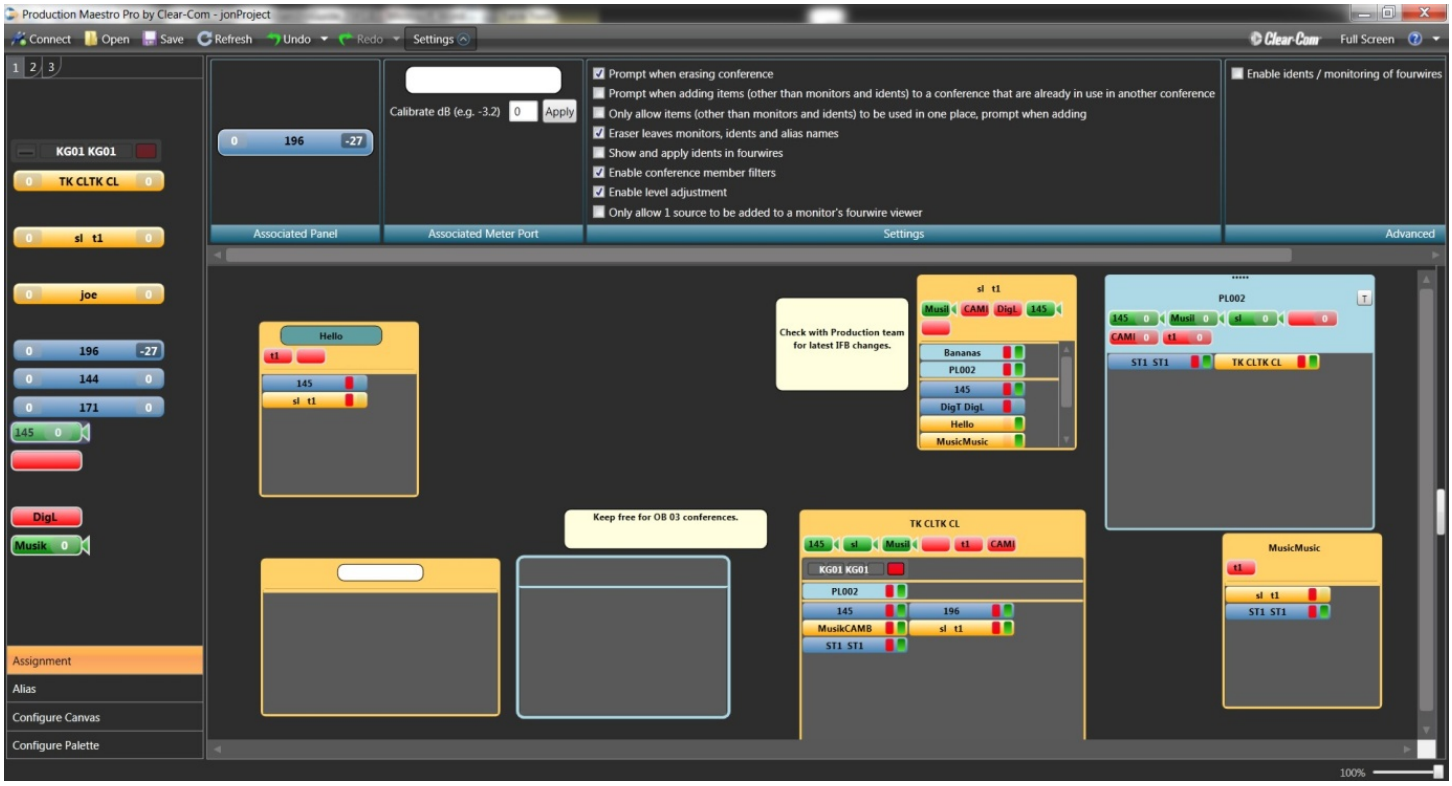
Eclipse™ Production Maestro Pro

User Guide



Document Reference

Eclipse Production Maestro Pro User Guide

PN 399G044 Rev A

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www.clearcom.com

Clear-Com Contacts

Americas and Asia-Pacific Headquarters
California, United States
Tel: +1.510.337.6600
Email: CustomerServicesUS@clearcom.com

Europe, Middle East, and Africa Headquarters
Cambridge, United Kingdom
Tel: +44 1223 815000
Email: SalesSupportEMEA@clearcom.com

