

Maestro

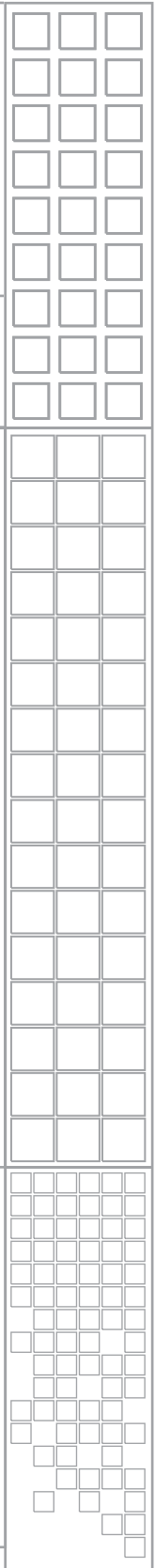
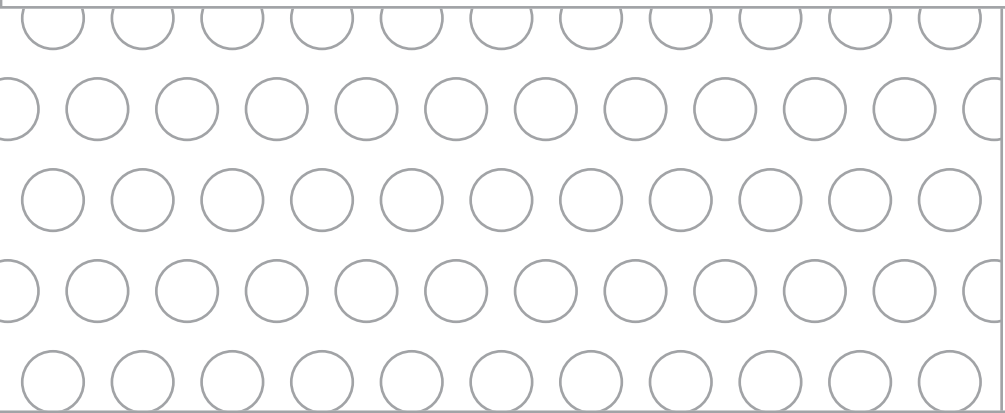
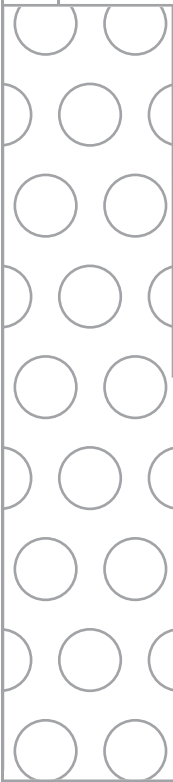
Multi-Format Master Control

Release Notes



SOFTWARE VERSION 1.2

071850602
January 15, 2007



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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.

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Maestro Release Notes

Purpose

This document provides software installation instructions for the 1.2 software release of the Maestro Master Control System.

This release provides additional functions and corrects certain software problems associated with the previous release. However, some functions are not yet available, as noted in the Release Notes Addendum, part no. 071850702.

This document also applies to Maestro systems already in the field that are being upgraded from previous versions of software.

Applicability

All Maestro systems.

Interoperability Requirements

- Encore version 1.7 or newer, or
- Jupiter version 4.2 or newer, or
- Jupiter version 7.4.1c or newer (for LAN connection).

Features Added

1. ES-Control (LAN) protocol is now supported for Jupiter CM-4000-controlled systems.

2. To prevent GUI shut down by an unauthorized person, the user can now set a GUI Exit ID. The system will then require entry of the ID prior to GUI shut down. (CR 70354)

Materials Supplied

Table 1. MAE-HD Bill of Materials

HD Maestro Software Upgrade		
Quantity	Description	Part number
1	CDROM, Maestro HD Software Program, v1.2 (1.2.1518.748)	063825802
1	Release Notes, Maestro v1.2	071850602
1	Release Notes Addendum, Maestro v1.2	071850702
1	Maestro Documentation CD	071851702

Table 2. MAE-SD Bill of Materials

SD Maestro Software Upgrade		
Quantity	Description	Part number
1	CDROM, Maestro SD Software Program, v1.2 (1.2.1518.748)	063825902
1	Release Notes, Maestro v1.2	071850602
1	Release Notes Addendum, Maestro v1.2	071850702
1	Maestro Documentation CD	071851702

Additional Documentation

Manuals

Maestro Installation Planning Guide*

Maestro Installation and Service Manual*

Maestro User Manual*

Note Many changes have been made to the above manuals, old versions of which should be discarded. Users should refer to the new versions of the Maestro manuals included in electronic form with this release.

