

# Maestro

MULTI-FORMAT MASTER CONTROL

## Release Notes

Software Version 2.0



Affiliate with the N.V. KEMA in The Netherlands

# CERTIFICATE



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# Maestro

MULTI-FORMAT MASTER CONTROL

## Release Notes

Software Version 2.0

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



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



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# *Maestro Release Notes*

## **Purpose**

This document provides software installation instructions for the 2.0 software release of the Maestro Master Control System. This release provides Dual Channel DVE functionality. Dual Channel DVE is a powerful option that offers more transitions and options than the previous versions.

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

# Materials Supplied

Table 1. MAE-HD-SW Bill of Materials

MAE-HD-SW Maestro Software Upgrade		
Quantity	Description	Part number
1	CDROM, Maestro HD Software Program, v2.0 (2.000.3656.1134)	063825809
1	Maestro Installation Guide	071869801
1	Maestro User and Tools Manual	071848203
1	Release Notes, Maestro v2.0	071850609
1	Release Notes Addendum, Maestro v2.0	071850709

Table 2. MAE-SD-SW Bill of Materials

MAE-SD-SW Maestro Software Upgrade		
Quantity	Description	Part number
1	CDROM, Maestro SD Software Program, v2.0 (2.000.3656.1134)	063825909
1	Maestro Quick Start Guide	071869801
1	Maestro User and Tools Manual	071848203
1	Release Notes, Maestro v2.0	071850609
1	Release Notes Addendum, Maestro v2.0	071850709

**Note** The Maestro software version number appears in two formats in this document. The abbreviated format, 2.0, indicates the major version “2” and minor version “0” with the “0” indicating no sub version. The long format expresses the release number as 2.000.xxxx.xxx with the additional digits indicating engineering information.

## New Features

The Dual Channel DVE option is the principal reason for the release. The Dual Channel DVE option eliminates the single-channel limitation of the current existing DVE option.

The 2.0 version of the Maestro software (or later is required) to support the Dual-Channel DVE option.



# Installation

## 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 installation CD or downloaded installation files.
- 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.

## Caveats

- Network issues are the most common cause of problems at customer sites. Network installation and configuration must follow Grass Valley recommendations. Please refer to the “Network Configuration” section in the Maestro Installation and Service Manual (part number: 071842302).
- 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 (Part # 071869801)

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.
2. Select the Processor, in the Deployment column, that you wish to check the Boot ROM version. 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.
4. 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 (See the example in [Figure 4](#)). Stop the Installation process and then contact Grass Valley Technical Support if the Boot ROM is not current.

5. If there is another Processor (channel) in the system, repeat [Step 1](#) above and following steps. If not, go to [Step 6](#).
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.
7. Right-click on the FPGA version number in the “Running>>” row of the selected Control Panel.
8. 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](#).
9. If there is another control panel in the system, repeat [Step 6](#) above and 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 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:

1. Launch the Maestro Configuration Editor by going to “Start > All Programs > Thomson > Maestro Configuration Editor.”
2. Select “File > Open” from the Menu bar to open the current configuration set.
3. Select the current configuration file and then click the **Open button**.
4. Select “File > Save As” to create a copy of the set.
5. Add the current version to the name as a suggestion. For example, v17.
6. Select “File > Save As” again to create another copy of the set.
7. Add the current version to the name. For example, add “v20”.
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 (part # 071869801).

## 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 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 CDROM 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 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 auto 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.

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.

The Maestro Welcome screen will then appear.

2. Click the **Next>** button to begin the installation process. The Destination Folder screen will then appear.
3. Click the **Next>** button to begin the installation process.
4. 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.

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

## Maestro Desktop Icon

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

**Note** If the installation fails to complete and you see the error message "Error 1001 -- the specified service already exists," you may need to manually remove the Maestro Jupiter Router Service software. Refer to *Manually Removing the Maestro Jupiter Router Service Software* on [page 23](#).

## Re-compiling the Configuration File

It is required that ALL configuration sets that are to be used with the 2.0 version of the Maestro application be recompiled with the 2.0 Configuration Editor. This requirement includes upgrading from ALL previous versions of Maestro. Changes have been made to the configuration tables to support the 2.0 version's functionality. Re-compiling the Configuration file will perform all necessary additions and modifications to the Maestro configuration file to support version 2.0.

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

This should be the configuration set that was created for v2.0 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 going to "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 (part # 071869801).

## Updating the System Configuration and Software

1. Launch the Maestro Deployment control center by selecting “Start > All Programs > Thomson > Maestro Deployment Center.

A Maestro Deployment Control Center window appears.

Other buttons may appear below the table if content has not been defined. For example, "Unmanaged Boards" will appear if a board has not been defined in the Configuration file.

**Note** The presence of unmanaged 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 disparate software versions or configurations. If this is the case, The Network Description table should be updated and the configuration recompiled and redeployed.

If the board hangs or does not come up in a reasonable time, press the Reset button on the left side of the Serial port on the Main board.

