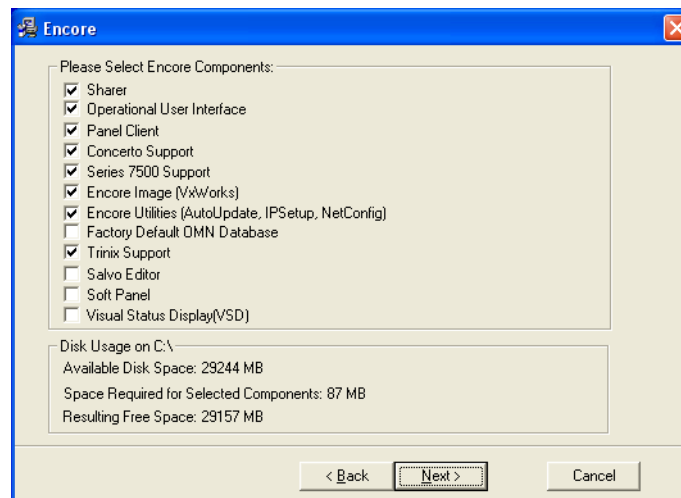
11. If this is a reinstallation or upgrade a Default Database screen appears that asks if you want to install a default database (Figure 21). The default setting is **No**.

Figure 21. Default Database Screen



12. When updating an existing Encore system, do NOT select the Factory Default OMN Database to retain your existing database. Leave **No** selected and click **Next >**.
13. A Select Encore Components Screen appears (Figure 22).

Figure 22. Select Encore Components Screen

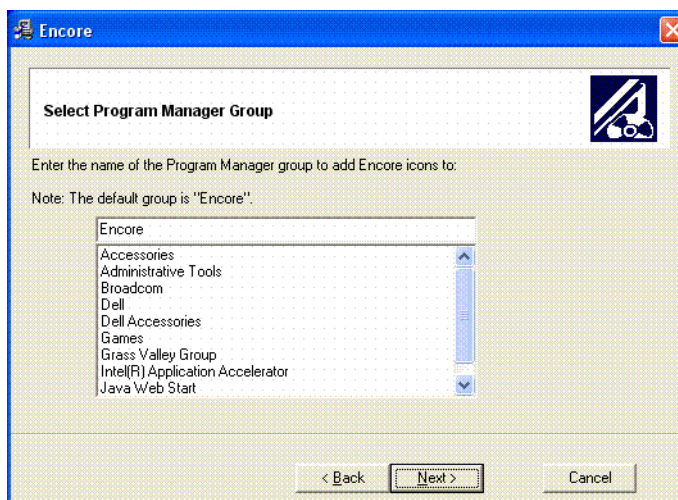


14. Because you are updating an existing Encore system, be sure the **Sharer** box is checked to ensure the Encore components will run the same software version after install. You can also select or omit any additional items as appropriate. For example, if your Encore system does not control a Concerto or SMS7000 matrix you can uncheck that box.

CAUTION Do NOT select the **Factory Default OMN Database** if you are updating an existing Encore system. If the factory default is installed your existing Encore database will be overwritten, which may make it necessary to completely reconfigure your system.

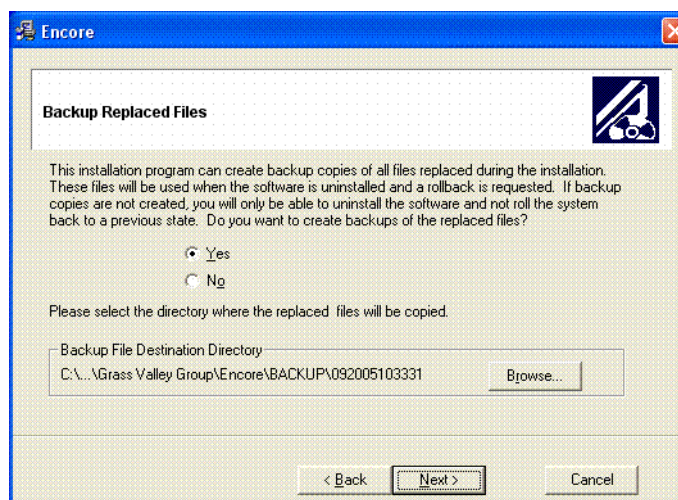
15. After selecting the correct components in [Figure 22](#) click **Next >**. The Select Program Manager Group screen appears ([Figure 23](#)).