Note The Installation and Service manual included with this release repeats all information contained in the Installation Planning Guide and User Manual.

Maestro Automation Interface Protocol Technical Reference Manual*

Concerto Multi-format Router Instruction Manual

Encore Installation and Service Manual and User Manual

Jupiter CM-4000 Installation and Operating Manual

Jupiter VM-3000 Installation and Operating Manual

*A copy of this manual is provided on the documentation CD supplied with this release.

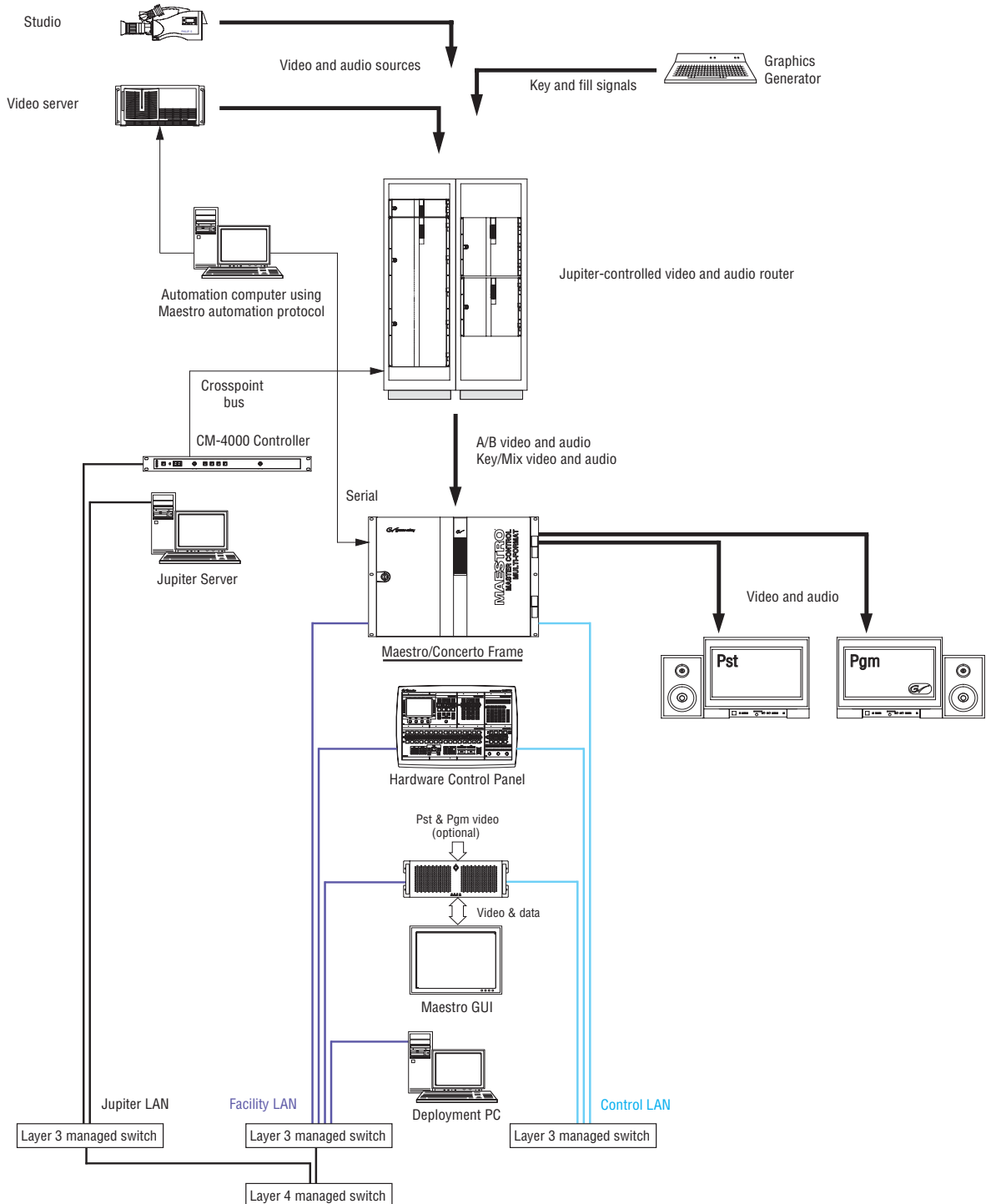
Engineering Change Orders

ECO 066P, Maestro v1.2 HD/SD software

ES-Control (LAN) Support

With this release, Maestro can be connected to a Jupiter CM-4000 control system using an IP network connection and ES-Control (LAN) protocol. An example of such a system is shown in Figure 1.

Figure 1. Maestro system with LAN connection to Jupiter CM-4000 Controller



In this arrangement, the Jupiter CM-4000 controller is placed on a separate class C network from the Maestro components. This “Jupiter LAN” includes the Jupiter file server.

Each network is connected to a dedicated, managed IP switch capable of Layer 3 (network/IP) switching. In turn, the Jupiter LAN and the Maestro facility LAN are connected with a managed, IP switch capable of Layer 4 (transport/TCP) switching.

Grass Valley recommends either Cisco 2500 series or HP Pro-Curve series IP switches for use with Maestro. In any case, the switches must allow IP multicasting.

Note The Maestro “facility LAN” is a utility network for connecting Maestro-related equipment only. It should not be part of a general-purpose LAN such as an IT network.

Note In Jupiter systems equipped with a VM-3000 controller, the VM must have a serial connection to the Router Control port on the Maestro frame. The VM-3000 uses “ES-Control (Serial)” protocol.

IP Switch Configuration

In the example above, the Layer 4 switch must be configured to allow multicast data packets to pass between the Maestro facility LAN and the Jupiter LAN. In general terms, the Layer 4 switch must know where the Layer 3 switches are connected and which network is associated with each of them. For more information, refer to the documentation supplied with the switches.