Canada Office
Quebec, Canada
Tel: +1 (450) 653-9669

China Office
Beijing Representative Office
Beijing, P.R.China
Tel: +8610 65811360 / 65815577

Contents

1 Introduction

Production Maestro Pro software provides administrators of the **Eclipse™ digital matrix intercom system** with the ability to:

- Create and manage audio across one or more matrices (system frames).
- Re-label keys to conferences on intercom panels and digital beltpacks.
- Dynamically reconfigure conferences, to meet the rapidly changing requirements of the operating environment (for example, broadcast studios, sports venues, MCR areas and Command and Control centers).
- Host conferences across multiple matrices (linked by fiber or trunk connections).
- Monitor audio levels in real time using onscreen meters.

The following guide describes how to install, use and maintain this powerful conference management tool.

Tip: *To find out more about Production Maestro Pro as you work, see* **Help** [?] *in the top right hand corner of your Production Maestro Pro screen.*

1.1 Licensing

Production Maestro Pro includes a 30 day trial period. During the trial period, you can use Production Maestro Pro without a license on your Eclipse network. When the trial period expires, you must enter a **passcode** in your *EclipseHX Configuration Software* (EHX) to continue using Production Maestro Pro.

Production Maestro Pro licenses are available for **up to 10 users** for each matrix (system frame) in your Eclipse network. Site licenses are available.

Note:
Each matrix that Production Maestro Pro connects to must have its own passcode in EHX Passcodes are entered in ***EHX >Preferences****.*

For further information, contact your Clear-Com representative.

1.1.1 Validating licenses

Production Maestro Pro repeatedly validates the license on the connected matrix, while the program is being used. If the matrix license ceases to be valid, Production Maestro Pro disconnects from that matrix.

If you require more licenses / passcodes after adding either matrices to your EclipseHX system, or Production Maestro Pro users, then you should provide your Clear-Com representative with all the matrix IDs (from **EHX > Event Log**) in the linked set.

Your Clear-Com representative will then issue a new passcode for each matrix ID.

If Production Maestro Pro does not find a valid license on either the target matrix, or one of the target matrices in a linked set an error message is displayed at the top of the canvas in **red**.

For example:

```
Your Production Maestro Pro demo period has expired on System 1 (Hardware
id 1, Passcode 0000-0000-0000-0000). Please contact your Clear-Com
distributor to purchase Production Maestro Pro licenses.
```

Other warning messages concerning licensing (for example, a warning that the demo period is about to expire) are displayed in **orange.**

The license key must be downloaded to the matrix by entering it into **EHX > Configuration > Preferences** and downloading a map to the matrix.

1.2 System requirements

The **minimum** system requirements for running Production Maestro Pro on your Windows PC are as follows:

Specification	Description / Value
Processor	1 GHz
Memory	1GB RAM
Hard disk	1GB minimum.
Input devices	CD-ROM drive
Display resolution	SVGA
User entry	Keyboard, Mouse
Network	IEEE 802.3 Ethernet card
.NET framework version	Microsoft .NET Framework 4.0 SP1 (supplied with Production Maestro Pro).
Operating systems	Microsoft Windows Server 2003 SP2 (x86 and x64). Microsoft Windows Server 2003 R2 (x86 and x64). Microsoft Windows Server 2003 SP2 (x86 and x64). Microsoft Windows Server 2003 R2 (x86 and x64). Microsoft Windows Server 2008 SP2 (x86 and x64). Microsoft Windows Server 2008 R2 (x64).* **Note:** *Only x64 is supported, as Windows Server 2008 R2 is not available for x86.* Microsoft Windows XP SP3 (x86 and x64). Microsoft Windows Vista SP2 (x86 and x64) Windows 7 (x86 and x64). Windows 8 (x86 and x64)

Table 1: Minimum system requirements

The **recommended** system requirements for running Production Maestro Pro on your Windows PC are as follows:

Specification	Description / Value
Processor	2 GHz or greater.
Memory	2GB RAM
Hard disk	1GB minimum.
Input devices	CD-ROM drive
Display resolution	SVGA
User entry	Keyboard, Mouse
Network	IEEE 802.3 Ethernet card
.NET framework version	Microsoft .NET Framework 4.0 SP1 (supplied with Production Maestro Pro).
Operating systems	Microsoft Windows Server 2003 SP2 (x86 and x64). Microsoft Windows Server 2003 R2 (x86 and x64). Microsoft Windows Server 2003 SP2 (x86 and x64). Microsoft Windows Server 2003 R2 (x86 and x64). Microsoft Windows Server 2008 SP2 (x86 and x64). Microsoft Windows Server 2008 R2 (x64).* **Note:** *Only x64 is supported, as Windows Server 2008 R2 is not available for x86.* Microsoft Windows XP SP3 (x86 and x64). Microsoft Windows Vista SP2 (x86 and x64) Windows 7 (x86 and x64). Windows 8 (x86 and x64)

Table 2: Recommended system requirements

1.3 Further information

For more information about Production Maestro Pro, see **Help** [?] in the top right hand corner of your Production Maestro Pro screen.

For more information abou EclipseHX system components (devices) referenced in this guide (including matrices (system frames), interface cards, interface modules and EHX (*EclipseHX Configuration Software*)), see the specific documentation for that device or software.

Eclipse documentation is available from:

- Your product CD-ROM.
- The Clear-Com website (http://www.clearcom.com/product/digital-matrix).

For sales information, see your Clear-Com sales representative. For contact information, see Page 2 of this guide.

2 Installing Production Maestro Pro

This chapter describes how to install your Production Maestro Pro software.

Note:
*Before installing Production Maestro Pro, check that your Windows PC meets the system requirements described in **1.2 System requirements**.*

Tip: *To find out more about Production Maestro Pro as you work, see* **Help** [?] *in the top right hand corner of your Production Maestro Pro screen.*

2.1 Before installing

Before installing Production Maestro Pro, check that your Windows PC meets the system requirements described in ***1.2 System requirements***.

If you are installing Production Maestro Pro as an update to an existing Production Maestro Pro installation, you must **uninstall** your existing version of Production Maestro Pro.

Ensure that you save:

- **Your Production Maestro Pro palette and canvas screen layouts (configurations)) (*.ccr files)**. The current installation opens at the last project you worked on. However, you will lose your work if you do not save the configuration before updating Production Maestro Pro.
- **The EHX system configuration(s) (*.hxn files)** that relate to your Production Maestro Pro configuration(s).

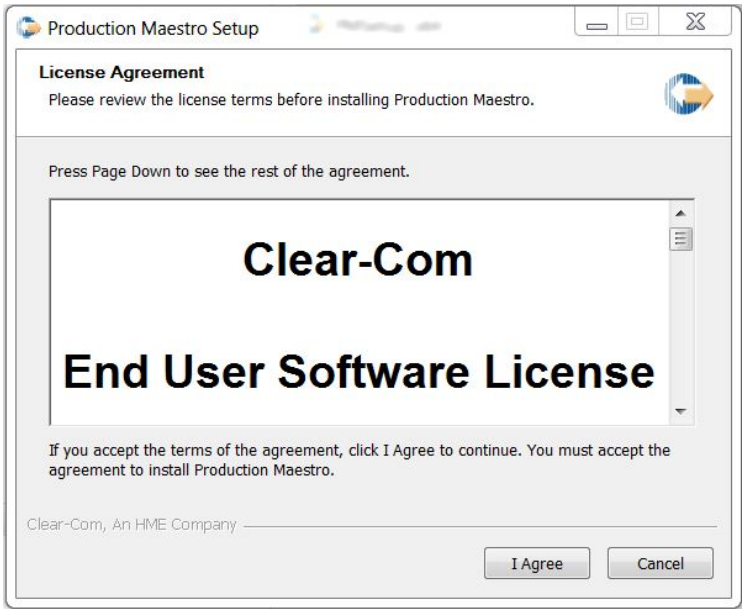
2.2 Installing Production Maestro Pro

To install Production Maestro Pro to your PC:

1. Insert the CD-ROM into the PC. Navigate to the CD-ROM and click the relevant ***.exe** file for your machine. Click **either**:
   - **PMSetup**

   To indicate that the **Setup** wizard has begun loading, the following screen is displayed:

