

MAESTRO

MULTI-FORMAT MASTER CONTROL



Release Notes
Software Version 2.4.0



Affiliate with the N.V. KEMA in The Netherlands



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Grass Valley Web Site

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

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

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

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



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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, and ask to be connected to the EH&S Department. Additional information concerning the program can be found at: www.grassvalley.com/about/environmental-policy

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Version **2.4.0**

MARCH 2011

MAESTRO Release Notes

Purpose

This document provides the software and hardware installation instructions for the 2.4.0 software release of the Maestro Master Control System. This release is an upgrade to systems with either the Dual-Channel DVE option or **no** DVE option.

It is assumed that the Dual-Channel DVE option has been previously installed on the intended system. If you do not have a DVE option installed and you are intending to install the Dual-Channel DVE option, see the 2.0 version of the Maestro Release Notes or the 2.0 version of the Maestro Installation manual, both of which can be found on the Grass Valley Web site.

Note If you have the Single-Channel DVE option, see the 1.7 version of the Maestro Release Notes; do NOT install the 2.4.0 version of the Maestro software.

The Release Notes Addendum provides a list of software corrections and known limitations that are associated with this release.

New Features

The new features of the 2.4.0 version of the Maestro Master Control System are as follows:

- Emergency Alert System (EAS) messaging support
- Pre Roll functionality
- Improved support for 256 character fonts

Changes to Tables

To accommodate EAS Messaging, the following changes have been made:

- The Automation Connection table has been renamed to the Serial Connection table and a new row has been added.
- The GPIO Definition table has been modified to accommodate additional Sub systems for the EAS messaging option.
- The Background Buttons table has been renamed to the Button Definition table.
- The Event Code Definition table has been created to define the Severity level for each TFT event code. This table is only used for EAS options.

These changes are part of the 2.4 version of the Maestro system even if you do not use the EAS Messaging.

Supported EAS Devices

Please review the list below to ensure that your EAS device is supported. The Maestro EAS option supports the following protocols and devices:

- Devices that are 100% compatible using a serial data interface with the Sage Generic Protocol.
- Devices that are 100% compatible using a serial data interface with the TFT EAS 911 protocol.

EAS Device Configuration

Other devices may be used if they can be configured to support the above listed protocols. For example, the DASDEC 1EN encoder. Contact your EAS device manufacturer for the needed configuration steps.

Emergency Alert System (EAS) Messaging Support

Note The EAS option is a software only feature that requires the previous installation of the Maestro Enhanced Branding Option.

The Maestro Master Control system now supports EAS messaging to support the requirement for broadcasters in the United States to display Test and Alert messages that are generated by the Emergency Alert System (EAS).

An EAS message is fed by an external EAS data stream through the Maestro Serial Tally port. This data is imported into a predefined Maestro internal branding text crawl template, which is built specifically for each EAS crawl. The EAS audio can come from either direct or external Routing switcher sources. Maestro's GPIO controls the starting and stopping of EAS messages.

The **Keyer 8** and **Audio Over 4** buttons are controlled by EAS Messaging. If the EAS Messaging option is used, there will be a reduction of Channel Branding resources.

Reduced Channel Branding Resources

When the Emergency Message (EAS) option is configured, the general purpose Channel Branding resources are reduced as follows:

- One animation or text crawl source. The second source is reserved for EAS Keyer assignment.
- Three Audio Voice Over sources. Audio Mixer-4 is reserved for external audio input from the EAS encoder.
- Seven Video keyers. Keyer-8 is reserved for EAS.
- One external Audio Mixer Input is reserved for EAS. The source for this Audio Mixer Input can only be an external discrete audio source.
- EAS Messaging supports up to 4000 characters in an EAS message that is received thru the serial connection.

EAS Messaging Configuration

The Maestro Configuration Editor is used to assign EAS Messaging functions to the required tables. The four specific tables are:

- Serial Connection
- Event Code Definition
- GPIO Definition
- Button Definition

You must clear the NV RAM for the Keyers and Audio Mixers to function correctly when deploying a configuration file with the EAS Messaging option (or after removing EAS Messaging). Clearing the NV RAM is accomplished by selecting the appropriate boards and then clicking the **Clear NVRam** button in the top right of the Maestro Deployment Control Center (see [Figure 1](#)).

CAUTION Clicking the **Clear NVRAM** button will cause the switcher to Switch to the default settings for Start-up configuration, the Program (PGM), Preset (PST) and Auxiliary (AUX) busses, and switch the PGM outputs to fade/silent mode. Grass Valley recommends that you place Maestro into bypass before clearing the NVRAM.

Figure 1. The Clear NVRAM Button



Saving Changes to Tables

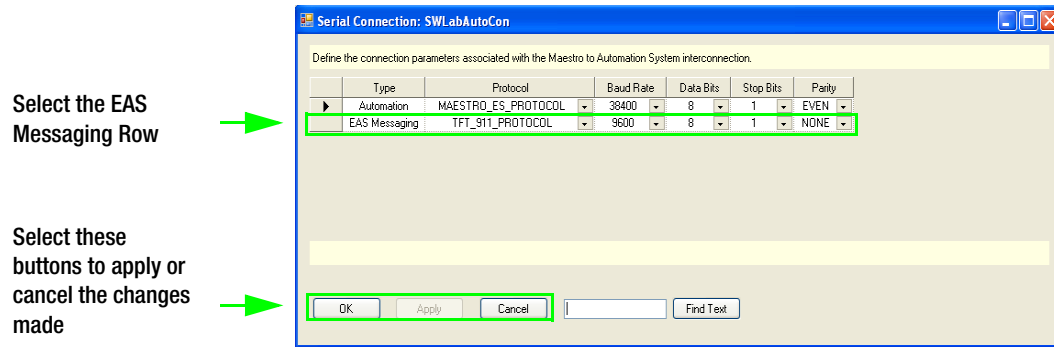
Press the **OK**, and then the **Apply** button to save the changes in Maestro’s memory; these buttons are located at the bottom of the table ([Figure 2](#)). However, changes are not saved to disk until you select File > Save. If you attempt to close the Configuration File before applying your changes, a pop up message will appear asking you to confirm or abandon the changes before editing a new file.

The Serial Connection Table

The Automation Connection table has been renamed to the Serial Connection table and a new row has been added to accommodate EAS Messaging. The Serial Connection hyperlink can be found in the 1st Step: Connections area. The Serial Connection table ([Figure 2](#)) will appear after clicking this hyperlink.

Note See the User manual that came with your EAS device, for the information needed for the steps below.

Figure 2. The Serial Connection Table



Follow these steps to configure the Serial Connection table:

1. Select the EAS Messaging row.
2. Select the preferred protocol type from the Protocol drop-down list. For example, SAGE_GENERIC_PROTOCOL or TFT_911_PROTOCOL, that is the Standard TFT.
3. Select the appropriate Baud rate from the drop down list. The options are: 1200, 2400, 9600, 19200, 38400, 57600, and 115200.
4. Select the appropriate Data Bits from the drop down list. The options are: 5, 6, 7, and 8.
5. Select the appropriate Stop Bits from the drop down list. The options are: 1, 1.5, and 2.
6. Select the appropriate Parity from the drop down list. The options are: Even, Odd, Mark, and Space.
7. Click the **OK** button and then the **Apply** button.
8. Save the changes by selecting Save from the File menu (File > Save).

The Event Code Definition Table (TFT Devices Only)

The Event Code Definition table has been created to define the Severity level for each TFT event code. This table can be found in the 2nd Step: Definition area but is only needed if a TFT device is used. This Severity level is assigned to the type of Text crawl that will be displayed on air. The EAS options are Test, Watch, Warning, or User 1 through User 12.

EAS Device Settings

The settings for your preferred EAS device are outside the scope of this manual. However, Grass Valley has some recommendations on the EAS Device configuration using the EAS Device configuration. These configuration settings are not entered in the Maestro Configuration Editor. The

appropriate EAS Device manual should be referred to for specifics as configuration options and settings will vary.

The EAS device should be configured to send each serial message to Maestro a single time. For example, certain EAS Devices may be configured to send the same serial message for multiple iterations.

CAUTION If multiple iterations are configured on the DASDEC, then you should select the DASDEC “Throttle down Serial Port Write Speed” option. If this option is not checked and the serial message is sent multiple times with no delay between serial messages from the EAS device, then the text crawl data may not work properly; that is, an “empty” crawl may be the result.

EAS Device Relay Configuration

The EAS device must be configured to send the serial data, and allow time for Keyer-8 source assignment, prior to activating the Keyer-8 relay. The source assignment duration will vary according to the Keyer-8 source that is being assigned. The variation in assignment time of EAS sources is due to how Maestro assigns internal sources. The variation factors include:

- The size of the EAS associated effect (crawl). The effect is loaded from the on-board hard disk drives; larger effects will take more time.
- Sequential loading. The time may increase if other internal branding engine elements are queued to be loaded to other keyers/mixers.

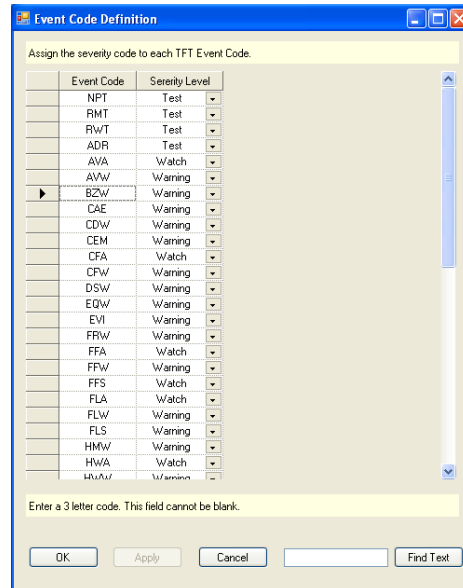
If the EAS device activates the Keyer-8 relay prior to sending the serial data, then the EAS message will not function properly (the prior EAS message may display or no EAS alert message may display). For example, to activate the relay correctly for the RWT (Required Weekly Test) on the SAGE Digital ENDEC, the relay is configured to be either the “End Pulse Pre” or “End Pulse Post” settings. This configuration setting will allow the serial data to arrive at the Maestro system with adequate time to assign the Keyer-8 source before the EAS device activating the Relays.

See your EAS Device documentation to determine how to configure the EAS device to meet this requirement.

The Event Code Definition Table Settings (TFT Devices Only)

Note If the Keyer 8 GPI is activated without the EAS device sending a serial message, then Keyer 8 will display the text crawl from the last received serial message.

Figure 3. The Event Code Definition Table



Follow these steps to assign the Event or Severity code for each TFT event code:

1. Select the preferred Event Code row.
2. Select the preferred Severity from the Severity Level drop-down list. For example, Test, Watch, or Warning. User defined levels are allowed.
3. Click the **OK** button and then the **Apply** button.
4. Save the changes by selecting Save from the File menu (File > Save).

Note Event codes can be added to this table.

The GPIO Definition Table

The GPIO Definition table has been modified to accommodate additional Sub systems for the EAS messaging option; the new GPIO Sub systems are EAS Messaging Warning, EAS Messaging Watch, EAS Messaging Test and EAS Messaging User1 thru EAS Messaging User12.

The GPIO Definition hyperlink can be found in the 5th Step: Input/Output Sets area. The GPIO Definition table (Figure 4) will appear after clicking this hyperlink.