Jupiter Control System Configuration

MPK Devices Table

When a LAN connection to Jupiter is used, the Jupiter MPK Devices table must list each Maestro frame processor (i.e., each Maestro channel) as a controlling device. Each processor is given a device name (such as “MaeChan1”) and identified as device type “ES-LAN.” The name of the CM board is selected but the Port field is left blank. In the Address field, a unique number from 1-64 is entered for each processor. The Input, Output, and Level sets should be built for use with the Maestro system and specified in the appropriate fields. The Output set itself should list only those matrix router outputs connected to the particular Maestro processor being configured. In other words, a separate Output set should be created for each Maestro channel.

The device names created here will appear as drop-down menu items on the Maestro RCS Connection table, as described below (*ES-Control RCS Device Name* on page 19).

Jupiter Router Service Application

A LAN connection to Jupiter requires installation of a new version of the “Jupiter Router Service” application on the Jupiter file server.

1. At the Jupiter file server Windows Control Panel, select Add or Remove Programs.
2. Remove the installed Jupiter Router Service application.

Note The Router Service application is contained in the “Maestro Software Package” folder. Select this folder and click on Remove.

3. Insert the Maestro Installation Disc into the CD Drive.
The CD should automatically start the installation process. If not, browse to the CD and select “setup.exe.”
4. At the “Welcome” screen click “Next.”
5. At the “Destination Folder” screen, select the destination folder (defaults are recommended) and click Next.
6. At the “Setup Type” screen, select “Custom,” and then *deselect* (with a red “X”) all applications except “Maestro Configuration > Jupiter Router Service” for installation. Click “Next.”
7. Click “Install.”

Maestro Installation Procedure

CAUTION Portions of this procedure will interrupt video signals passing through the system. Users of this equipment should consult with Grass Valley Technical Support personnel before proceeding.