Figure 23. Program Manager Group Screen



16. Accept the default Encore group name and click **Next >**. The Backup Replaced Files screen appears ([Figure 24](#)).

Figure 24. Backup Replaced Files Screen.

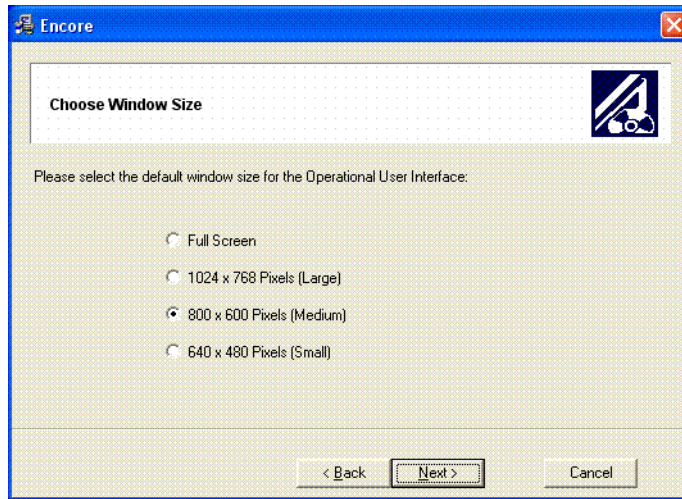


17. Select **Yes** to backup the files and click **Next >**. The backup file folder is named with the date and time. Note that Log files are not saved in this backup directory.

If you choose **No** you will be unable to rollback the system to its previous state.

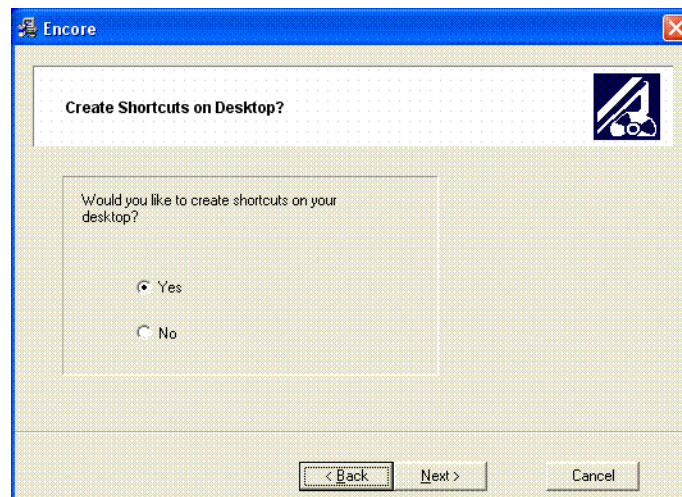
18. The Choose Window Size screen appears (Figure 25). Choose the size that best fits your PC monitor. Medium is recommended for most situations. Click **Next >** after your selection.

Figure 25. Choose Window Size Screen



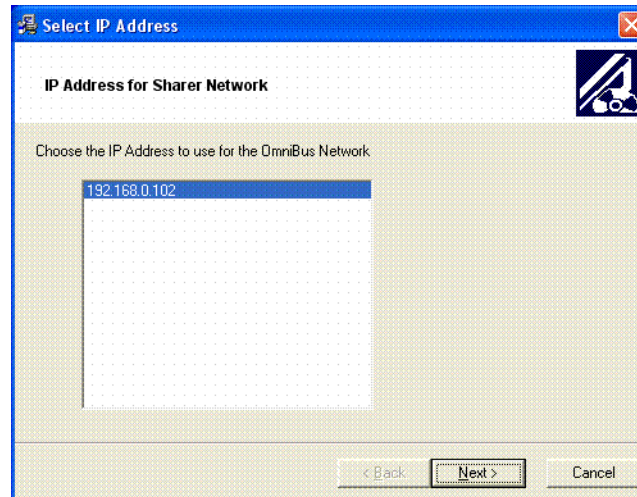
19. The Create Shortcuts on Desktop screen appears (as shown on the left of Figure 26). We recommend installing the shortcuts to make it easy to launch the Encore application. Click **Next >** after making your selections.