Note If EAS Messaging is not configured, then this table cannot have any User defined levels.

Figure 4. The GPIO Definition Table

Device Type	Identifier	Sub System	Purpose	Trigger Type	Trigger Duration	Trigger Sense
MaestroGPI	7	EAS	Keyer 8	Level	0:00	High
MaestroGPI	7	EAS	Audio Over 4	Level	0:00	High
MaestroGPI	14	Action	Transition	Pulse	0:00	High
MaestroGPO	1	Bus Tally	Bus A	Pulse	2:00	High
MaestroGPO	2	Bus Tally	Bus B	Level	0:00	High
MaestroGPO	5	Action	Transition In Progress	Level	0:00	High
MaestroGPO	10	Source Tally	KSL-Emb	Level	0:00	High
MaestroGPI	7	EAS Messagin	EASWarning	Level	0:00	High
MaestroGPI	7	EAS Messagin	EASWatch	Level	0:00	High
MaestroGPI	7	EAS Messagin	EASTest	Level	0:00	High

Select an available Identifier. This field cannot be blank.

OK Apply Cancel Find Text

Follow these steps to assign the video Keyer-8 and Audio Mixer-4 buttons to the EAS Fixed assignments option (if they are not already selected):

1. Enter or modify the row with a Purpose of Keyer 8.

The Device Type must be Maestro GPI and the selected Identifier must be the same Identifier as the one that was selected for EAS Messaging Warning, EAS Messaging Watch, EAS Messaging Test, and EAS Messaging User Sub Systems.

2. Enter or modify the row with a Purpose of Audio Over 4. The Device Type must be Maestro GPI and the Identifier can be the Same Identifier as Keyer 8.
3. Enter three new rows and then select the EAS Messaging Warning, EAS Messaging Watch, and EAS Messaging Test options from the Sub System column.

All three of these rows are required, although you could select the same Purpose (that is Text Crawl source) as desired. The Identifier must be the same as is entered for Keyer 8.

4. For each of the three rows entered in [Step 3](#), select the Text Crawl source (the Internal input that is defined in the Content Definition as having a Source Type of "Text Crawl") from the drop-down menu in the Purpose column
5. Enter EAS Messaging User types.

Up to 12 User types can be defined (EAS Messaging User1 thru EAS Messaging User12). The Identifier must be the same as is entered for Keyer 8. This step is optional.

6. Select the Text Crawl source for any of the EAS Messaging User types that were selected in [Step 5](#).
7. Click the **OK** button and then the **Apply** button.
8. Save the changes by selecting Save from the File menu (File > Save).

The Button Definition Table

The Background Buttons table has been renamed to the Button Definition table. The Button Definition hyperlink can be found in the 6th Step: Input-based Sets area. The Button Definition table ([Figure 5](#)) will appear after clicking this hyperlink.

If EAS Messaging is defined in the GPIO Definition Table, then video Keyer-8 and Audio Mixer-4 must have “EAS Fixed assignment” set as their purpose. This fixed assignment means the buttons cannot be affected by either Automation control or by the operator.

Figure 5. The Button Definition Table

Button	Purpose	Default Source
▶ Background 1	Operator	
Background 2	Operator	
Background 3	Operator	
Background 4	Operator	
Background 5	Operator	
Background 6	Operator	
Background 7	Operator	
Background 8	Operator	
Background 9	Operator	
Background 10	Operator	
Background 11	Operator	
Background 12	Operator	
Background 13	Operator	
Background 14	Operator	
Background 15	Operator	
Background 16	Operator	
Keyer 1	Operator	KSL-Emb
Keyer 2	Operator	
Keyer 3	Operator	
Keyer 4	Operator	
Keyer 5	Operator	
Keyer 6	Operator	
Keyer 7	Operator	
Keyer 8	EAS Fixed Assignment	
Audio Over 1	Operator	
Audio Over 2	Operator	
Audio Over 3	Fixed Assignment	BarsDirect
Audio Over 4	EAS Fixed Assignment	SaturnDirect

Follow these steps to assign the video Keyer-8 and Audio Mixer-4 buttons to the EAS Fixed assignments option (if they are not already selected):

1. Select the preferred button row either the video Keyer-8 or Audio Mixer-4 buttons.
2. Select the *EAS Fixed Assignment* option from the Purpose drop-down list for both video Keyer-8 and Audio Mixer-4 buttons.

3. Select the Default Source for Audio Over.

The Default Source field for the Keyer 8 button is controlled by EAS Messaging and cannot be specified in this table. The field is grayed out.

4. Click the **OK** button and then the **Apply** button.
5. Save the changes by selecting Save from the File menu (File > Save).

Maestro Control Panel Changes for EAS Operation

If EAS Messaging is configured in the GPIO Definition Table, the Keyer 8 and Audio Over 4 buttons are fixed and assigned to EAS Messaging.

Figure 6. Maestro Keyer Control with EAS Messaging

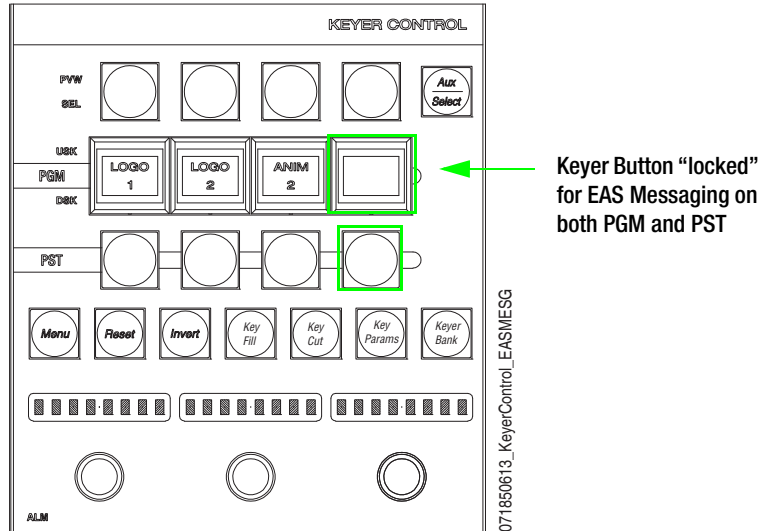
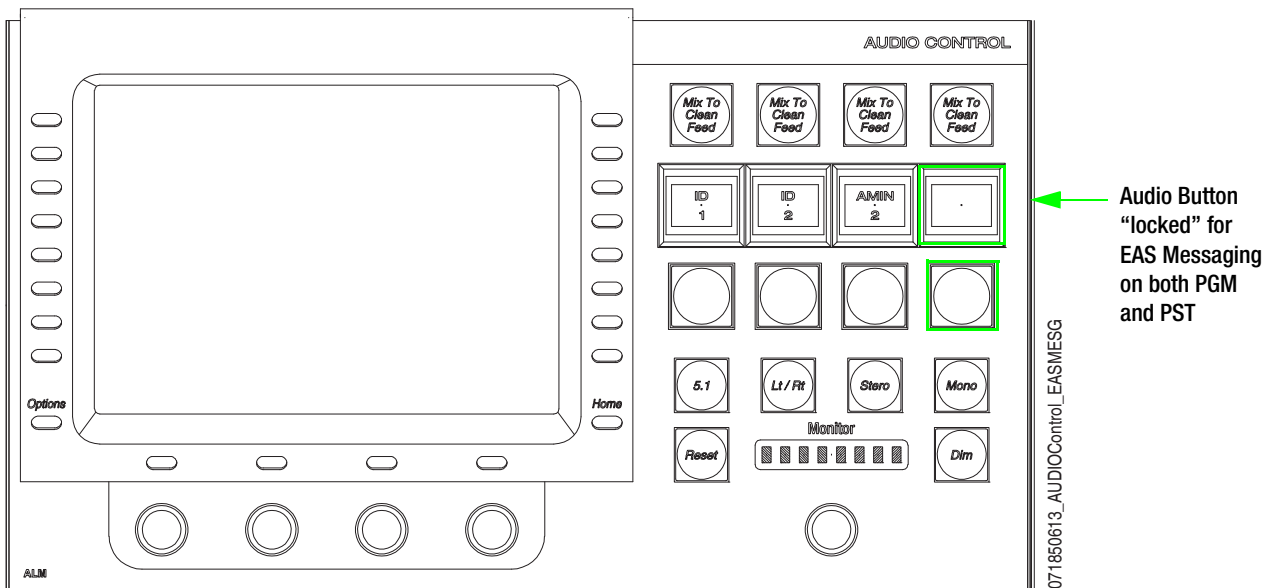


Figure 7. Maestro Audio Control with EAS Messaging



Hardware Installation Procedure

The EAS option is a software only option that requires the previous installation of the Maestro Enhanced Branding Engine option. Hardware installation should refer to this and the installation instructions for the Maestro Enhanced Branding Engine option.

The following is a summary of the steps that are needed for the installation of the EAS Messaging option to the Maestro Master Control system. Generally, you will need a NULL Modem cable and a RS232 to RS422 converter. Grass Valley recommends using a RS-232 to RS422 converter.

Note See the Installation manual for your EAS device for its Installation steps.

Pre-Installation Steps

Follow these steps before installing the standard Maestro system:

1. Inspect the shipping carton for evidence of freight damage before unpacking the system. Carefully unpack and inspect all equipment for freight damage.

If the contents have been damaged, notify the carrier and Grass Valley. Retain all shipping cartons and padding material for inspection by the carrier.

Do not return damaged merchandise to Grass Valley until an appropriate claim has been filed with the carrier and a Material Return Authorization number has been received from Grass Valley.

2. Verify the installation and operation of the external matrix Routing switcher (for example, Trinx or Concerto) and control system (for example, Encore or Jupiter) that is associated with the Maestro system.

EAS Hardware Installation Steps

Follow the steps below to install the hardware for the EAS option:

1. Connect the EAS device's serial connection to the Serial Tally connector on the Maestro's rear panel ([Figure 8 on page 20](#)).

The EAS device must have a serial connection that is configured the same as it is defined in the Serial Connection table.

Note Refer to your EAS device's documentation for information about cables.

2. Connect the EAS device's Digital audio connector to the appropriate Maestro connection. See your EAS device's Installation manual for the correct connection type ([Figure 9 on page 21](#)).

Note Analog audio must be converted to Digital audio before connecting to the Maestro master control device.

The image in [Figure 9](#) shows the audio connection being connected to the 1/2 MON OUTS connection; this is used as an example only. The actual connection depends on your configuration.