Maestro Deployment PC

Note In some installations, the “deployment PC” will be the same as the GUI PC.

Requirements

- A period of time where the Maestro system can be taken off-line.
- Windows XP Service Pack 2.
- In order to upgrade the Maestro software, the Maestro configuration computer will need access to the installation CD or downloaded installation files.
- The configuration from the existing operational Maestro system will be used to complete the Maestro upgrade.

Installing the Maestro Software Package

Note It is recommended that all default values be used during the installation.

1. Go to the Maestro Deployment Control Center, Configuration box, and make a note of the “Current” configuration set.
2. Close all Maestro applications.
3. The previous version of Maestro **must be uninstalled**:
 - a. Using the Windows Control Panel, select Add or Remove Programs.
 - b. Remove the Maestro Software Package.
This will not remove user data.
4. Insert the Maestro upgrade CD.

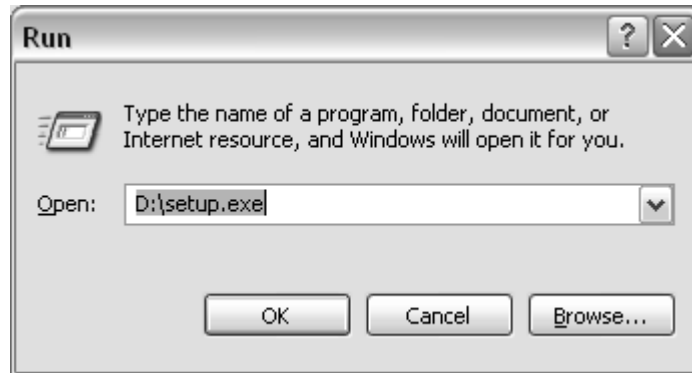
A popup will appear that asks if the upgrade should continue. Click on “Next.” Go to Step 5.

If the installation does not automatically start, the installation will have to be started manually:

- a. Select **Start > Run**.

A window similar to that shown in Figure 2 should appear.

Figure 2. Run Dialog Box



- b. Enter "D:\setup.exe" where D: is the CD Drive.
- c. Click the **OK** button.

A popup will appear that asks if the upgrade should continue; select "Next." Go to Step 5.

- 5. A popup will indicate the default destination folder. Select "Next."
- 6. For Setup Type, select "Complete."
- 7. When the "Ready to Install" menu appears, select "Install."

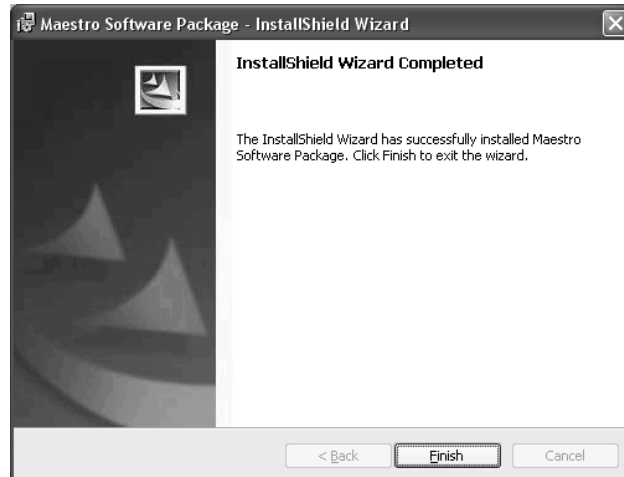
The window shown in Figure 3 will appear.

Figure 3. Installing Maestro Software Package



When this step is complete, the window shown in Figure 4 will appear.