2. When the **Setup** wizard has loaded, the **License Agreement** dialog is displayed:

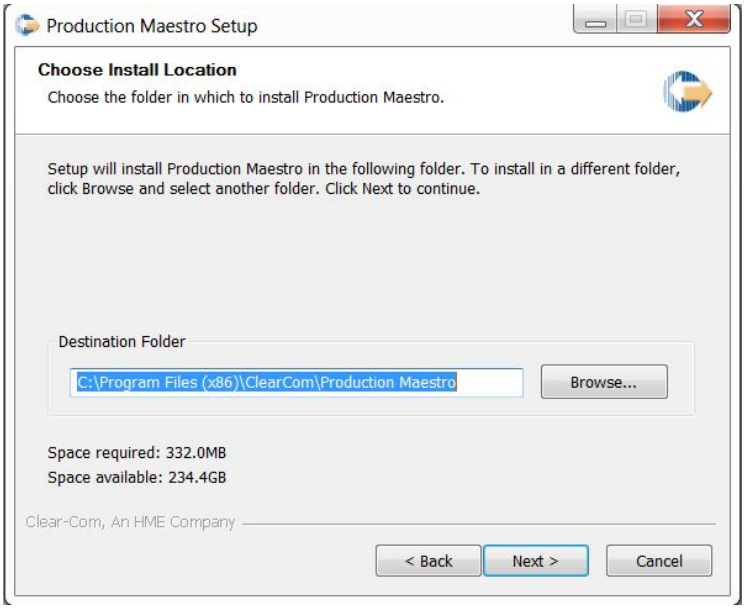


Use the internal scroll bar to review the agreement. To continue with the installation, click **I Agree**.

To cancel the installation, click **Cancel**.

Note:
You must accept the license agreement to install Production Maestro Pro.

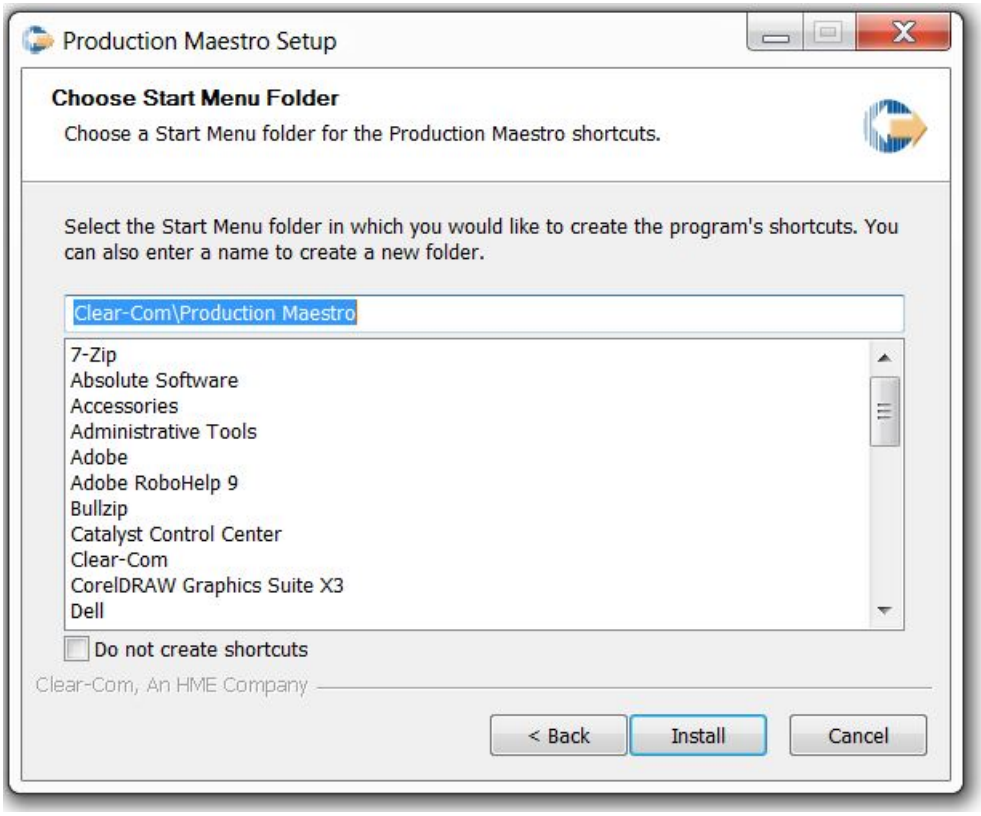
3. The **Choose Install Location** dialog is displayed:



The default location is **Program Files > ClearCom** on the C Drive. To select a different location, click **Browse**. To continue, click **Next**.

Note:
To assist your decision, the amount of space required for Production Maestro Pro, and the amount of available space on the C Drive, is displayed under the location field.