Figure 8. Maestro Rear Panel-EAS Connection Serial Tally Connector

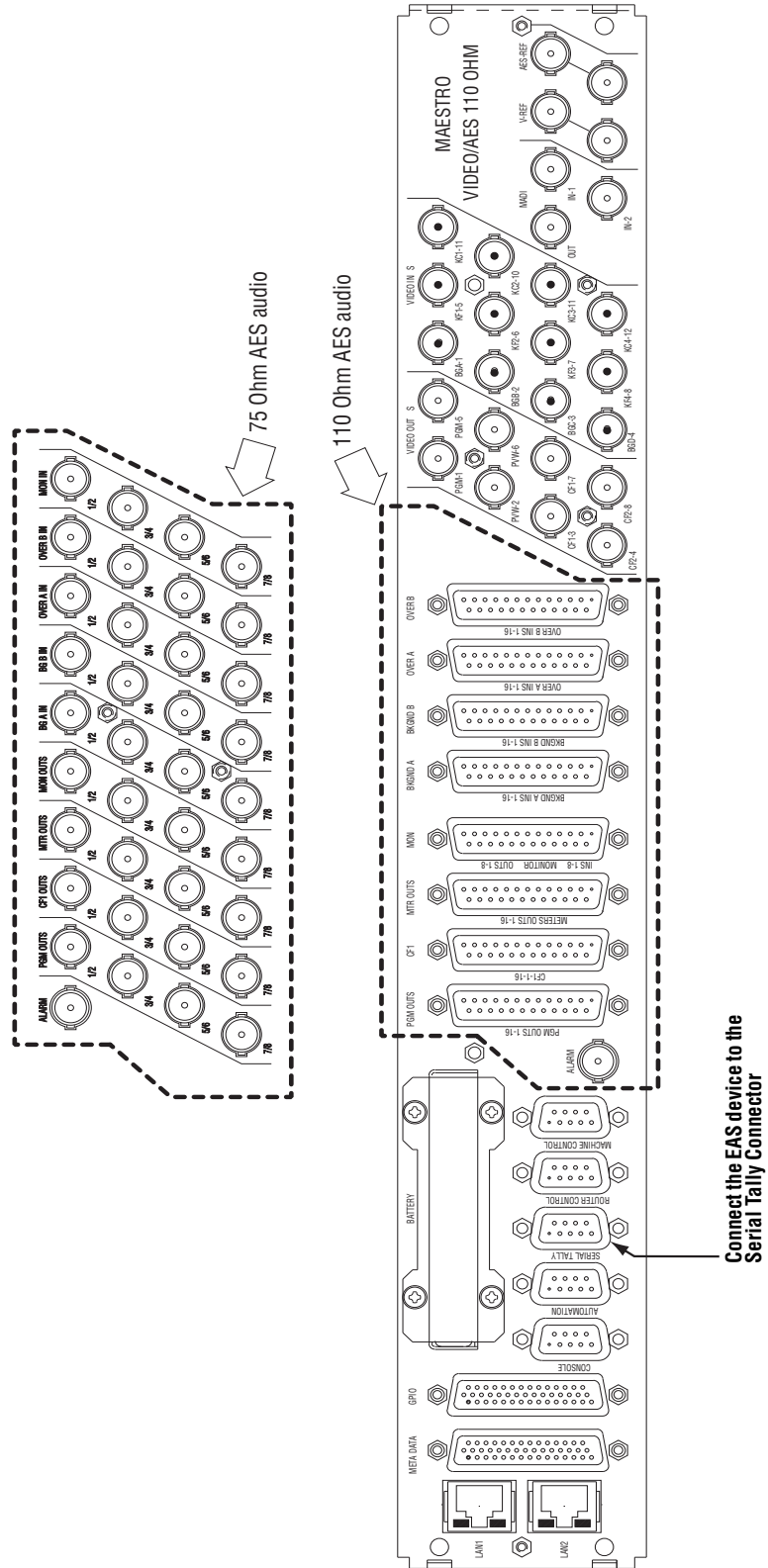
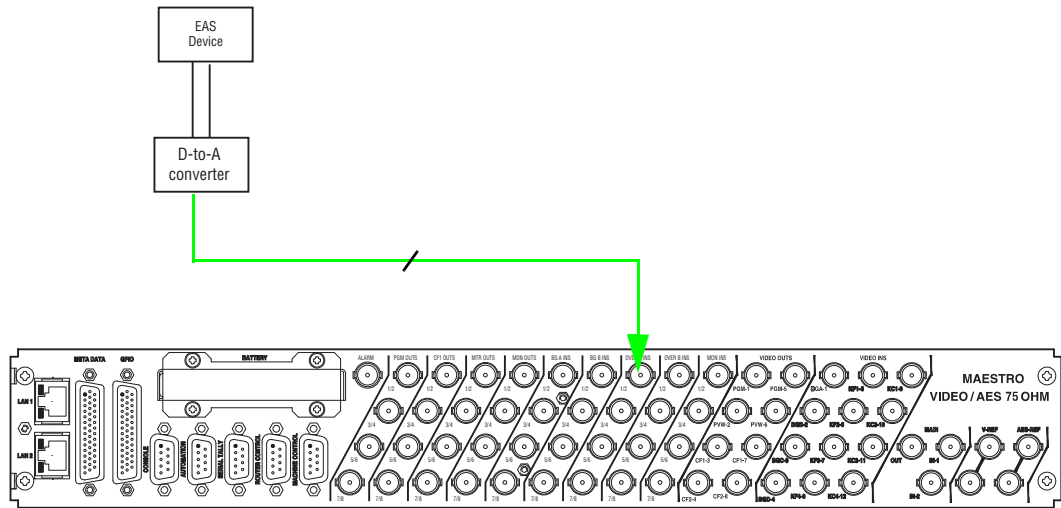


Figure 9. Analog Audio Must Be Converted To Digital Audio



The Pre Roll Take Feature

Maestro now supports a Pre Roll Take feature. This new feature can be used from either the Control Panel, the GUI Control Panel, or from the MAESTRO_PREROLL_TAKE Automaton command. For more information about automation commands, see the 2.4.0 version of the Maestro Automation manual.

The Pre Roll Take feature is installed by running the 2.4.0 version of the Maestro Installer. The Pre Roll Take duration can be set to a default value using the GPIO definition table or to a preferred variable duration that can be set using the Source Assignment sub-panel.

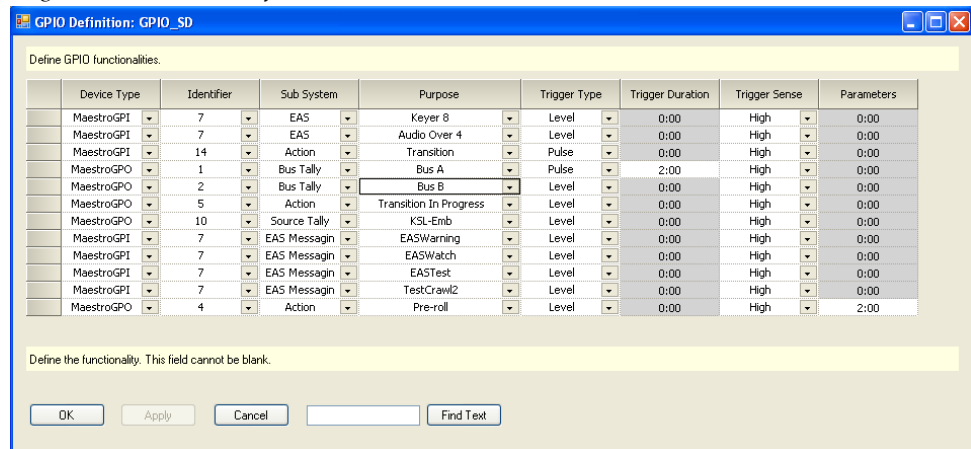
Defining the Default Pre-roll Duration - The GPIO Definition Table

The default duration for the Pre Roll Take feature can be configured in the GPIO Definition table. When the Pre Roll time has been defined, it will stay in effect until the time is changed by entering a new Pre Roll Time.

Before configuring the Pre Roll Take feature, start the Maestro Configuration Editor program. The GPIO Definition table's hyperlink can be found in the 5th Step: Input/Output Sets area.

The GPIO Definition table will appear after clicking the GPIO Definition table hyperlink ([Figure 10](#)).

Figure 10. The GPIO Definition Table



The screenshot shows a window titled "GPIO Definition: GPIO_SD" with a table of GPIO functionalities. The table has columns for Device Type, Identifier, Sub System, Purpose, Trigger Type, Trigger Duration, Trigger Sense, and Parameters. The last row in the table is highlighted, showing a Pre-roll configuration with a duration of 2:00.

Device Type	Identifier	Sub System	Purpose	Trigger Type	Trigger Duration	Trigger Sense	Parameters
MaestroGPI	7	EAS	Keyer 8	Level	0:00	High	0:00
MaestroGPI	7	EAS	Audio Over 4	Level	0:00	High	0:00
MaestroGPI	14	Action	Transition	Pulse	0:00	High	0:00
MaestroGPO	1	Bus Tally	Bus A	Pulse	2:00	High	0:00
MaestroGPO	2	Bus Tally	Bus B	Level	0:00	High	0:00
MaestroGPO	5	Action	Transition In Progress	Level	0:00	High	0:00
MaestroGPO	10	Source Tally	KSL-Emb	Level	0:00	High	0:00
MaestroGPI	7	EAS Messagin	EASWarning	Level	0:00	High	0:00
MaestroGPI	7	EAS Messagin	EASWatch	Level	0:00	High	0:00
MaestroGPI	7	EAS Messagin	EASTest	Level	0:00	High	0:00
MaestroGPI	7	EAS Messagin	TestCrawl2	Level	0:00	High	0:00
MaestroGPO	4	Action	Pre-roll	Level	0:00	High	2:00

Below the table, there is a text field with the prompt "Define the functionality. This field cannot be blank." and buttons for "OK", "Apply", "Cancel", and "Find Text".

Follow these steps to configure the Pre Roll Take's default value:

1. Add a new row to the table by right-clicking the table and then selecting the *Insert Row Below* option.
2. Select the Device Type drop-down and then select the *MaestroGPO* option.

3. Select the preferred identifier from the identifier drop-down list.
4. Select the *Action* option from the Sub System drop-down list.
5. Select the *Pre-roll* option from the purpose drop-down list.
6. Select the *Level* option from the Trigger Type drop-down list.
7. Select either the *High* or *Low* option from the Trigger Sense drop-down list.
8. Enter the preferred duration in the Parameters field. The example shown in [Figure 10 on page 22](#) is “2.00.” The maximum pre-roll duration is based upon video standard.
 - A 30 frame video standard’s maximum would be “9:29.”
 - A 25 frame video standard’s maximum would be “9:24.”
9. Click the **OK** button and then the **Apply** button to apply the changes.
10. Save the changes by selecting Save from the File menu (File > Save).

Defining the Pre-roll Duration - The Source Assignment Sub-Panel

An alternative that you may use is to set or change the Pre Roll duration using the Source Assignment sub-panel. The time must be entered in a seconds:frames format. This defined Pre Roll time will stay in effect until it is changed by entering a new user-defined Pre Roll Time.

The valid range for a Pre Roll time is 0 seconds and 0 frames (0:00) to the maximum. The maximum pre-roll duration is based upon video standard:

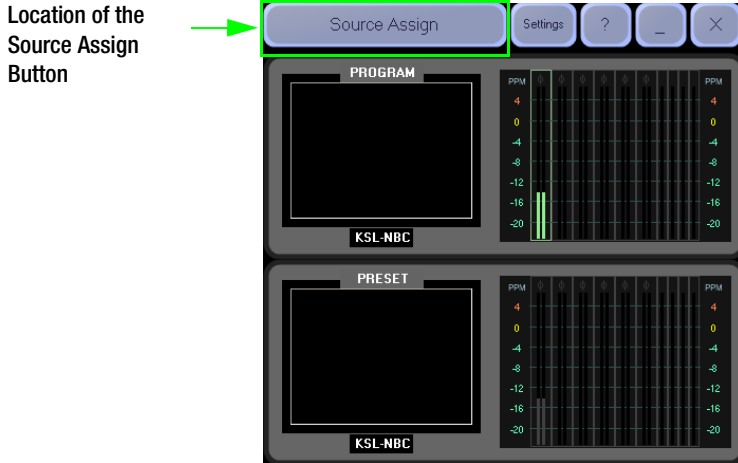
- A 30 frame video standard’s maximum would be “9:29.”
- A 25 frame video standard’s maximum would be “9:24.”