Figure 4. Maestro Software Package Installation Complete



8. Select "Finish."

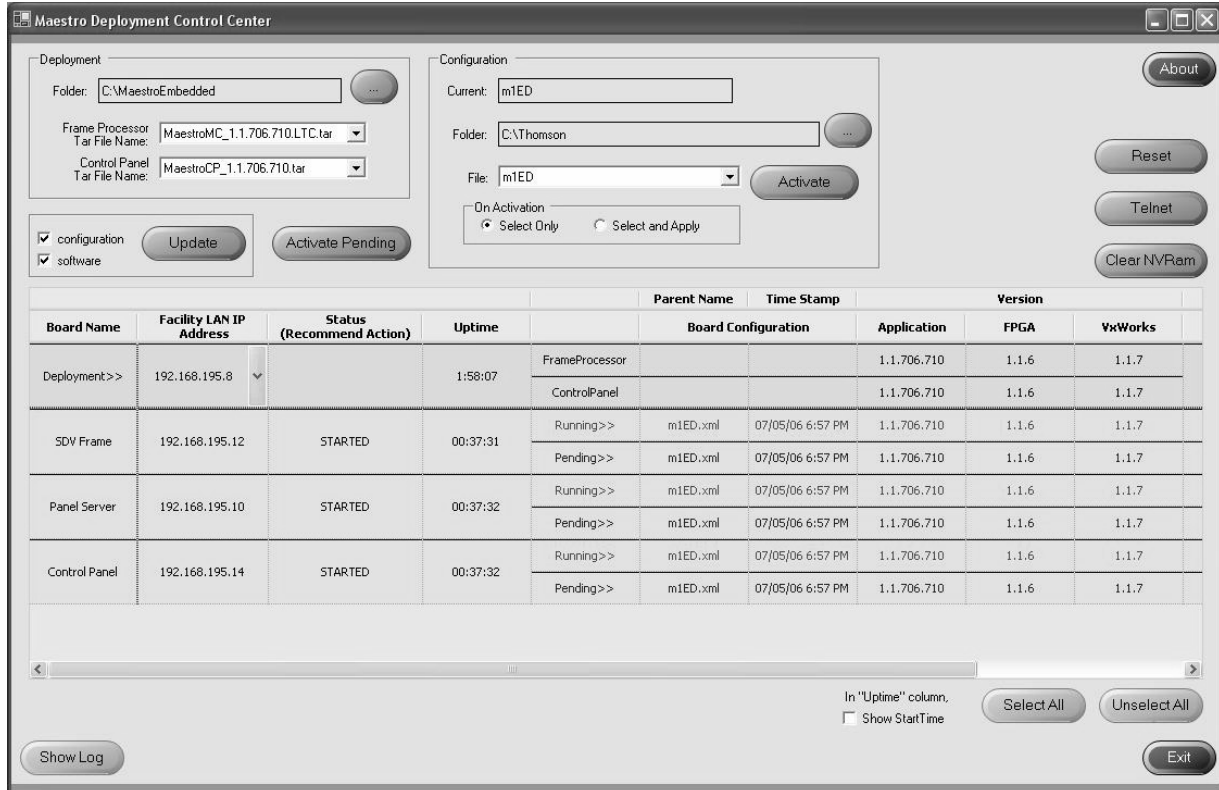
Installation of the Maestro Software Package is now complete. The newly installed Maestro software must now be loaded on the Maestro system boards to finish the update. Activation of the Maestro configuration using the Maestro Deployment Control Center defines the boards available for updating.

Activating the Maestro Configuration

1. Run the Maestro Deployment control center by selecting **Start > All Programs > Thomson > Maestro Deployment Control Center**.

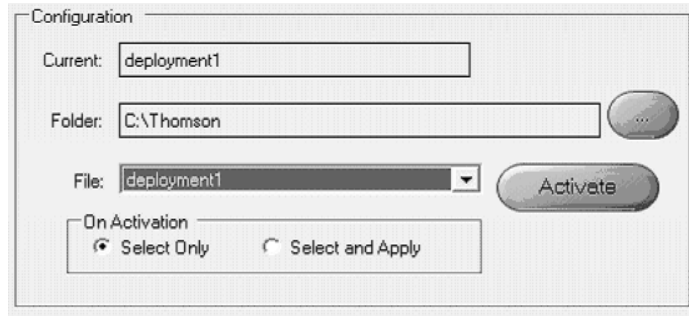
A Maestro Deployment Control Center window similar to that shown in Figure 5 should appear.

Figure 5. Maestro Deployment Control Center (example)



- In the Configuration box, verify that the Folder field has the correct path to the Maestro configuration directory. (Default = C:\Thomson)
Refer to Figure 6.