4. The **Choose Start Menu Folder** dialog is displayed:



The default Start Menu folders is **Clear-Com\Production Maestro**.

Tip: *You can find all the Start Menu folders in **Start > All Programs**. Shortcuts to recently used and popular programs are shown in the main Start menu.*

To select an alternative folder **either**:

- Select from the list of existing Start Menu folders. Use the dialog scroll bar to navigate the list.
- Enter a name into the selection field to create a new folder.

To prevent the creation of shortcuts, select **Do not create shortcuts**.

Click **Install**.

5. Production Maestro Pro starts to install. During installation, an installation progress bar is displayed [ ].

   For more detailed information about the progress of the installation, click **Show Details**.

   When the installation is complete, click **Close**.

Production Maestro Pro has now been installed to your PC. You are now ready to start Production Maestro Pro.

Note:
*On installing Production Maestro Pro, a firewall dialog may be displayed asking if Windows should **Block** or **Unblock** Production Maestro Pro. Select **Unblock Production Maestro Pro**.*

3 Starting Production Maestro Pro

This chapter describes how to start Production Maestro Pro (from both the Windows Start menu and the command line).

Tip: *To find out more about Production Maestro Pro as you work, see* **Help** [ ] *in the top right hand corner of your Production Maestro Pro screen.*

3.1 Starting Production Maestro Pro from the Start menu

To start Production Maestro Pro:

1. Go to **Start** [ ] **> All Programs > Clear-Com** [ ] **> Production Maestro Pro** [ ].

2. Click either of the following:
   - **Production Maestro Pro** [ ].
   - **Production Maestro Pro (Simulation)** [ ]. Simulation means that conference and four-wire port information is read only from the project (***.hxn**) file or Production Maestro Information (***.hxpmi**) file. No attempt is made to connect to a matrix.

   Production Maestro Pro opens in **Assignment mode**, where assignments are made to conferences and four-wire viewers.

Tip: ***Assignment mode*** *is the main operational mode for Production Maestro Pro. For more information about the different operational modes, see* ***4 Using Production Maestro Pro****.*

To change the operational mode at start up, see ***3.2 Command line options*** *below.*

3.2 Command line options

You can use the command line to modify the way Production Maestro Pro runs at start up:

Command line option	Description
/SIM	Runs Production Maestro Pro in **Simulation mode**. **Note:** *An entry to run Production Maestro Pro in simulation mode is automatically created in the **Start > All Programs** at installation (see above).*
/ADMIN	Runs Production Maestro Pro in **Administrator mode**. Administrator mode enables a system administrator to place restrictions on user actions through a number of additional settings. These settings are saved in the project file (provided that you save the file while in **Administrator mode)**.
/LAN2	Uses the **secondary** LAN's IP addresses to connect to the ***linked set*** (the group of linked matrices to which Production Maestro Pro connects).

/ASSOCIATED-PANEL	Allows the system administrator to set up a command line specifying the associated panel to be used.
	
	The format of the command line is:
	`/ASSOCIATED-PANEL=PORT.<system number>.<port number>`
	
	Example:
	`/ASSOCIATED-PANEL=PORT.1.3 for port 3 on system 1.`

/ASSOCIATED-METER-PORT	Allows the system administrator to set up a command line specifying which port on the matrix is connected to the PC audio input. This enables Production Maestro Pro to meter an audio level **without** using an LMC-64 interface card. The format of the command line is: `/ASSOCIATED-METER-PORT=PORT.<system number>.<port>` **Tip:** *Different Production Maestro Pro PCs may use the same layout file (but with different ports).*

Configuration file	Including a system configuration path and filename within/outside (as required by your operating system) the quoted command line causes Production Maestro Pro to automatically load that system configuration file when it is run. Either a Production Maestro Information File (*.hxpmi) or a EHX Project File (*.hxn) may be supplied.
Project file	Including a Production Maestro Pro project (layout) path and filename (***.ccr**) within/outside (as required by your operating system) the quoted command line causes Production Maestro to automatically load the project (layout) file when it is run.