Figure 26. Create Shortcuts on Desktop Screen



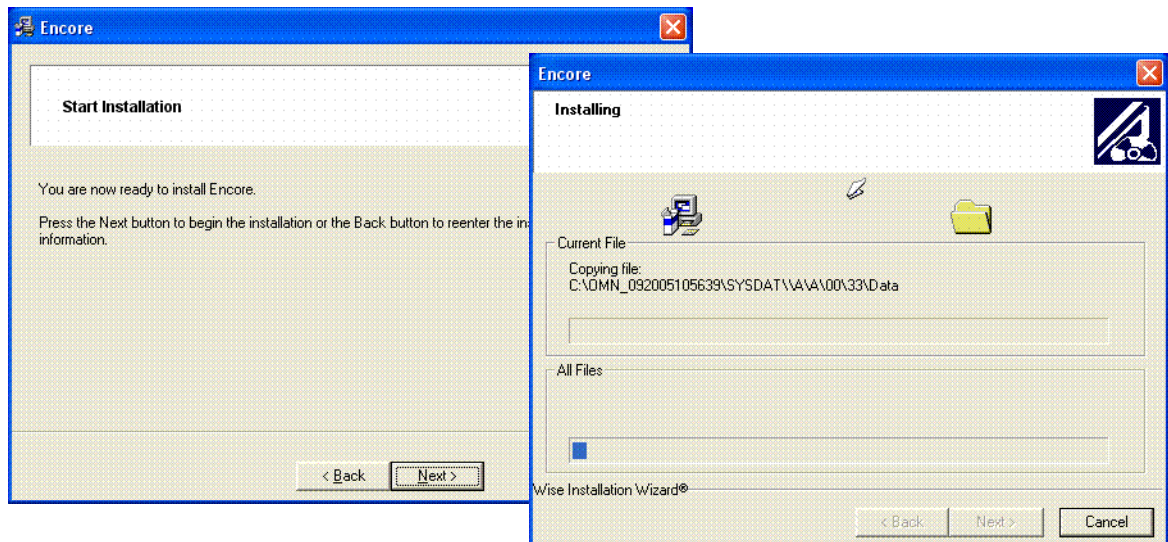
20. A screen then appears asking you to confirm the IP address of the Sharer Network (Figure 27). The IP address of the network interface cards (NIC) in use on that PC will be listed. If multiple NICs are installed you must select the one that will be used by Encore. Click **Next >** to continue.

Figure 27. IP Address for Sharer Screen



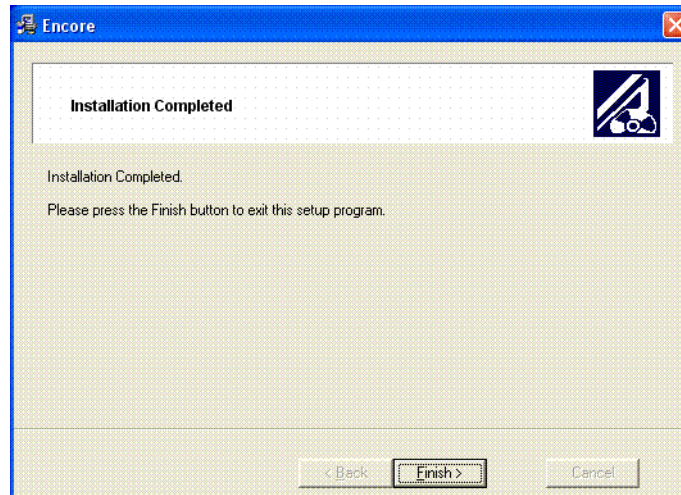
21. The Start Installation screen appears. Click **Next >** to begin copying files to the PC. The progress of the transfer is reported (Figure 28).

Figure 28. Encore Installation Screens



22. When the file transfer is done the Installation Completed screen appears (Figure 29). Click **Next >** to finish this part of the installation.

Figure 29. Encore Installation Screens



23. If you checked boxes for other components, a series of additional installation screens will be displayed until all the selected software components have been installed onto the PC.
24. While the installation on the local PC is done, you are not finished with the software update. Other Encore system components still need to be updated.

Restart Sharer

Figure 30. Watchdog Icon



25. Re-start the Sharer, System Manager and Encore OUI. Run the Sharer by double clicking the Watchdog icon (Figure 30).

CAUTION The Sharer must be running when you reboot SCBs the first time after they have been updated with new Panel Server software (see page 40).