The following actions will occur when a Pre Roll time is entered that is outside the valid range:

- If a Pre Roll time has been entered in the GPIO Definition Table, the Pre Roll duration entered in the GPIO definition table will be applied.
- If there is not a Pre Roll time entered in the GPIO Definition Table, the entry will be ignored.

The Source Assignment panel is located in the top-right corner of the Maestro Hardware Control panel. It can also be accessed by clicking the **Source Assign** button in the Top-left corner of the GUI panel ([Figure 11 on page 24](#)).

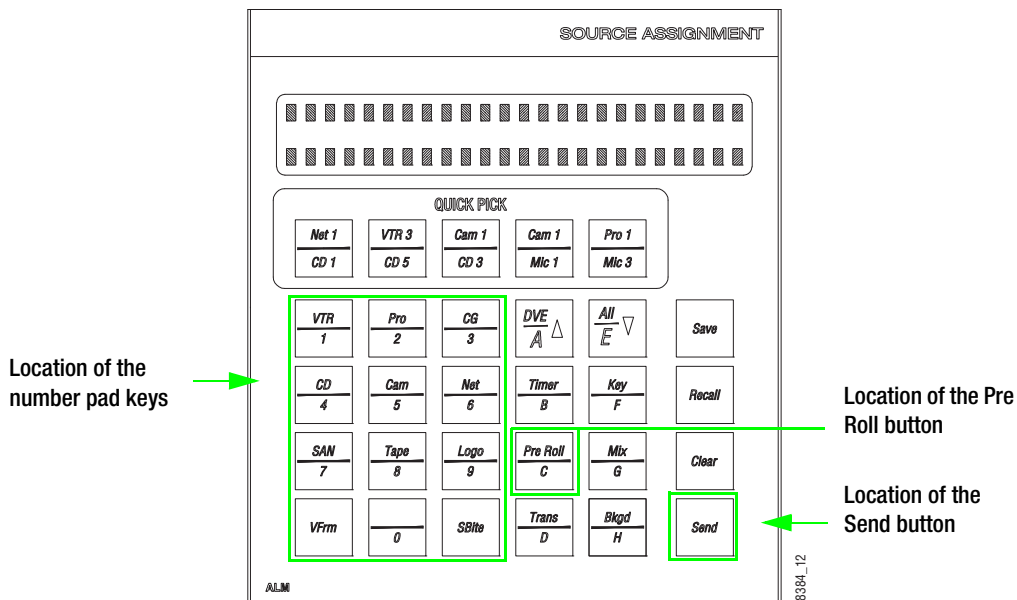
Figure 11. Source Assign Button on the GUI CP



Follow these steps to define a Pre Roll duration using the Source Assignment sub-panel (Figure 12):

1. Enter the preferred Pre Roll time by pressing the number pad keys on the Source Assignment sub-panel for the chosen time. All of the significant digits must be entered in the seconds:frames format.
For example, a transition time of 4 seconds requires pressing the 4, 0 and 0 keys. Only pressing the 4 key will result in a 4 frame transition.
2. Press the **Send** button. The **Pre Roll** button in the Source Assignment will then be illuminated (Figure 12).
3. Press the **Pre Roll** button and the Pre Roll time will appear in the Pre Roll display above the **Pre Roll Take** button.

Figure 12. The MAE-ASN-CP Source Assignment Control Sub Panel



The Pre Roll Take Procedure

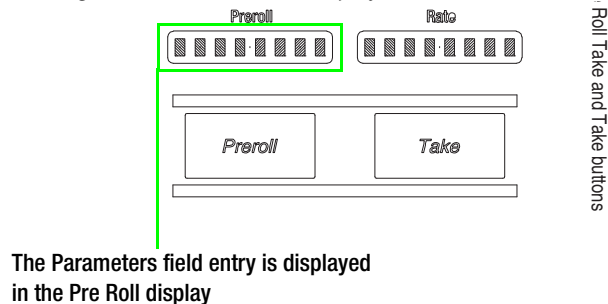
The **Pre Roll Take** button is located below the bus buttons in the Source Control section of the Maestro Control panels. (Figure 13)

Figure 13. Location of the Pre Roll Take Button in the Source Control Section



The current Pre Roll Duration will appear in the Pre Roll window, which is above the **Pre Roll Take** button (Figure 14 on page 25). For example, “2:00” is used in the example shown above in Figure 13. If the Pre Roll duration has not been set, either in the GPIO Definition table or by using the Source Assignment sub-panel, then “0:00” will be displayed in the Pre-roll time display.

Figure 14. Pre Roll Rate Display



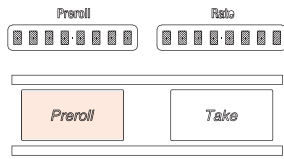
The Parameters field entry is displayed in the Pre Roll display

Performing a Pre Roll Take

The Pre Roll Take procedure is:

Once the **Pre Roll Take** button has been pressed, the button will illuminate red (Figure 15) until the source transition begins.

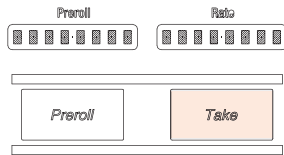
Figure 15. Red Pre Roll Take Button



50613_Pre Roll Take selected

The **Take** button will then turn red (Figure 16) when the actual sources transition begins.

Figure 16. Red Take Button



071850613_Take selected

The **Take** button remains illuminated for the duration of the transition.

Note See the Transition Configuration section in the Maestro Installation and Service manual for information about Transitions.

Optional Takes

Grass Valley recommends that the “Pre Roll and-then Take” Transition technique should be used whenever possible. However, a transition in progress will immediately move to completion anytime the Maestro system receives another Pre-Roll Take, or Take command (either manually or through automation); even if the current transition is not complete at the time the command is received. For example, once the **Pre Roll Take** button has been pressed:

- If the **Pre Roll Take** button is pressed again, (or an Automation Take or Pre Roll Take command is received) before the transition is complete, the transition will immediately move to completion.
- If the **Take** button is pressed again, (or an Automation Take or Pre Roll Take command is received) before the transition is complete, the transition will immediately move to completion.

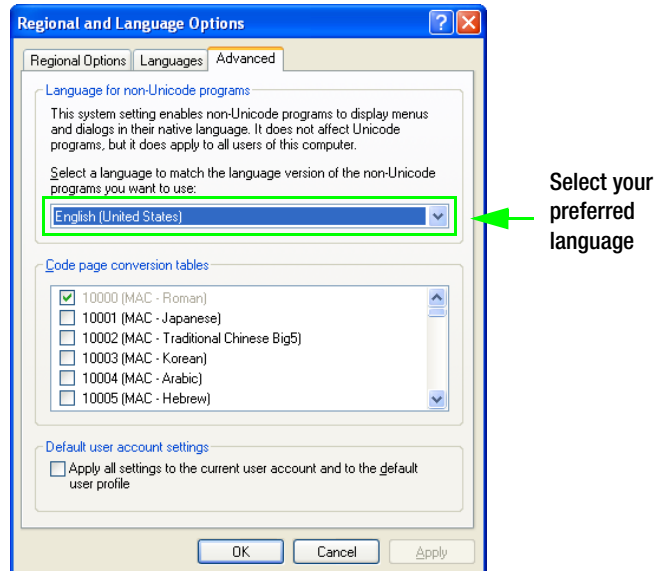
Improved Support For 256 Character Fonts

The Maestro 2.4 release has improved support for 256 character Fonts. This improvement will help customers whose alphabet characters are not Latin based. You will need to set the code page on the PC to the appropriate region to use this feature.

Follow these steps to select a language to match the non-Unicode programs:

1. Select the Control Panel menu from the Start menu. The Control panel menu will then open.
2. Select the Regional and Language Options icon. The Regional and Language Options dialog will then open.
3. Select the Advanced tab.

Figure 17. The Advanced Tab of the Regional and Language Options Dialog



4. Select your preferred language from the Language for non-Unicode programs drop-down list.

Installing the Maestro Master Control System

Before installing the Maestro Master Control system, read the Interoperability requirements, Upgrade requirements, HD licensing, and Caveats.

Available Materials

Table 1. MAE SD and HD SW Bill of Materials

Maestro Software Upgrade	
Quantity	Description
1	CD-ROM, Maestro HD Software Program, v2.4.0
1	Maestro Documentation CD-ROM

Note The Maestro software version number appears in two formats in this document. The abbreviated format, 2.4.0, which indicates the major version “2” and that “4” is the minor version. When there is a third number, it will indicate a sub version. The long format expresses the release number as 2.400.xxxx.xxxx with the additional digits indicating engineering information. All of the 2.4.0 documentation is on the Maestro Documentation CD-ROM.

Interoperability Requirements

- Encore router control system version 1.7 or newer, or
- Jupiter router control system version 4.2 or newer when using ES-Switch on a VM control system, or
- Jupiter router control system version 7.3 or newer when using ES-Switch on a CM control system, or
- Jupiter router control system 7.5.0 or newer when using ES-LAN on a CM control system

Upgrade Requirements

- A period of time where the Maestro system can be taken off-line (externally bypassed).
- Windows XP (English version-US Edition) with Service Pack 2 or greater.
- In order to upgrade the Maestro software, the Maestro configuration computer will need access to the Maestro installation CD or downloaded installation files.
- Verify the HD license key with Grass Valley's Customer Service department. See [Contacting Grass Valley on page 4](#) for the contact information for your area.
- The configuration from the existing operational Maestro system will be used to complete the Maestro upgrade.
- It is recommended that the Maestro Configuration computer be upgraded to contain at least 2GB of RAM and have a Core 2 Duo processor.

Note It is assumed that the Dual-Channel DVE option has been previously installed on the intended system or that no DVE option has been installed. If you have the Single-Channel DVE option, do NOT install this software version. For more information, see the 1.7 version Release Notes, which can be found on the Grass Valley Web site.

Maestro HD Licensing

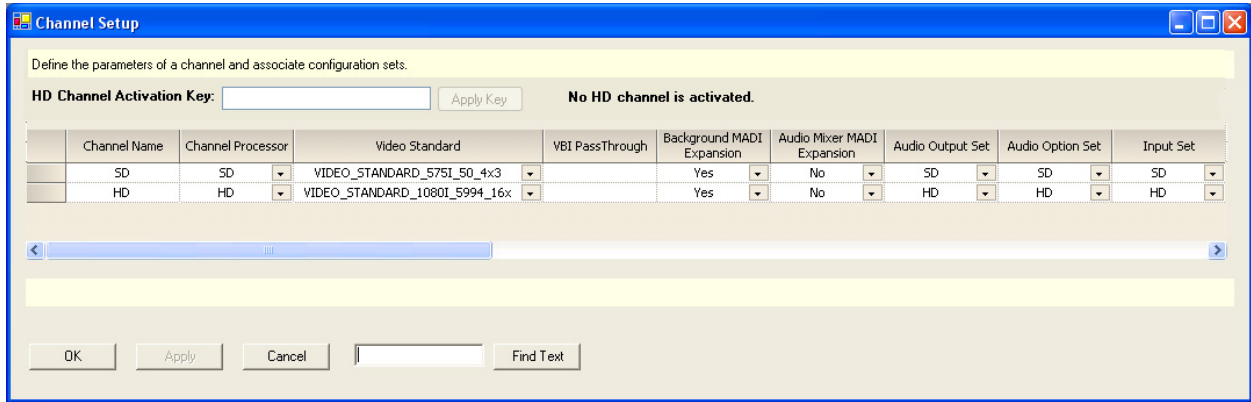
Since the 2.2 version of Maestro, the software for both the HD and SD channels are located on the same CD-ROM. You will need to enter the activation key that is provided with the software to access the HD channels.