Table 3: Command line options

Note:
*Project files (palette and canvas screen layouts) are saved in Production Maestro Pro as ***.ccr** format files. You can associate the ***.ccr** filename extension with Production Maestro Pro, so that clicking a ***.ccr** file automatically starts the program.*

4 Using Production Maestro Pro

This chapter describes how to use Production Maestro Pro, including:

- Opening and saving EHX Project (***.hxn**), Production Maestro information (*.hxpmi) and Production Maestro Pro project files (***.ccr**).
- Navigating and using the **palette** and **canvas** screens, in the different **operational modes (Configure Palette, Configure Canvas, Alias** and **Assignment modes)**.
- Configuring and managing **conferences, preset conferences** and **four-wire viewers**.
- Using **Settings** to control how conferences are configured and managed.
- Using **four-wire viewers** to visually monitor and assign routing to and from four-wire ports, and also create IFB systems.
- Assigning **Alias labels** to conferences and four-wire viewers.
- Using **audio level meters** to meter audio levels for conferences and four-wire ports in real-time.

The chapter also provides a quick reference to color coding in Production Maestro Pro, and the main features of the Production Maestro Pro screen.

Note:
*The use of audio level meters usually requires the fitting of at least one LMC-64 audio metering interface card to a connected matrix. However, you can use the command line to enable some audio metering without an LMC-64 (see **4.20 Using audio level meters (Clear-Vu ®)**).*

Tip: *To find out more about Production Maestro Pro as you work, see* **Help** [?] *in the top right hand corner of your Production Maestro Pro screen.*

4.1 Getting started with Production Maestro Pro

Before you can start configuring conferences, Production Maestro Pro must connect with the matrix (or matrices) using either a Production Maestro Information file (*.hxpmi) or an EHX Project File (*.hxn) (See ***4.2 Connecting to the matrices in an EHX configuration***).

The IP addresses of the matrices are extracted from the configuration file, and IP connection made with the matrices. If an EHX Project file (*.hxn) is used to connect to the matrices, Production Maestro Pro will prompt the user to select the frames that they wish to connect to.

When Production Maestro connects to the matrices, it obtains the current active assignments from the matrix. All assignments made by Production Maestro Pro are sent directly to the matrix. You can now start to use Production Maestro Pro to configure conferences.

If Production Maestro Pro loses the connection to the matrices:

- The assignments you have already made remain in effect.
- Any other Production Maestro Pro client that is connected to the matrices may continue to make assignments.

Tip: *For information about restoring lost connections, see* ***4.2.1 Restoring a lost connection.***

To protect your Production Maestro Pro projects (including such features as palette width, canvas configuration, audio level meters, settings and palette configurations), you should save your projects as *Production Maestro Pro project (or layout) files* (***.ccr**). (See ***4.4 Saving a project (layout) file***).