You will next use the NetConfig application to transfer the software you just installed onto the PC to the actual Encore system components.

About NetConfig

NetConfig (Networking Configuration Application) is a multipurpose software utility for managing NetConfig-enabled Grass Valley devices. The latest version of NetConfig is included on the Encore Software CD, and is installed on a PC by choosing the **Encore Utilities** checkbox.

You will use the NetConfig utility program to update the software on your existing Encore system components.

Requirements

The NetConfig program requires:

- Windows 2000 SP4 and above, or Windows XP SP2 and above operating system,
- to be logged in with Administrator-level privileges for the local machine, and
- have Internet Explorer version 5.5 or later installed.

Features

Once installed on a PC configured on an Encore network, NetConfig can be used to:

- Discover devices on the network, report duplicate IP addresses, and remotely configure these devices to resolve conflicts,
- Report rudimentary health checks of these devices,
- Display web pages served by these devices on the network, and
- Install software to these devices.

For more information, see the separate *NetConfig Instruction Manual*.

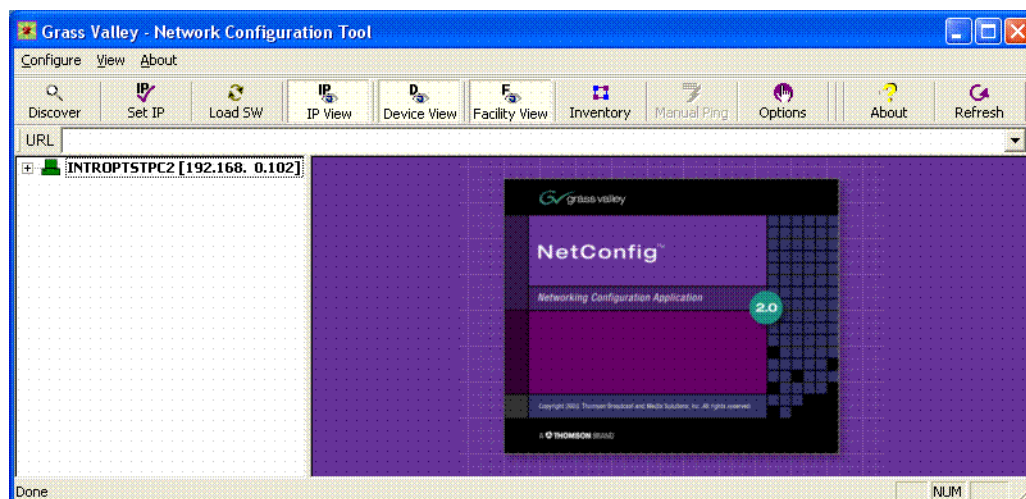
Launch NetConfig



During software installation a shortcut to NetConfig (as shown on the left) is automatically installed on the PC desktop.

26. Double click on the **NetConfig** shortcut icon to launch the application.
27. The NetConfig screen will appear ([Figure 31](#)).

Figure 31. NetConfig Screen



Update Encore SCB Software

CAUTION In previous Encore releases SCB software was updated by mapping their drives and copying files directly to their flash. This technique should not be used with Encore 1.7 and later software.

CAUTION When updating Encore 1.6.5.4 software to 1.7.3 software, any redundant SCBs must be updated separately. Software incompatibilities do not support earlier and later versions running simultaneously.

Redundant SCB Update From v1.7 Simplified Procedure

Redundant SCBs already running v1.7 can be updated to v1.7.3 simultaneously. Follow the v1.6.5.4 procedure below, except:

- You do not have to disable Panel Server applications (skip [Step 28](#) through [Step 34](#)).
- You can select all SCBs when you install the new software.

If you are currently running v1.7 software proceed to [Step 35](#).