Figure 6. Maestro Deployment Control Center Configuration box



- In the "File:" drop down field, select the Maestro configuration set to be activated.

This will normally be the latest ("known good") configuration set noted earlier (page 9).

- Click the **Select Only** radio button.

The On Activation area contains two radio buttons "**Select Only**" and "**Select and Apply**"

Select Only - Activates the configuration and downloads it to the boards, but does not apply it as the running configuration.

Select and apply -- Activates the configuration, downloads it to the boards and applies it as the running configuration.

- Click the **Activate** button.

The board Status section of the screen should now be refreshed. The list shows what Maestro boards to update and what IP addresses to use during the following process.

Updating the Maestro Board Software

- In the Deployment box, the "Folder" field should indicate "C:\MaestroEmbedded."
- In the **Frame Processor Tar File Name** field:
 - For LTC systems (those using Linear Time Code) select "MaestroMC_1.2.1518.748.LTC.tar." (When used, LTC is connected to pins 43 and 44 of the GPIO connector on the rear panel.)
 - For VITC systems (those using Vertical Interval Time Code) select "MaestroMC_1.2.1518.748.VITC.tar."

3. In the **Control Panel Tar File Name**, field, select "MaestroCP_1.2.1518.748.tar."
4. Click the **Select All** button (lower right corner of menu).
Alternatively, each board can be updated independently by clicking on the "Board Name" field or all at the same time by using the "Select All" button.
5. In the Update box, check to see that the "configuration" and "software" boxes are both checked. Then click the **Update** Button.
6. After a few minutes, the "Status" column should indicate "(Apply Pending)" for all boards, the "Application" column should show that the new software version is "Pending>>," and the **Apply Pending** button should be enabled.

CAUTION The following step will interrupt the video signals passing through the system for about 1 minute.

7. Click the **Apply Pending** button.
The boards will reset and start running the latest software.
8. In the Version column, verify that the Application versions have all been updated as seen in Figure 7.

Figure 7. Maestro Deployment Control Center Software Version Status

The screenshot shows the Maestro Deployment Control Center interface. It has two main sections: Deployment and Configuration. The Deployment section includes fields for Folder (C:\MaestroEmbedded), Frame Processor Tar File Name (MaestroMC_1.2.1518.748.VITC.tar), and Control Panel Tar File Name (MaestroCP_1.2.1518.748.tar). The Configuration section includes Current (Peter_test), Folder (C:\Thomson), and File (Peter_test). There are buttons for Update, Apply Pending, Activate, About, Reset, Telnet, and Clear NVRam. Below these sections is a table with columns for Board Name, Facility LAN IP Address, Status (Recommend Action), Uptime, Parent Name, Time Stamp, Version (Application, FPGA, OS), File Name, and Time Stamp. The table lists several boards: Deployment, FP, CP, PCI, and Safety CP, each with multiple rows for different components (FrameProcessor, ControlPanel) and their status (Running, Pending).

Board Name	Facility LAN IP Address	Status (Recommend Action)	Uptime	Parent Name	Time Stamp	Version			File Name	Time Stamp	
						Board Configuration	Application	FPGA			OS
Deployment>>	192.168.196.43		364:41:14	FrameProcessor		1.2.1518.748	18	15			
				ControlPanel		1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM	
FP	192.168.196.51	STARTED	14.02:18:29	Running>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
				Pending>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
CP	192.168.196.63	STARTED	15.04:33:02	Running>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
				Pending>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
PCI	192.168.196.71	STARTED	20.06:29:21	Running>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
				Pending>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
Safety CP	192.168.196.60	STARTED	20.01:11:46	Running>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM
				Pending>>	Peter_test.xml	12/26/06 2:37 PM	1.2.1518.748	18	15	Peter_test.xml	12/26/06 2:37 PM

9. This completes the upgrade.

Checking the GUI Display

In some cases the update process will result in conflicts with the existing GUI configuration. For this reason, the following test procedure is recommended.

1. Make a backup copy of the "AppConfig.xml" file.

This file is typically located at "C:\Program Files\Thomson\Maestro Software Package\GUI Control Console."