4.1.1 Quick reference to the Production Maestro Pro screen

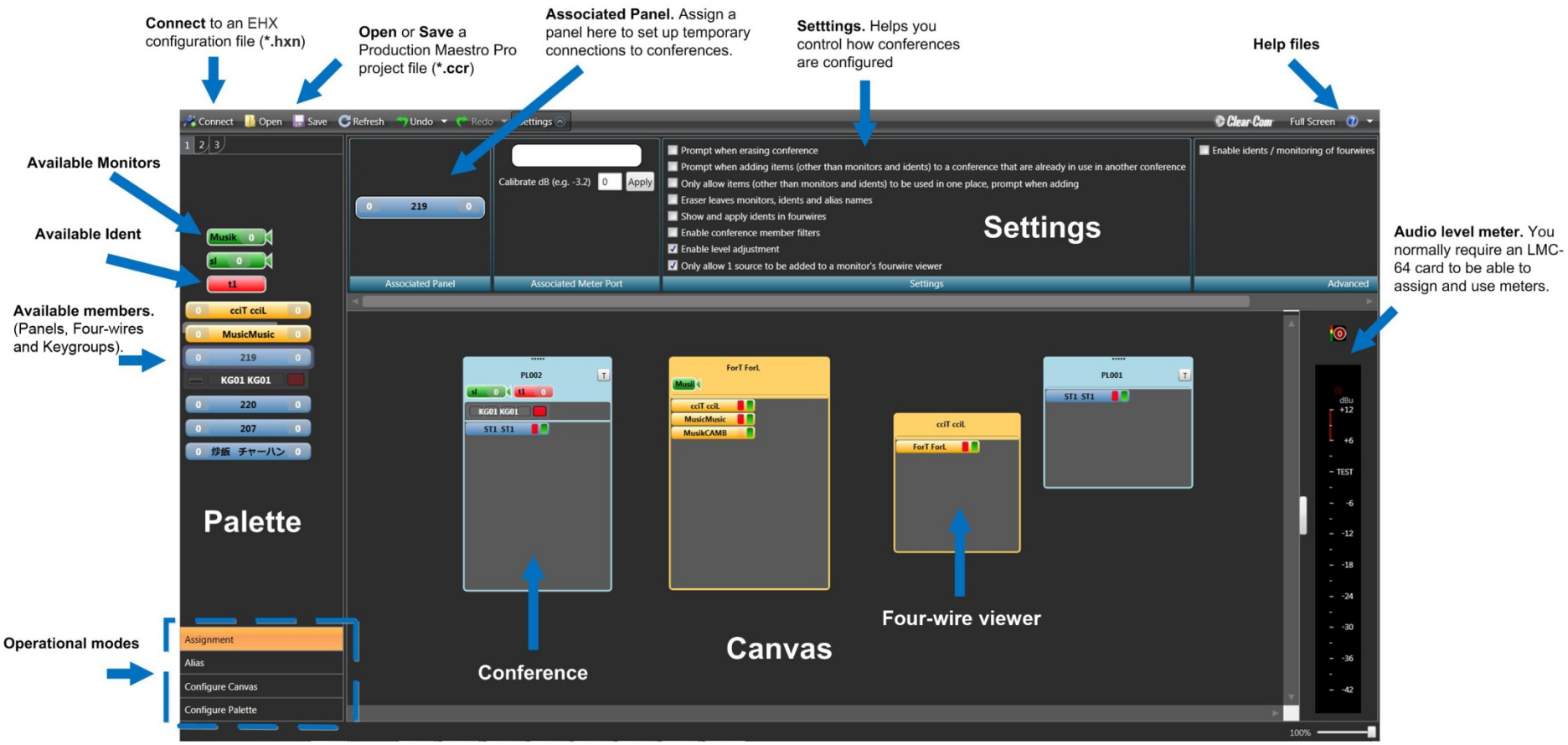


Figure 1: Quick reference to the Production Maestro Pro screen

4.1.2 Quick reference to color coding

Color coding is used for the rapid identification of onscreen items**:**

System component		Color coded icon
Four-wires and four-wire viewers		0 joe 0
Panel		0 205 0
Keygroup		KG01 KG01
Split label port	**Ident (Talk)**	DigL
	Monitor (Listen)	DigT 0
Conference		PL002 1
Preset conference		Preset Conference
Meter (Meter control shown)		Meter
Note		Read my notes please
Alias label		Joe System

Table 4: Color coded system components

4.1.3 Tool tips

When you move your mouse over an item on the canvas or palette, a **tool tip** is displayed with detailed information about that item.

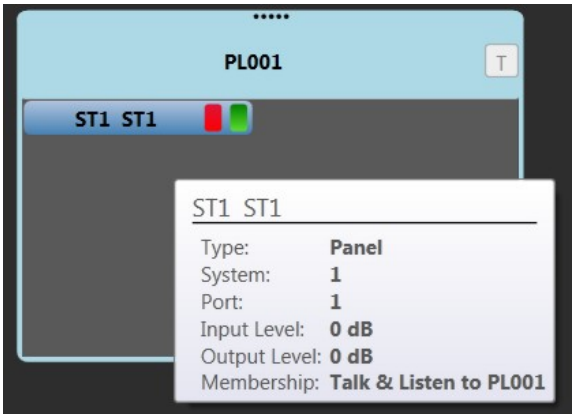


Figure 2: Example tool tip

4.1.4 Help

To find out more about Production Maestro Pro as you work, click **Help** [ ] in the toolbar at the top right of the screen.

The following options are displayed in the drop-down menu:

Option	Description
Content	The content of the Help files. You can navigate the Help files using the navigation tree, search, or index facilities.
Show meter status	Displays the status of the audio level meters (see ***4.20 Using audio level meters (Clear-Vu ®)***).
About Production Maestro Pro	Version and logs information about Production Maestro Pro.  **Figure 3: About Production Maestro Pro** The dialog displays: • The main version and build numbers (for example, `Version 3.13.4 (Build 0)`). • Copyright information. • A menu displaying version information for the component parts of Production Maestro Pro. • The Clear-Com website address: http://www.clearcom.com To go to the date stamped program logs (***.txt** files) on your PC, click **Show Logs**. To copy the information displayed in the dialog, click **Copy Info.** The copied information goes into the clipboard. To close the dialog, click **OK**.