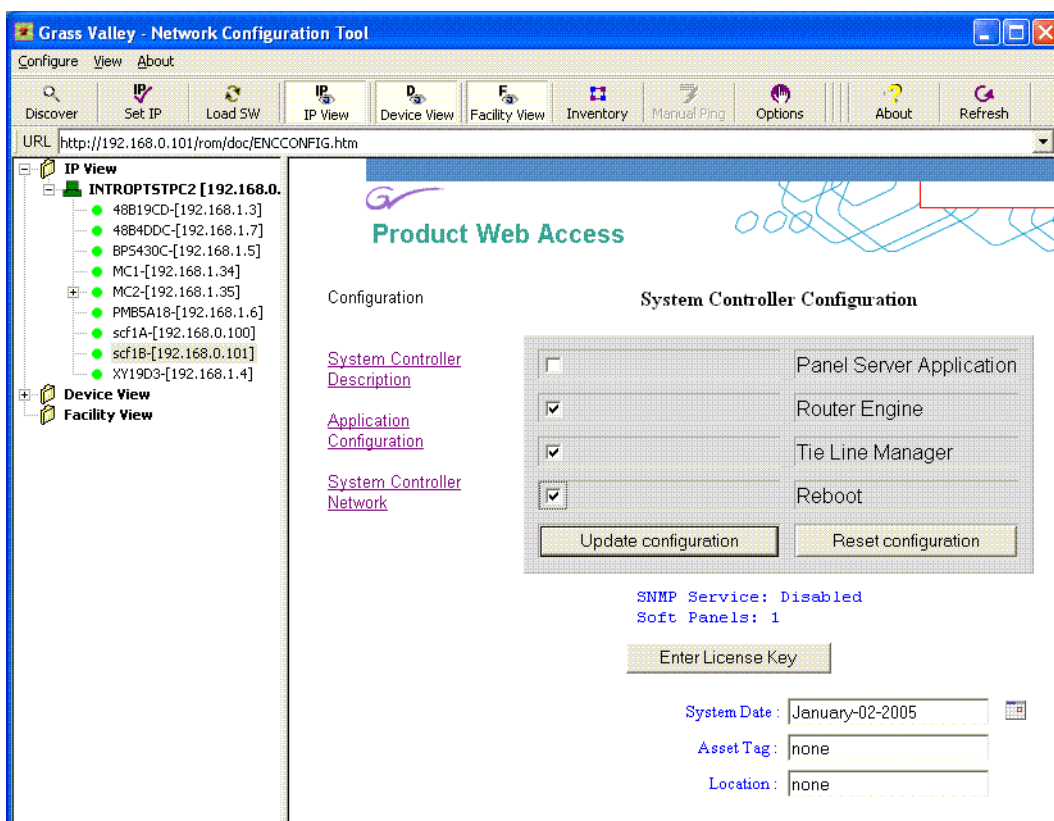
Redundant SCB Update From v1.6.5.4 Procedure

28. Click on the NetConfig Device View and open the hierarchy display of the devices on the network. They should report green operating statuses.

Disable Mirror Panel Server Applications

29. For all Encore System Controllers running a Mirror Panel Server application, use NetConfig to access each mirrored Panel Server Application Configuration web page, uncheck the **Panel Server Application** box, check the **Reboot** box, and then click on **Update Configuration** (Figure 32).

Figure 32. Disabling Mirror Panel Server

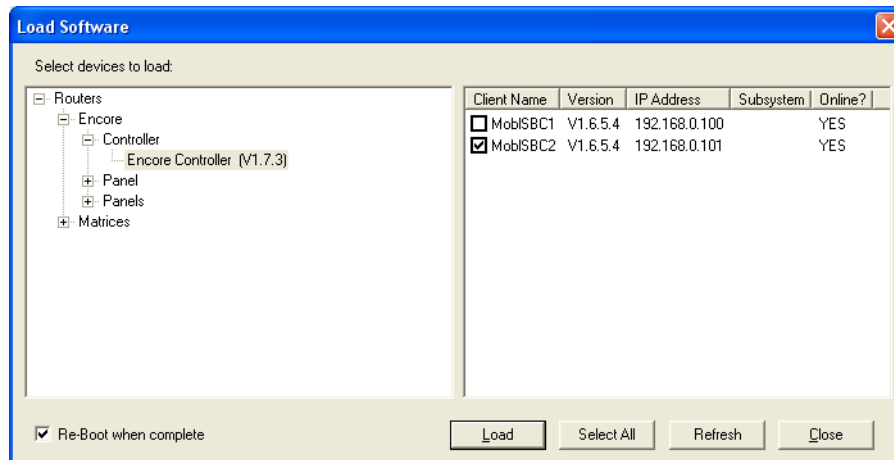


Upgrade Mirror System Controllers

30. Using NetConfig, upgrade the Mirror system controller(s).
- When the reboot completes (green indicator in NetConfig) click on the **Load Software** tab, or select **Configure > Load Software** to open a window showing a hierarchy of the software available.
 - Click **Routers > Encore > Controller** in the software hierarchy window, then select **Encore Controller (V1.7.3)**. This is the SCB software version we are updating the SCB to.