Note Before installing the 2.2 and later versions of Maestro, and if you purchased the HD option, verify your HD license key with Grass Valley's Customer Service department. See [Contacting Grass Valley on page 4](#) for the contact information for your area.

Follow these steps to unlock the HD channels:

1. Open the Maestro Configuration Editor application.
2. Open the Channel Setup table from the Navigation panel (8th Step: Channel Sets> Channel Setup). The Channel Setup table will then appear. See [Figure 18](#).

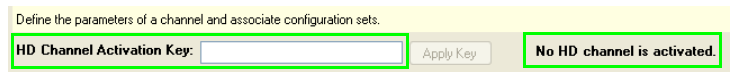
Figure 18. The Channel Setup Table



3. Enter the Activation key in the HD Channel Activation Key field. This field is located near the top of the dialog box (Figure 18 on page 30). The Activation Key can be found on the certificate that came with the system.
4. Click the **Apply Key** button. The HD channels will now be activated and the number of activated HD channels will appear in the information text (see Figure 19).

Figure 19. HD Channel Activation Key Field

The HD Channel Activation Key Field



Information Text.
The number of activated HD channels will appear here.



Caveats

- Network issues are the most common cause of problems when installing a Maestro system. Network installation and configuration must follow Grass Valley recommendations. Please refer to the Network Configuration section in the *Maestro Installation and Service Manual*.
- All Maestro processors connected to the same Maestro deployment PC and comprising a single system (all processors interconnected via the same facility and Control LANs) must have the same software version and configuration deployed to them. Having different software versions/configurations deployed within a single system is not supported and may result in communication incompatibilities and system failure.

Software Upgrade Procedure

Note For the complete instructions, see the Maestro Installation manual.

Grass Valley recommends that you follow the Software Upgrade procedure steps exactly. The Upgrade procedure includes the following steps:

1. *Checking the Boot ROM Versions.*
2. *Making a Copy of the Maestro Configuration File.*
3. *Installing the Maestro Software Package.*
4. *Re-compiling the Configuration File.*
5. *Updating the System Configuration and Software.*
6. *Checking the GUI Control Panel for Proper LAN Settings.*
7. *Updating FPGAs/CPLDs.*

Checking the Boot ROM Versions

Before proceeding with the installation of the Maestro system, you must verify the boot ROM version that is installed on the Maestro processor board. The boot ROM must be updated to the current version or the processor board will not boot properly.

Maestro software versions 1.4 and higher require the Processor and hardware control panel boot ROMs to be current.

Note Most Maestro processor boards will have the current boot ROM installed. Only previous board shipments will have the older boot ROM installed.

Follow these steps to check the Boot ROM Version:

1. Open the Maestro Deployment Control Center window. Look at the Deployment column.
2. Select the Processor that has the Boot ROM version you wish to check. The row for the selected Processor will have a dark background.
3. Right-click on the FPGA version number in the *Running>>* row and in the FPGA column, of the selected Processor. A window similar to the one seen in [Figure 20 on page 32](#) appears.

Figure 20. Processor Board Boot ROM and FPGA/CPLD Update Window

Name	Loaded	Current File	Update
BOOTROM	Mar 06 2006 15:23:46	Dec 14 2006 07:28:07	*
GENESIS FPGA	5.5		
CONTROL FPGA	5.39		
VIDEO IN 1 FPGA	5.54		
VIDEO IN 2 FPGA	5.54		
VIDEO MIX FPGA	5.23		
AUDIO MULTIPLEX FPGA	5.17		
AUDIO PROCESSOR FPGA	5.34		
METER DSP	1.0		
RECLOCKER 1 CPLD	4.0	4.0	
RECLOCKER 2 CPLD	4.0	4.0	
RECLOCKER 3 CPLD	4.0	4.0	
RECLOCKER 4 CPLD	4.0	4.0	
ALARM CPLD	1.23	5.7	<input type="checkbox"/>
CPU PMON CPLD	0.3		

*Contact technical support Select All

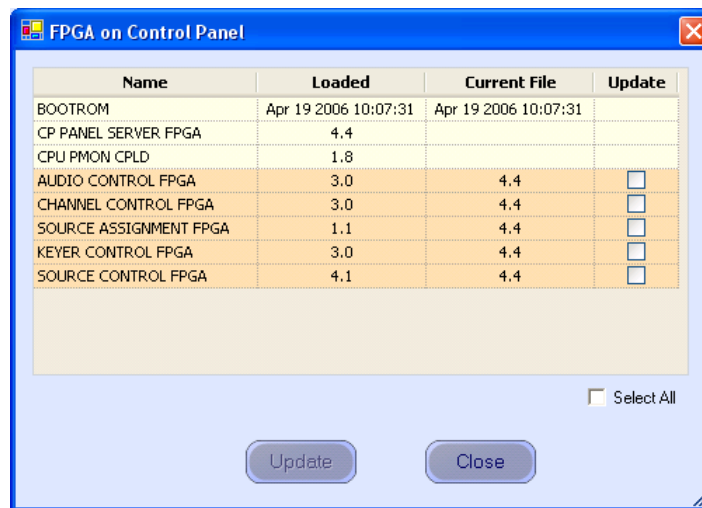
Update Close

- Verify that the date that appears in the *Loaded* column for the boot ROM is Dec 14 2006.

Note If you see an older date or no date at all, the Boot ROM should be updated. Stop the Installation process and then contact Grass Valley Technical Support for update instructions.

- If there is another Processor (channel) in the system, repeat [Step 1](#) above and the following steps. If not, go to [Step 6](#).
- In the Maestro Deployment Control Center window, select the control panel for which you wish to check the Boot ROM version.
For a hardware control panel, this will be a CP Panel Server board. For a GUI control panel, this will be a PCI Panel Server board.
- Right-click on the FPGA version number in the *Running>>* row of the selected Control Panel. A window similar to the one seen in [Figure 21 on page 33](#) appears.

Figure 21. Control Panel Boot ROM and FPGA/CPLD Update Window



- Verify that the date that appears in the *Loaded* column for the BOOTROM is Apr 19 2006.

Note If you see an older date or no date at all, the Boot ROM should be updated. Stop the Installation process and then contact Grass Valley Technical Support for update instructions.

- If the Boot ROM version is current, go to [Step 9](#).
- If there is another control panel in the system, repeat [Step 6](#) above and the following steps. If all boot ROMs are current, proceed to [Installing the Maestro Software Package](#).

Making a Copy of the Maestro Configuration File

Grass Valley recommends that you make a copy of your Maestro Configuration file. This step will help with a rollback should something go wrong.

Follow these steps to make a copy of the current configuration set:

- Launch the Maestro Configuration Editor (Start > All Programs > Thomson > Maestro Configuration Editor).
- Select Open from the File menu (File > Open) to open the current configuration set.
- Select the current configuration file and then click the **Open button**.
- Select Save As from the File menu (File > Save As) to create a copy of the set.
- Add the current installed version to the name as a suggestion. For example, v23.

6. Select Save As from the File menu (File > Save As) again to create another copy of the set.
7. Add the version to be installed to the name. For example, add v24.
8. Close all Maestro applications.

Note For more information about the Configuration file, refer to the Maestro Configuration Editor section of the Maestro Installation and Service Manual.

Installing the Maestro Software Package

The following instructions show the steps that are needed to install Maestro. The installation process will check if a previous version is installed on the Maestro Deployment computer. You must remove the previous version of Maestro to install the latest version. These steps are explained below.

Follow these steps to start the Maestro application installation process:

1. Insert the supplied software CD-ROM into the computer's CD Drive and follow the prompts.

The CD should automatically start the installation process. If not, browse to the CD, using Window Explorer, and then click either the MaestroInstall.exe icon or the setup.exe icon.

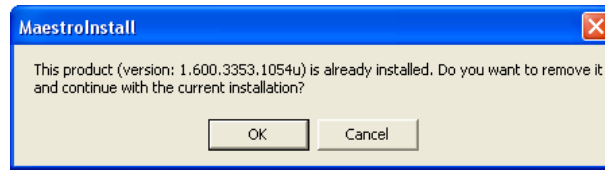
Note If this is an Initial installation, you may see a message asking if you want to install Microsoft .NET Framework. If so, select the **Yes** button. (The 3.5 SP1 version of .NET is located on the CD.)

Automatically Removing the Previous Version of Maestro

When the installation automatically runs from the CD, or is started manually by running the MaestroInstall.exe file, the previously installed Maestro software is automatically detected. You will then be prompted to remove the older version of the software before proceeding with the installation of the new software.

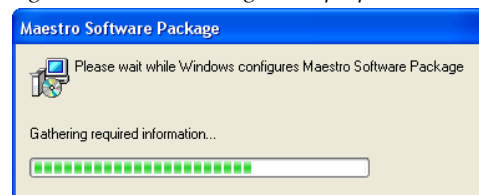
Note Removing the previously installed Maestro software will NOT remove or delete the existing configuration or graphic data.

Figure 22. Automatic Detection of Prior Software Version



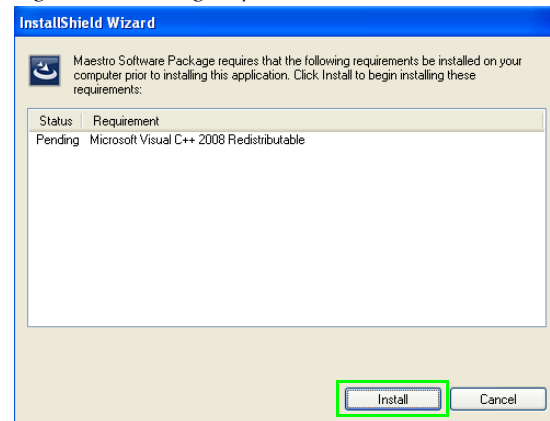
1. Click the **OK** button to proceed with removal of the previous software version. A new popup will then appear that will show the progress of the removal status. When completed, Maestro will verify that all of the required software components (requirements) have been installed and are available.

Figure 23. Removal Progress Pop-up



The following alert may appear.

Figure 24. Missing Requirements



2. Click the **Install** button to install the missing requirements (Figure 24). When completed, the Maestro Welcome screen will then appear.
3. Click the **Next>** button to begin the installation process. The Destination Folder screen will then appear.
4. Click the **Next>** button to continue the installation process.
5. Follow the instructions on the following installation screens. Click the **Next** button as needed.

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

6. The InstallShield Wizard Completed screen will then appear when the installation process is finished.
7. Click the **Finish** button. The Installation application will then close.

Maestro Desktop Icons

Three Maestro shortcuts icons will be displayed on the PC's desktop as part of the installation process. These Icons are, Maestro Configuration Editor, Maestro Deployment Center, and Maestro GUI Control Panel. Clicking the program's shortcut will launch that program.