As a suggestion, you may wish to name the backup copy

`AppConfig_VV.xml`

...where VV is the version number of the old software; for example:

`AppConfig_11.xml`

2. Launch the GUI application. Check for proper appearance and operation, including attributes such as button colors, slider operation, and video overlay operation. If these problems or others appear, you should rebuild the AppConfig.xml file as follows:
3. Select "Settings" in the upper-left corner of the display. Make a note of the Panel Server IP address and the Local IP address.
4. Exit the GUI application.
5. Delete the existing AppConfig.xml file.
6. Re-launch the GUI application. Since the old configuration was just deleted, you will be asked to re-enter the network addresses.

Note If necessary these addresses may be found in the old AppConfig_VV.xml file described above by opening the file with an editor such as NotePad. On row 6, the "MasterViewIPAddress" is the Panel Server control LAN address; on row 9, the "LocalControl LanIP" is the GUI PC control LAN address.

Setting Gateway and Subnet Masks

When a LAN connection to Jupiter is used, Jupiter network components must be able to communicate with devices on the Maestro facility LAN and vice versa. Specifically, each component must be configured with the gateway address and subnet mask needed for inter-network communications.

In the example system shown on page 6, the address of the Jupiter LAN layer 3 switch and the address of the Maestro facility LAN layer 3 switch must be entered as the gateway address for each component on the respective network.

Jupiter File Server

For example, if the Jupiter file server's address is 192.168.253.2, then the Jupiter's layer 3 switch might be assigned address 192.168.253.1 and subnet mask 255.255.255.0. The file server would then be assigned gateway 192.168.253.1 and subnet mask 255.255.255.0.

Maestro Components

Similar arrangements must be made for all Maestro facility network components, including the frame processors, control panels, panel servers, and deployment/GUI PCs. Each of these components must be configured with the appropriate gateway and subnet mask for the facility LAN.

Deployment/GUI PC

The gateway and subnet mask for the Deployment/GUI PC is set using the Windows Control Panel > Network and Dial-up Connections menu.

Frame Processors, Hardware Control Panels, and PCI Panel Servers

The gateway and subnet mask for these components should be set using the Grass Valley NetConfig application.

Maestro Configuration

RCS Connection

This table is used to identify the matrix router controller that will be receiving commands from Maestro.

For Jupiter ES-Control(LAN) applications, the controller will be a CM-4000. Each Maestro channel has a one-row entry on this table.

Figure 8. RCS Connection table

Name	Protocol	IP Address	Redundant IP Address	Baud Rate	Data Bits	Stop Bits	Parity	Switch Frame Delay	ES-Control RCS Device Name
JupChan1	ES-Control(LAN)	192.168.190.10	192.168.190.11					10	ES-LAN1
JupChan2	ES-Control(LAN)	192.168.190.10	192.168.190.11					10	ES-LAN2

Select the MPK device name. This field is enabled if RCS configure server is of type Jupiter

OK Apply Cancel Find Text

Name

Create a name for each processor (channel) under Jupiter control. This is an arbitrary name used only within the Maestro system.

Protocol

For Jupiter LAN control, select “ES-Control (LAN).”

IP Address

Enter the IP address of the primary CM.

Redundant IP Address

Enter the IP address of the redundant CM (if any).

Baud Rate

This column is not used for ES-Control (LAN) applications.

Data Bits

Column not used.

Stop Bits

Column not used.

Parity

Column not used.

Switch Frame Delay

(Required entry) - Enter the control system switch latency in frames.
Normal values are

Encore - factory default is 12.

Jupiter - factory defaults are AccuSwitch 2, JupiterXPress 4, VM 3000 6.

ES-Control RCS Device Name

Select the name of the appropriate Maestro processor (channel). The source of these names is the Jupiter MPK table (as described on page 7).

If you do not see the names expected on the drop-down list, it may be that the connection to the control system server has not been established. By selecting "Connect to Server" the editor will retrieve configuration data already entered on the control system server.

Note On the Connect to Server menu, the "Active" set field indicates the active set on the Jupiter system. "Current" refers to the active configuration file on the Maestro system.

When finished, Apply, Save, etc.

Note After all the configuration tables are edited and saved you must "compile" the set before it can be activate using the Deployment Control Center (as described above).