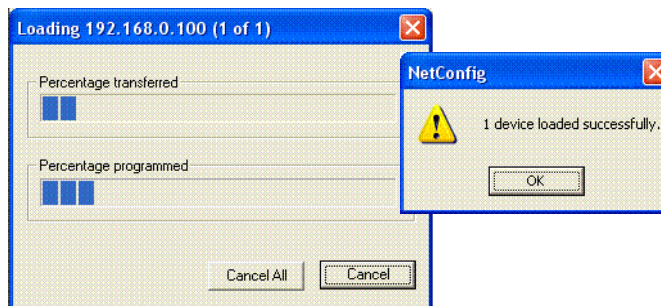
- c. Select the check box of the Mirror SCB(s) ([Figure 33](#)).

Figure 33. Encore Mirror SCB Selected for Software Update



- d. Make sure **Re-Boot when complete** is selected and then click **Load**. The software will load to the SCB and its progress will be reported. When finished, click **OK** to the loaded successfully prompt ([Figure 34](#)). The SCB will then reset and run the new software version.

Figure 34. Software Update Progress and Confirmation



31. After the software loads and the system controller reboots (which may take a couple minutes), access the Mirror system controller(s) web page and verify that the software version now displays 1.7.3.

Note If a Server Error message appears when you try to access the system controller webpage, click on the NetConfig **Refresh** button.

Upgrade Master System Controllers

32. Now upgrade the Master system controller(s) by following [Step 30](#) above but selecting the Master SCB(s).

Note The Encore system will be unresponsive for approximately 2-3 minutes during this process, although existing crosspoint status will be preserved.

33. After the software loads and the system controller reboots, access the Master system controller(s) web page and verify that the software version now displays 1.7.3.

Note If a Server Error message appears when you try to access the system controller webpage, click on the NetConfig **Refresh** button.

Enable Mirror Panel Server(s)

Note If your Encore system was running 1.7 software before being updated to 1.7.3, you did not have to disable redundant Panel Servers. If Panel Servers were not disabled, you will not have to enable them.

34. For an Encore SCB running a Mirror Panel Server application, use NetConfig to access its Application Configuration web page, check the **Panel Server Application** box, check the **Reboot** box, and then click on **Update Configuration**. Do this with every Mirror Panel Server in your system.

Skip [Step 35](#) if you just updated your 1.6.5.4 SCBs to 1.7.3.

Redundant v1.7 SCB Update Procedure Continued

If you are updating from v1.7 and skipped to this step, do the following:

35. Update all your SCBs with the new software.
 - a. Click on the NetConfig **Load Software** tab to open a window showing a hierarchy of the software available.
 - b. Click **Routers > Encore > Controller** in the software hierarchy window, then select **Encore Controller (V1.7.3)**.
 - c. Click the **Select All** check box to select all your SCBs.
 - d. Make sure **Re-Boot when complete** is selected and click **Load**. The software will load to all the SCBs in turn and report its progress. When finished, click **OK**. Each SCB will reset and run the new software version.

Route Table (Multi-Area Systems Only)

If your system has multiple Areas and routes have not been established to cross networks, you may need to execute route commands to allow Net-Config access to other Areas. You can create and run a .bat file at least once to create the routes. Placing this .bat file in a startup directory on the PC will help ensure it will run.

An example of the commands for this .bat file for a default Encore system with two Areas with the second SCB set to 192.168.2.0 is:

```
route add 192.168.1.0 mask 255.255.255.0 192.168.0.100
route add 192.168.2.0 mask 255.255.255.0 192.168.0.101
```

The first entry in each row is the IP address of that network (in this example the “0” is a placeholder), the second entry is the subnet mask, and the third entry is the EN1 IP address of the SCB in that network.

If you need help, contact your network system administrator or Grass Valley Customer Support for assistance.