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:

- 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 to be for v2.0 ([Step 5 on page 13](#)). 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 up to one (1) minute.

5. In the Software Application box:

- a. The *Folder* field should indicate “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\_2.000.aabb.ccdd.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\_2.0.00.aabb.ccdd.VITC.tar.”
- c. In the *Control Panel Tar File Name*, field, select the .TAR file. For example, “MaestroCP\_2.000.aabb.ccdd.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 one minute.

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 (as in step 7) 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.”
9. Proceed to *Checking the GUI Control Panel for Proper LAN Settings* [on page 17](#).



## 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 later 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 Technical Support.

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

## 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.

The FPGA/CPLD update menu will then appear.

This menu shows the names of all FPGAs/CPLDs on the Processor and the version number of the gateway currently running (“Loaded”) in each device. Certain of the FPGA-type components and all of the CPLD-type components can be updated using this menu, and 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.

**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 no DVE board is installed. Doing so will cause the update to fail.

4. Select **Update**.

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 Technical Support.

## 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.

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, and 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.

3. Check the “Select All” box.
4. Select **Update**. 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 arrange the replacement.

# Configuration

## Required Encore Configuration

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

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

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. Set the "Refresh Rate" to 60 (default is 0).
6. Repeat steps 3-5 for any additional Maestro processors.
7. When finished setting the refresh rate on all Maestro processors, return to the Panel Server page and click on "Modify" to save changes.

**Note** The above step is for Encore version 1.7.3.1 and above. This is not a problem. The "Refresh Rate" field should be left as default 0 for all Maestro frame processors.

The settings that can be adjusted in the selected menu option appear in the LCD windows.

**Note** The Adjusted settings are applied to the currently selected keyer only. A keyer is selected by pressing the **SEL** button above the desired keyer LCD button

## Hardware Upgrade Procedure

**Note** For the Hardware Upgrade instructions, see the Maestro Installation and Service Manual (Part # 071869801)

## 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 CDROM 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.

2. Click the **Next>** button to begin the installation process. The Destination Folder screen will then appear.
3. Click the **Next>** button to begin the installation process. The Setup Type screen will then appear.
4. Click the **Custom** radio button and then click the **Next>** button.
5. Click the drop-down arrow and then select the **This feature will not be available** option for all of the features but the Jupiter Router Service. A red "x" will appear by the features.
6. Click the **Next>** button. The Ready to Install the Program screen will then appear.
7. Click the **Install** button. The installation process will then begin. The InstallShield Wizard Completed screen will appear when the installation process is finished.
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. The software can be manually removed by following the steps below.

**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.

1. Using the Windows Control Panel, select Add or Remove Programs.
2. Select the Maestro Software Package.

*Figure 1. Removing the Maestro Software Package*

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

It can also be automatically removed by initiating the new software installation procedure in Step 2.

## Manually Installing Maestro

If the installation does not start automatically, the process can be started manually:

1. Select the Run command from the start menu > **Run**).
2. Enter "E:\MaestroInstall.exe" where E: is the CD Drive.

**Note** 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 dialog will appear. Click the **OK** button. The prior Maestro software version must then be manually removed using the Add/Remove Programs in the Windows Control Panel.

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

## Manually Removing the Maestro Jupiter Router Service Software

Only perform this procedure if you see the error message “Error 1001 -- the specified service already exists” referred to in the Note on [page 13](#).

1. Select the Services by navigating to Control Panel > Administrative Tools > Services.
2. Select the Maestro Jupiter Router Service option
3. Select **Stop the service** or right click the service and select **Stop** ().
4. Go to “Start > Run” and enter the phrase “regedit” in the text field (fig).
5. Go to “HKEY\_LOCAL\_MACHINE > SYSTEM > CurrentControlSet > Services.”
6. Highlight “MaestroJRService” and then right click and delete this item.
7. Close all windows and reboot. Repeat [Step 1](#) above and confirm that MaestroJupiterRouterService is not listed.

Proceed with re-installation of the new software, starting with [Step](#) on [page 12](#).

## VBI Pass-Through Offset Workaround

There is an offset error when configuring VBI Pass-through settings for the 575i50, 1080i50 and 1080i5994 standards.

### 575i50 and 1080i50 Standards

The actual line that is being operated on is one greater than what is shown in the VBI Pass-through panel for the 575i50 and 1080i50 standards. For example, if you check line 9, you are actually enabling VBI pass-through for line 10.

To correct this offset select a line that is one (1) greater than the preferred line.

### 1080i5994 Standard

The 1080i5994 standard is affecting two fields.

For field 1, the actual line that is being affected is one greater than what is shown in the VBI Pass-through panel. For example, if you check line 9, you are actually enabling VBI pass-through for line 10.

To correct this offset select a line that is one (1) greater than the preferred line.

For Field 2, actual line that is being operated on is two greater than what is shown in the VBI Pass-through panel. For example, if you check line 570, you are actually enabling VBI pass-through for line 572.

To correct this offset select a line that is two (2) greater than the preferred line.