Re-compiling the Configuration File

It is required that ALL configuration sets that are to be used with the 2.4.0 version of the Maestro application be recompiled with the 2.4.0 Configuration Editor. This requirement includes upgrading from ALL previous versions of Maestro. Changes have been made to the configuration tables to support the 2.4.0 version's functionality. Re-compiling the Configuration file will perform all necessary additions and modifications to the Maestro configuration file to support version 2.4.0. Recompiling the Configuration file will also perform a configuration validation test and generate a report of any validation errors.

Follow these steps to re-compile the Configuration file:

1. Launch the Maestro Configuration Editor by going to Start > All Programs > Thomson > Maestro Configuration Editor.
2. Open the Maestro configuration set to be re-compiled by selecting File > Open > Thomson and selecting the set.

This should be the configuration set that was created for v2.4.0 use (see [Step 6](#) in the *Making a Copy of the Maestro Configuration File* section).

3. If the system displays a Validation Report, you must check the indicated table(s) and make corrections as indicated.

You can use the links in the Description column to display the table(s).

4. Save the configuration file.
5. Compile the file by selecting Compile Channel Data from the file menu (File > Compile Channel Data).
6. Proceed to [Updating the System Configuration and Software](#) below.

Note For more information about the Configuration file, refer to the Maestro Configuration Editor section of the Maestro Installation and Service Manual.

Updating the System Configuration and Software

Follow these steps to update the system configuration and Software:

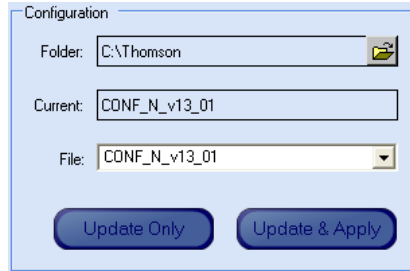
1. Launch the Maestro Deployment control center by selecting Start > All Programs > Thomson > Maestro Deployment Center. The Maestro Deployment Control Center window appears (Figure 25 on page 37).

Figure 25. Maestro Deployment Control Center (Example)

Board Name	Facility LAN IP Address	Uptime	Status	Recommend Action	Board Configuration			Version			Active Configuration	
					Parent Name	Time Stamp	Application	FPGA	OS	File Name	Time Stamp	
Deployment>>	10.16.87.155	0:01:41			FrameProcessor		1.700.3453.1092	53	34	CONF_N_v13_01.xml	04/27/09 8:33 AM	
					ControlPanel		1.600.3353.1054	53	33			
SDV Frame	192.168.195.12	38.19:22:43	UNLOADED	Fail to start. Check board.	Running>>	NONE	NONE	NONE	53	33	NONE	NONE
					Pending>>	CONF_N_v13_01.xml	06/28/07 6:51 PM	1.600.3353.1054	53	33	CONF_N_v13_01.xml	04/13/09 8:26 AM
Panel Server	192.168.195.10	20.20:29:13	CHECK_DISK_FAILED		Running>>	NONE	NONE	NONE	NONE	33	NONE	NONE
					Pending>>	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Control Panel	192.168.195.14	69.21:38:22	STARTED		Running>>	CONF_N_v13_01.xml	06/28/07 6:51 PM	1.600.3353.1054	53	33	CONF_N_v13_01.xml	04/13/09 8:26 AM

2. Click the **Show Log** button in the lower left-hand corner of the application, to provide detailed monitoring of the update process. This is an optional step.
3. In the Configuration box:

Figure 26. Configuration Box



- Verify that the Folder field has the correct path to the Maestro configuration directory. (Default = C:\Thomson)
- Select the Maestro configuration set that is to be activated in the File: drop-down list.

This file should be the configuration set that was updated and compiled for v2.4.0 (Step 5 on page 36). The background of a compatible configuration file (that is, one that was compiled with the current version of the Configuration Editor) will be highlighted green in the drop-down list.

The Configuration box contains two buttons: **Update Only** and **Update & Apply**.

- **Update Only** - Downloads the selected configuration file to the boards but does not apply it as the running configuration.

Note The selected configuration files appears in the *Pending>>* row. The currently active configuration appears in the *Running>>* rows.

- **Update & Apply** - Downloads the selected configuration file to the boards and applies it as the running configuration.

4. Click the **Update Only** button.

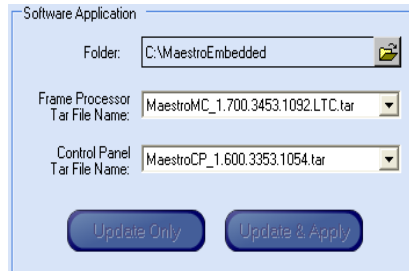
This action will update the contents of the *Pending>>* row in the Board Configuration and Active Configuration columns.

Note When the **Update Only** button is clicked, the configuration file does not become the active configuration until the **Apply Pending** button is clicked to activate the pending configuration.

CAUTION The following step **will interrupt** the video and audio signals passing through the system for approximately one minute.

5. In the Software Application box:

Figure 27. Software Application Box



- a. The *Folder* field should have the following text, C:\MaestroEmbedded.
- b. In the *Frame Processor Tar File Name* field:
 - For LTC systems (those using Linear Time Code) select the file that has .LTC in the name. For example, MaestroMC_2.4.000.aabb.cccd.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 the file that has .VITC in the name. For example, MaestroMC_2.4.0.00.aabb.cccd.VITC.tar.
- c. In the *Control Panel Tar File Name*, field, select the .TAR file. For example, MaestroCP_2.4.000.aabb.cccd.tar.

6. Click the **Select All** button (lower right corner of application).

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.

The Software Application box contains two buttons: **Update Only** and **Update and Apply**.

- **Update Only** - Downloads the selected application software to the boards but does not apply it as the running application. The selected application software files appears in the *Pending>>* row. The currently active application software appears in the *Running>>* rows.
- **Update & Apply** - Downloads the selected application software to the boards and applies it as the running application software.

CAUTION The following step **will interrupt** the video and audio signals passing through the system for approximately two minutes.

7. Click the **Update & Apply** button.

This action will update the contents of the *Running>>* rows in the Version columns and activate the application, FPGA and OS code.

Note If the **Update Only** button is clicked, the software application file does not become the active software application until the **Apply Pending** button is clicked. The pending software application will then be the active software.

If the **Update Only** button was selected, instead of the **Update & Apply** button, you should:

- a. Click the **Apply Pending** button to activate software and any pending configuration files.

Note Clicking the **Update & Apply** button in the respective section will apply any pending updates for that section. Clicking the **Apply Pending** button will apply both the Software and Configuration updates.

- 8. Verify that the new Configuration and Application versions are running.

If you encounter any board issues, see [Solving Un-managed Board Issues](#) below.

- 9. Proceed to [Checking the GUI Control Panel for Proper LAN Settings](#) on page 42.

Figure 28. Maestro Deployment Control Center Software Version Status

The screenshot shows the Maestro Deployment Control Center interface. At the top, there are two main configuration sections: 'Software Application' and 'Configuration'. The 'Software Application' section has a folder path of 'C:\MaestroEmbedded', a 'Frame Processor Tar File Name' of 'MaestroMC_1.600.3353.1054.tar', and a 'Control Panel Tar File Name' of 'MaestroCP_1.600.3353.1054.tar'. The 'Configuration' section has a folder path of 'C:\Thomson', a 'Current' version of 'WZQV 11-25-08', and a selected 'File' of 'WZQV 11-25-08'. Below these sections are buttons for 'Update Only' and 'Update & Apply'. On the right side, there are buttons for 'About', 'Reset', 'Telnet', 'Apply Pending', and 'Clear NVRam'.

The main part of the interface is a table with the following columns: Board Name, Facility LAN IP Address, Uptime, Status, Recommend Action, Board Configuration (Parent Name, Time Stamp), Version (Application, FPGA, OS), and Active Configuration (File Name, Time Stamp). The table lists several boards: Deployment, WZQV SD, WZQV HD, GUI CP, and HW CP. Each board row shows its current status (e.g., STARTED, Running, Pending) and the details of its configuration and version.

At the bottom of the interface, there are buttons for 'Content Download Status', 'Show Contents', 'Refresh', 'Select All', 'Unselect All', 'Show Log', and 'Exit'. There are also checkboxes for 'In "Uptime" column, Show StartTime'.

Board Name	Facility LAN IP Address	Uptime	Status	Recommend Action	Board Configuration		Version			Active Configuration	
					Parent Name	Time Stamp	Application	FPGA	OS	File Name	Time Stamp
Deployment>>	10.16.86.154	0:30:28			FrameProcessor		1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/2008 11:42:28 AM
					ControlPanel		1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/2008 11:42:28 AM
WZQV SD	10.16.86.50	4:00:47:06	STARTED	Running>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
				Pending>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
WZQV HD	10.16.86.51	4:00:47:12	STARTED	Running>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
				Pending>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
GUI CP	10.16.86.52	4:00:47:08	STARTED	Running>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
				Pending>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
HW CP	10.16.86.53	4:00:47:10	STARTED	Running>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM
				Pending>>	WZQV 11-25-08.xml	11/25/08 11:42 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:42 AM

Solving Un-managed Board Issues

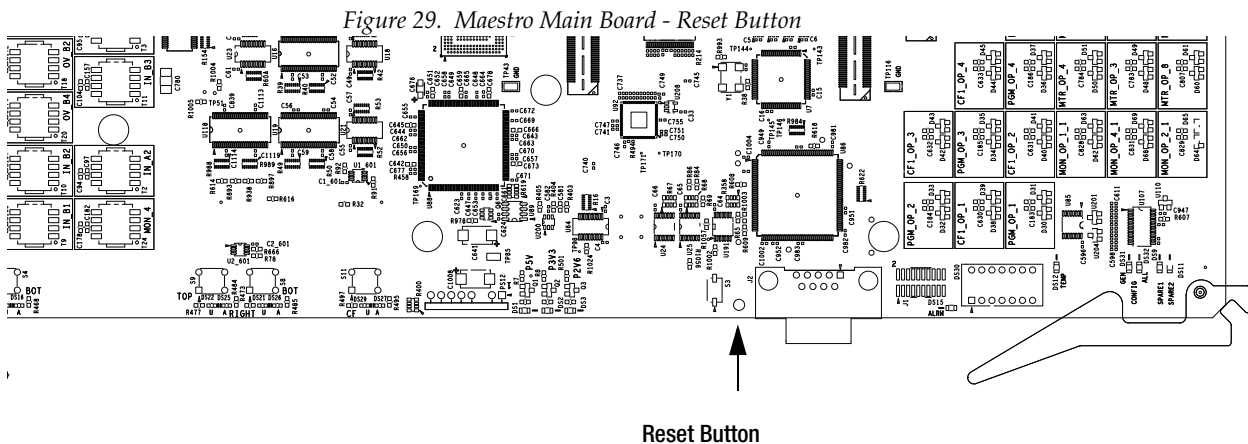
When the Maestro Deployment center first appears, additional buttons may appear below the table if the content has not been defined in the Configuration file.

For example, the phrase “Unmanaged Boards” will appear if a board has not been defined in the Configuration file. The presence of un-managed boards indicates the potential of “rogue” boards in the system that could potentially cause a conflict and interfere with the configured Maestro processors due to different software versions or configurations.

Follow these steps to resolve board issues:

1. Update the Network Description table including all boards in the system.
2. Recompile and then redeploy the Configuration file.
3. Verify that the recompiled Configuration and Application versions are running.
4. Verify that the boards are active.