Update Matrix Software

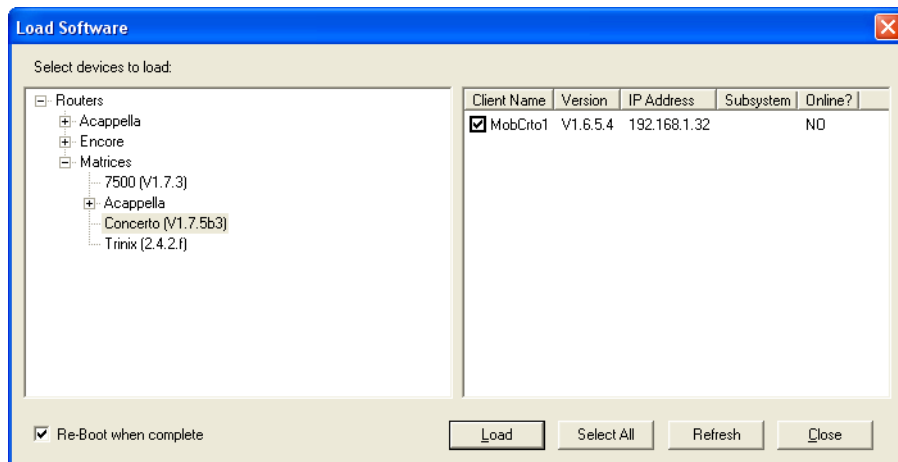
Encore systems can employ Concerto, Trinix, and SMS7000 Matrices.

Concerto Matrix Procedure

If your system includes a Concerto matrix, the Matrix Application software is also updated using NetConfig.

36. In NetConfig, click on the **Load Software** tab, or select **Configure > Load Software** to open a window showing a hierarchy of the software available.
37. Click **Routers > Matrices** in the window, then select **Concerto**. This will display the software versions available for loading ([Figure 35](#)).

Figure 35. Concerto Matrix Software



38. Select the Concerto software to be loaded and check the boxes of the matrix controller(s) to be updated.

39. Select **Re-Boot when complete** and **Load**. The software will be loaded to the target(s) in turn with the progress reported. When finished, click **OK** to the loaded successfully prompt. The devices will then reset and run the new software version.

Trinix Matrix Update Procedure

Note Due to a compatibility issue, Trinix Broadlinx Controllers cannot be upgraded using NetConfig. The upgrade must be carried out manually by either replacing the Broadlinx compact flash with one containing the new version or by using a compact flash reader/writer to upgrade the existing compact flash.

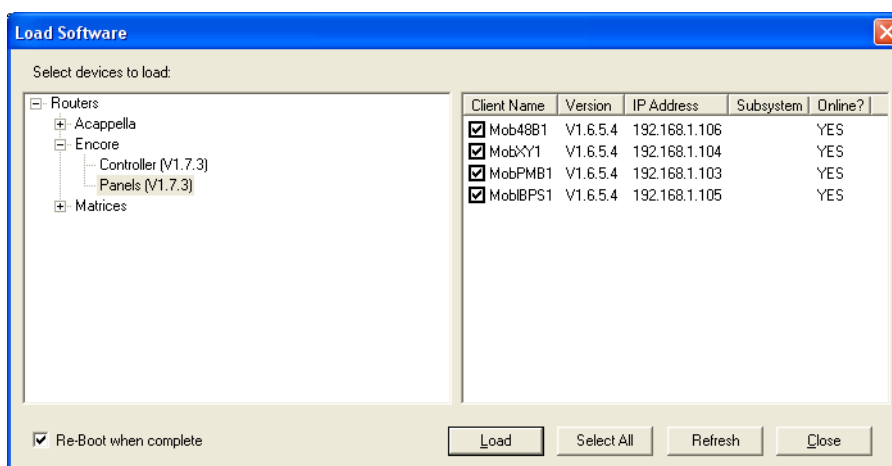
SMS7000 Matrix Update Procedure

SMS7000/7500 systems can be updated using NetConfig only if the system is already running V1.6.5 or later software. Systems running older software will need to be updated using the older procedure (Xitami).

Update Control Panel Software

40. In NetConfig, click on the **Load Software** tab, or select **Configure > Load Software** to open a window showing a hierarchy of the software available.
41. Click **Routers > Encore > Panels** (plural name, not singular) in the window. This will display the software versions available for loading (Figure 36).

Figure 36. Control Panel Software (Panels (plural) Directory)



42. Select the control panel software to be loaded and check the boxes for the panel(s) to be updated.

Note If you are upgrading a multi-area system (i.e., a multi-network system), and a panel is reported as offline, uncheck that panel and complete the installation for the online panels. Then, check the gateway setting for the configuration PC. The gateway setting must point to the SCB that will be used to reach the control panels being updated. In the case of redundant SCBs, you may need to try both before the panels will update. It may be helpful to check the IP View to see which panels are visible (green light) to the SCB selected as the gateway.