If the board is hanging or does not come up in a few minutes, you will need to manually reset the board by pressing the **Reset** button on the left side of the Serial port on the front edge of the Main board.



Checking the GUI Control Panel for Proper LAN Settings

Beginning with Maestro software version 1.4, the “Panel Server IP” address and the “Local IP” address for the Maestro GUI must now use Control LAN addresses only. In releases prior to 1.4, the GUI application would connect and run over the facility LAN; this is no longer possible in version 1.6.0 and newer versions.

The following steps should be taken to ensure that the GUI application is set for the correct addresses:

1. With Maestro’s GUI up and running, click the **Settings** button. This will open the Application Settings window.
2. Double-click (or select and click the **Alter** button) the **Panel Server IP** setting.
3. Specify the Control LAN address of the Panel Server card associated with the GUI.

This will switch the view back to the first Application Settings window.

To look up the GUI Control LAN address, go to Maestro Configuration Editor > Network Description Table. Then check the *Board Type GUI* row and the *Control LAN IP Address* column.

4. Double-click (or select and press Alter) the **Local IP** setting.
5. Select the Control LAN address of the PC associated with the GUI.

This will switch the view back to the first Application Settings window.

To look up the PC Control LAN address, go to Start > Control Panel > Network Connections. Double-click on the card used for the Control LAN. Then go to Properties > Internet Protocol > Properties.

6. Close the Application Settings window. The GUI should then connect and work properly.

Note If you have difficulty making this change or if the GUI is not functioning properly after this change, please contact Grass Valley Technical Support (see [Contacting Grass Valley on page 4](#)).

7. Proceed to [Updating FPGAs/CPLDs on page 43](#).

Updating FPGAs/CPLDs

This section will describe the steps needed to update the FPGAs/CPLDs on the Processor boards and on the hardware control panel. (FPGA = Field Programmable Gate Array. CPLD = Complex Programmable Logic Device.)

Updating FPGAs/CPLDs on the Processor Boards

Note Some of the FPGAs on the Processor are updated using the Software Version **Update and Apply** procedure described above. The remaining FPGAs on the Processor are updated using the procedure below.

Follow these steps to update the FPGAs/CPLDs on the Processor boards:

1. In the board Status section of the Maestro Deployment control center, select the Processor to update.
2. Right-click on the Running FPGA field for this Processor (Figure 30).

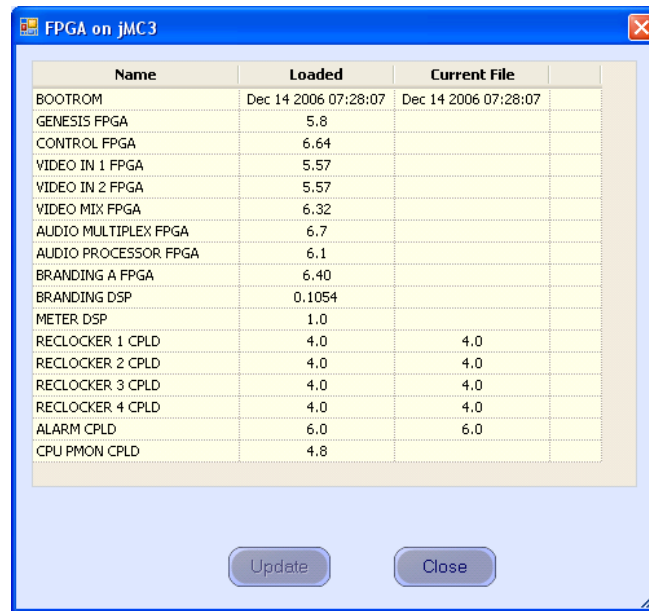
Figure 30. "Running" FPGA Version

The screenshot shows the Maestro Deployment Control Center interface. At the top, there are configuration fields for Software Application and Configuration, each with 'Update Only' and 'Update & Apply' buttons. Below these is a table with columns for Board Name, Facility LAN IP Address, Uptime, Status, Recommend Action, Board Configuration (Parent Name, Time Stamp), Version (Application, FPGA, OS), and Active Configuration (File Name, Time Stamp). The 'WZQV SD' board is highlighted in orange, and its 'FPGA' version '53' is circled in red. At the bottom, there are buttons for 'Content Download Status', 'Show Contents', 'Refresh', 'Select All', 'Unselect All', and 'Exit'.

Board Name	Facility LAN IP Address	Uptime	Status	Recommend Action	Board Configuration			Version			Active Configuration	
					Parent Name	Time Stamp	Application	FPGA	OS	File Name	Time Stamp	
Deployment >>	10.16.86.154	0:23:57			FrameProcessor		1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/2008 11:23:37 AM	
					ControlPanel		1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/2008 11:23:37 AM	
WZQV SD	10.16.86.50	4:00:40:45	STARTED	Running >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
				Pending >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
WZQV HD	10.16.86.51	4:00:40:51	STARTED	Running >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
				Pending >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
GUI CP	10.16.86.52	4:00:40:50	STARTED	Running >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
				Pending >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
HW CP	10.16.86.53	4:00:40:52	STARTED	Running >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	
				Pending >>	WZQV 11-25-08.xml	11/25/08 11:23 AM	1.600.3353.1054	53	33	WZQV 11-25-08.xml	11/25/08 11:23 AM	

The FPGA/CPLD update menu will then appear (Figure 31 on page 44).

Figure 31. Processor Board FPGA/CPLD Update Menu



Name	Loaded	Current File
BOOTROM	Dec 14 2006 07:28:07	Dec 14 2006 07:28:07
GENESIS FPGA	5.8	
CONTROL FPGA	6.64	
VIDEO IN 1 FPGA	5.57	
VIDEO IN 2 FPGA	5.57	
VIDEO MIX FPGA	6.32	
AUDIO MULTIPLEX FPGA	6.7	
AUDIO PROCESSOR FPGA	6.1	
BRANDING A FPGA	6.40	
BRANDING DSP	0.1054	
METER DSP	1.0	
RECLOCKER 1 CPLD	4.0	4.0
RECLOCKER 2 CPLD	4.0	4.0
RECLOCKER 3 CPLD	4.0	4.0
RECLOCKER 4 CPLD	4.0	4.0
ALARM CPLD	6.0	6.0
CPU PMON CPLD	4.8	

This menu shows the names of all of the FPGAs/CPLDs on the Processor and the version number of the gateway that is currently running (or is loaded) in each device. All of the CPLD-type components (and specific FPGA-type components) can be updated using the FPGA/CPLD update menu. The menu will indicate the new version number and will display a check box when a newer (or current) version of gateway is available for those components.

Note A Current version may have a smaller number than the corresponding Loaded version. If FPGA/CPLD updates were performed with prior Maestro software versions, there may be no available FPGA/CPLD updates with the current version.

3. Check the **Select All** box if there are available updates.

Note Do not check “Gennum A” or “Gennum B” if there is no DVE board installed; doing so will cause the update to fail.

4. Select the **Update** button.

You will be asked to confirm the update.

CAUTION The following step **will interrupt** the video and audio signals passing through the system.

5. Click the **Yes** button.

6. From this point there are two possibilities:

- A popup will show that the Processor update was successful.

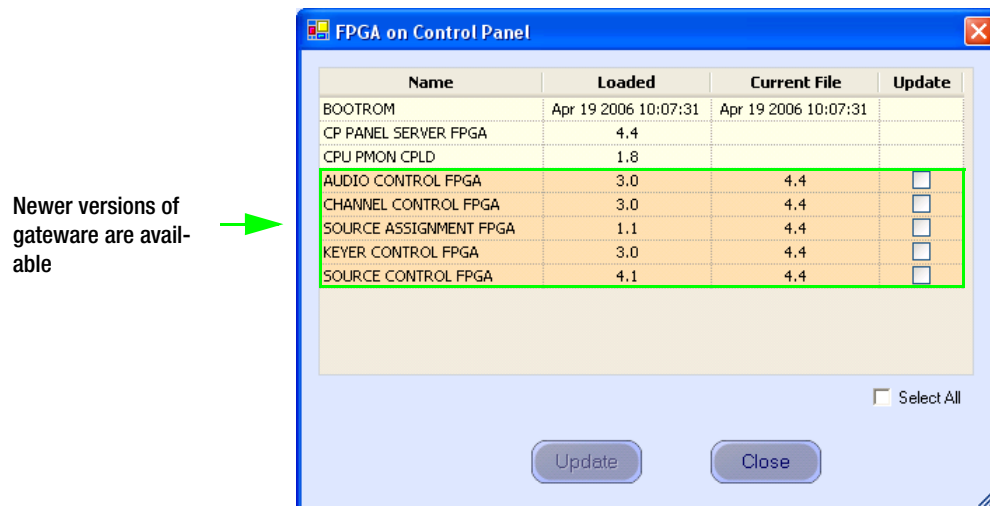
- An error message may indicate that the “physical JTAG chain is broken.” If this message appears, the FPGAs/CPLDs on the Processor cannot be updated. Stop the installation process and then contact Grass Valley Technical Support (see [Contacting Grass Valley](#) on page 4).

Updating FPGAs/CPLDs on the Hardware Control Panels

Follow these steps to update the FPGAs/CPLDs on the Hardware Control panels

1. In the board Status section of the screen, select the hardware control panel to update.
2. Right-click on the FPGA field for this control panel. The FPGA/CPLD update menu will then appear ([Figure 32](#)).

Figure 32. Control Panel FPGA/CPLD Update Menu



This menu shows the names of all FPGAs/CPLDs on the control panel and the version number of the gateway now running (loaded) in each device. Certain FPGA-type components and all of the CPLD-type components can be updated using this menu. If a newer (current) version of gateway is available for those components, the menu will indicate the new version number and display a check box ([Figure 32](#)).

3. Check the **Select All** box.
4. Select the **Update** button. You will be asked to confirm the update.

CAUTION The following step **will cause** the control panel to become inoperative while the update is in progress.

5. Select Yes.

From this point there are several possibilities:

- A popup will show that the control panel update was successful. Repeat the process for additional control panels. When all FPGAs/CPLDs have been updated, the upgrade is complete.
- An error message may indicate that the “physical JTAG chain is broken.” The CP Panel Server board, which is located within the control panel, may need to be replaced. Please contact Grass Valley Technical Support to help determine if a replacement is needed.

Configuration

Required Encore Configuration

For Encore-controlled Maestro systems, it is possible for Encore (prior to and including version 1.7.3.1) to run out of TCP/IP sockets. When this happens, Encore will refuse any additional Native Protocol client connection requests from Maestro processors. This issue usually occurs after the Maestro processor has been rebooted many times as part of the software update, hardware installation and troubleshooting processes.

Follow these steps to resolve this issue:

1. In the Encore OUI, select the Panel Server application.
2. Select RCL Server.
3. In the Ethernet RCL Client section, select a Maestro processor.
4. Select Flags and Parameters.
5. For Encore versions prior to and including version 1.7.3.1, set the Refresh Rate setting to "60." For all later versions of Encore, set the Refresh Rate setting to "0."
6. Repeat steps 3-5 for any additional Maestro processors.

Note The Maestro Configuration PC NP client should always set the Refresh Rate setting to "0".

When finished setting the refresh rate on all Maestro processors, return to the Panel Server page and click **Modify** to save changes.