43. Make sure **Re-Boot when complete** is selected and then click **Load**. The software will be loaded to the target(s) in turn with the progress reported. When finished, click **OK** to the loaded successfully prompt. The devices will then reset and run the new software version.

Confirm Sharer Mode

44. Use the Encore OUI to log on to the Master Panel Server and verify that the Panel Server is in **Sharer** filing mode and that, for redundant Panel Servers, the Sync Status is **In Sync**.
45. Log onto Master Router Controller and verify that the Router Controller is in **Sharer** filing Mode.
46. Log onto the Master TLM and verify that the TLM is in **Sharer** filing mode.
47. Repeat steps [Step 44](#) through [Step 46](#) with the Mirror application of each Master/Mirror pair in your system.

Restore Full System Operation

After the software update, some items may need to be addressed to restore the Encore system with its previous functionality and activate new features.

- If after an update of a system with redundant SCBs the panels report NO ROUTER, use the Encore OUI to access the Router Controller application, go to Configure and click on Commit Changes. This updates the panels with their configurations.
- If crosspoint switches are not occurring on the vertical interval or appear to be delayed in execution, check that your system is using a VITC timecode source. To change VITC format, go to Router Controller, Configure, click on TimeCode, then click on the name of the format and select the correct one.
- If you are running redundant SCBs and crosspoints switches are not occurring in sync, check that either VITC timecode is present, or if VITC is not present, that the Reference Count Server on all SCBs in the system are turned on, via each SCB's webpage.

This completes the entire upgrade process.

Manually Updating SCB Flash Memory

Flash Purchased from Grass Valley

If you purchased flash memory from Grass Valley customer service, it will already be formatted and loaded with the latest Encore software. Simply replace the existing flash memory in all your SCBs with the new ones provided.

Flash Purchased Locally

CAUTION Encore SCBs only support flash memory up to 512MB. Do not attempt to use higher capacity flash because corrupted data may result.

If you are using separately purchased compact flash memory, or if the SCB flash becomes corrupted, you can reformat it and load files manually with the following procedures.

Materials Required

You will need the following:

- PC running Windows XP service pack 2.
- Compact Flash reader/writer,
- SanDisk 512MB Compact Flash (This process has been validated only for these Compact Flash varieties, but will probably work with other types), and
- The mkdosfs.exe application (located in the Unsupported directory on the Encore Software CD).

Format Flash for VX Works

Flash memory only formatted by Windows cannot be used in an Encore SCB because the VX Works operating system code is used.

1. Install the mkdosfs.exe in the C: root directory of the PC.

CAUTION mkdosfs.exe is a general purpose DOS format tool able to format any drive. Use extreme caution when using this tool as irreparable damage can be done to the PC's operating system and memory contents.

2. Format the Compact Flash using Windows.
 - a. Insert the Compact Flash into the Flash reader/writer.
 - b. Open Windows Explorer.
 - c. Right click on the Flash reader/writer drive.

- d. Select **Format**.
 - e. Select **FAT** for the format type (NOT Fat 32).
3. Open a command Prompt Window, go to the root directory (CD \), and run the mkdosfs.exe by typing:

```
c:\> mkdosfs -w <Drive label of Compact Flash reader>:
```

CAUTION Be sure to use the **-w** option and use care when selecting the drive name. Irreparable damage can be done to the PC's operating system and memory contents if the incorrect drive is selected.

Manually Copy Files to the Formatted Flash

1. After installing the Encore software onto the PC, copy the contents of the **c:\Program Files\Grass Valley Group\Encore\File System** folder to flash.
2. Copy all the files and folders from the **c:\Program Files\Grass Valley Group\Encore\Encore Image** folder EXCEPT the Encore.tar file.

Note Be sure the copied files do not have any Read Only options set (see below).

Install Flash into SCB

1. Make sure the Sharer is running on your network.
2. Pull the SCB from the Encore frame far enough to access the flash port and insert (or replace) the newly formatted flash memory card.
3. Reinsert the SCB into the Encore frame.

The SCB should boot successfully and will receive its configuration from the Sharer.