For the 1.7.3.2 version of Encore (and later), Grass Valley recommends configuring the level and destination exclusion sets that only has the Levels and Destinations that each Maestro channel frame processor NP client will use.

Do NOT set any exclusions for Levels and Destinations for the Maestro configuration PC NP client.

Hardware Upgrade Procedure

Note For the Hardware Upgrade instructions, see the Maestro Installation and Service Manual.

Other Installation Steps

These steps are for Jupiter users and if you choose to install Maestro manually.

Installing the Maestro Jupiter-Router Service

The Maestro Jupiter-Router Service must be installed on the Jupiter PC if you are using the Jupiter Control system. This process is similar to installing the Maestro Software.

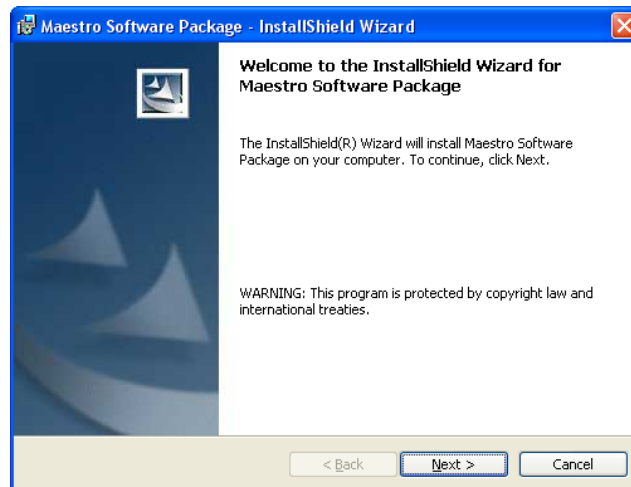
Follow these steps to start the Maestro Jupiter-Router Service installation process:

1. Insert the Maestro software CD-ROM into the computer's CD Drive and follow the prompts.

The CD should automatically start the installation process. If not, browse to the CD, using Window Explorer, and then click the MaestroInstall.exe icon.

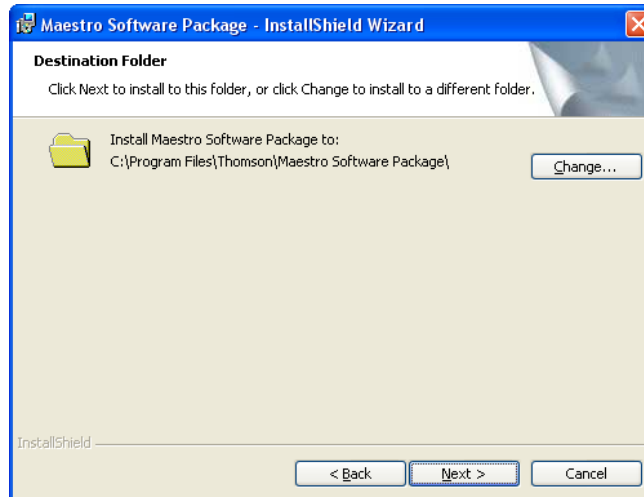
The Maestro Welcome screen will then appear (Figure 33).

Figure 33. Maestro Installer Welcome Screen



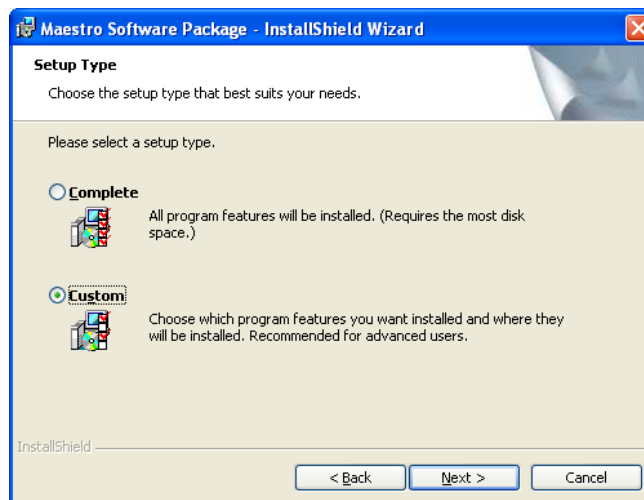
2. Click the **Next>** button to begin the installation process. The Destination Folder screen will then appear (Figure 34 on page 49).

Figure 34. Maestro Installer Destination Folder Screen



3. Click the **Next>** button to begin the installation process. The Setup Type screen will then appear (Figure 35).

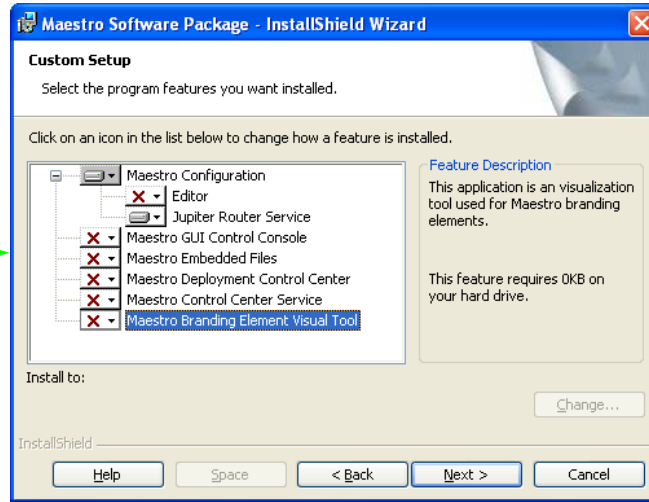
Figure 35. Maestro Installer Setup Type Screen



4. Click the **Custom** radio button and then click the **Next>** button. The Custom Setup screen will then appear (Figure 36 on page 50).

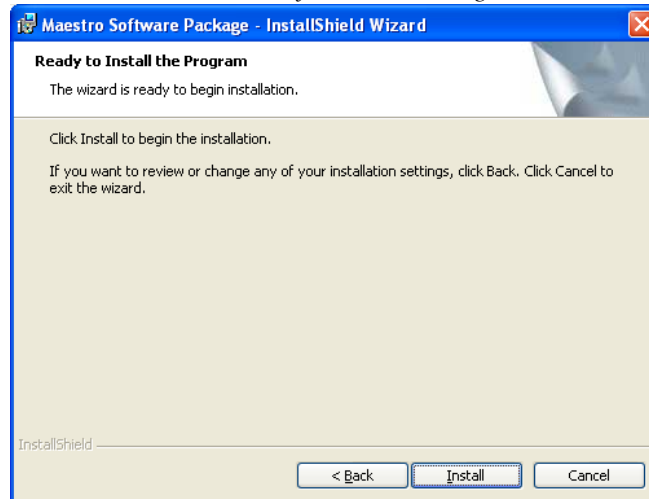
Figure 36. Maestro Installer Custom Setup Screen

A red "x" will appear by the features that will not be installed



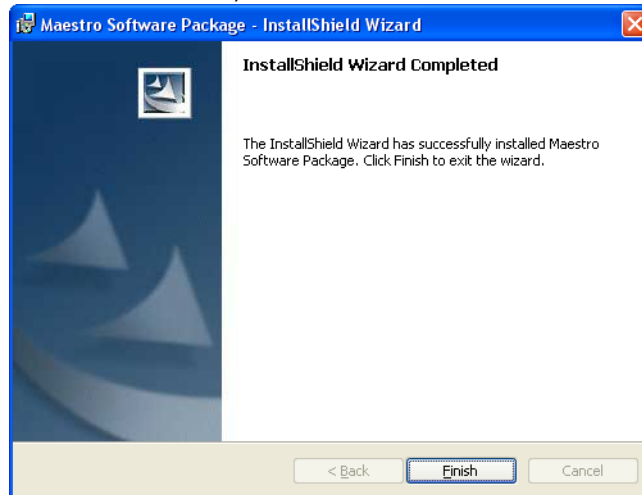
5. Click the drop-down arrow and then select the **This feature will not be available** option for all of the features except for the Jupiter Router Service. A red "x" will appear by the features that are not selected (Figure 36).
6. Click the **Next>** button. The Ready to Install the Program screen will then appear (Figure 37).

Figure 37. Maestro Installer Ready to Install the Program Screen



7. Click the **Install** button. The installation process will then begin. The InstallShield Wizard Completed screen will appear when the installation process is finished (Figure 38 on page 51).

Figure 38. Installation Completed Screen



8. Click the **Finish** button. The Installation application will then close.

Manually Removing the Previous Version of Maestro

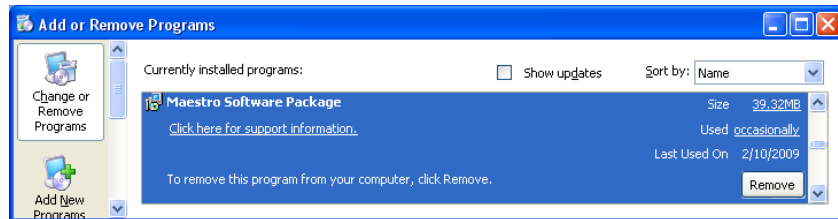
The previous version of Maestro software must be uninstalled before a new version can be installed.

CAUTION If you are uninstalling v1.3, v1.4, v1.5, or v1.5.1 software, you must use the Administrator account (login). If you are uninstalling v1.2 or prior software, you must use the account (login) used when that software was installed.

Follow these steps to manually remove the previous version of Maestro:

1. Using the Windows Control Panel, select Add or Remove Programs.
2. Select the Maestro Software Package ([Figure 39](#)).

Figure 39. Removing the Maestro Software Package



3. Click the **Remove** button. This step will not remove user data.
4. Close the Windows Control Panel.

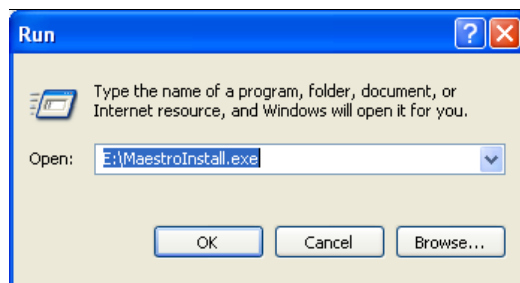
Note The previous version of Maestro software can also be automatically removed by starting a new software installation procedure.

Manually Installing Maestro

The installation process can be started manually if it does not start automatically. Follow these steps to manually install the Maestro Software Package:

1. Select the Run command from the start menu (Start> Run). The Run dialog will then appear ([Figure 40](#))

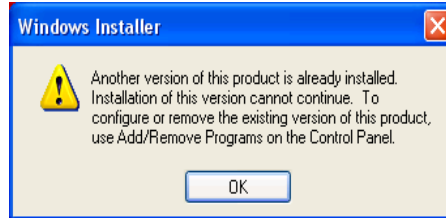
Figure 40. Run Dialog Box



2. Enter "E:\MaestroInstall.exe" where E: is the CD Drive ([Figure 40 on page 52](#)).

If you enter E:\setup.exe (where "E" is the name of the PC's CD ROM) in the Run dialog box (instead of "MaestroInstall.exe") the Windows Installer dialog will appear ([Figure 41](#)). Click the **OK** button. The prior Maestro software version must then be manually removed using the Add/Remove Programs in the Windows Control Panel.

Figure 41. Setup.exe Add/Remove Programs Prompt



3. Click the **OK** button. The installation as described in the [Installing the Maestro Software Package on page 34](#) section will then begin.