Table 5: Help menu options

4.2 Connecting to the matrices in an EHX system

Before you can start configuring and managing conferences, Production Maestro Pro must connect with the matrix (or matrices) Using either a Production Maestro Information File (*.hxpmi) or an EHX Project File (*.hxn)

To connect to the matrices in an EHX system:

1. Click **Connect** [] in the toolbar at the top of the screen.

2. A dialog opens. From the dialog, browse to the Production Maestro Information File (*.hxpmi) or EHX Project File (*.hxn). The file format is pre-selected for the selection field.
3. Open the Production Maestro Information File or EHX Project File
   The IP addresses of the matrices in the configuration are extracted from the configuration file, and IP connections made with the matrices. If an EHX Project file (*.hxn) is used to connect to the matrices, Production Maestro Pro will prompt the user to select the frames that they wish to connect to.

   Note:
   *Except in Simulation mode (where all data is read from the ***.hxn** file), no other data, such as lists of ports, is read from the ***.hxn** file. Information about ports, conferences and keygroups is read **live** from the matrices. Production Maestro Pro clients are automatically updated with any changes that are made to the configuration in EHX.*

4.2.1 Generating a Production Maestro Information File

A Production Maestro Information File (*.hxpmi) is a small file used specifically to provide information to Production Maestro Pro. Using an Production Maestro Information file allows the user to work with a much smaller file than a full EHX Project (*.hxn) file, as well as to pre-select which frames they are interested in connecting to.

You can generate a Production Maestro Information File from EHX by selecting File -> Save Production Maestro Information.

4.2.2 Restoring a lost connection

If Production Maestro Pro loses the connection to a matrix:

- The names of all the devices from that matrix are changed to **????** to signal the loss of data.
- Port entities are **grayed out** to indicate that their status is unknown.

While Production Maestro Pro attempts to reconnect to the matrix, the following message is displayed in the bottom left corner of the screen:

```
Connecting to <IP address of matrix>
```

Production Maestro Pro continues to attempt to reconnect indefinitely (or until the connection is restored).

When the connection is restored, Production Maestro Pro displays the following message in the bottom left hand corner of the screen, as it reloads the connection with all the matrices in the linked set:

```
Loading <IP addresses of all matrices>
```

The onscreen display is updated with the new configuration information, and the port entities are no longer grayed out.

4.3 Opening a project (layout) file

The Production Maestro Pro project file (***.ccr**) (also referred to as a layout file), stores the Production Maestro Pro screen configuration (including such features as palette width, canvas configuration, audio level meters, settings and palette configurations).

The ***.ccr** file does **not** contain:

- The port information as this is read directly from the matrices by Production Maestro Pro (see ***4.1 Connecting to the matrices in an EHX system*** above).
- The alias level or routing assignments made by Production Maestro Pro.

To open a Production Maestro Pro project file (***.ccr**):

1. Click **Open** [Open] in the toolbar at the top of the screen.

2. A dialog opens. From the dialog, browse to the project file (***.ccr** format). The file format is pre-selected for the selection field.
3. Open the project file.

   Production Maestro Pro loads the layout information.

4.4 Saving a project (layout) file

To save a Production Maestro Pro project file (***.ccr**):

1. Click **Save** [Save] in the toolbar at the top of the screen.

2. A dialog opens. Enter the required filename and save the file to the desired location on your PC. The **Save File Type:** is pre-selected as a ***.ccr**.

   The Production Maestro Pro layout and settings information is saved to the file.

   Note:
   Port information is not saved to the project file, as this information is read from the matrices in the EHX configuration when opened by Production Maestro Pro.

4.5 Refreshing information from the matrices

To reload the current device information from the connected matrices, click **Refresh** [Refresh] in the toolbar in the top of the screen.

The information displayed by Production Maestro Pro is updated.

Note:
Refresh *may be used after communications have been interrupted between the PC and matrices*.

4.6 Dragging and dropping

The majority of the actions that you perform on onscreen items (from panels and four-wires, to audio meters and conferences) are achieved by dragging and dropping items with the mouse.

Dragging and dropping is used to:

- Move items between screens (for example, from the canvas to the palette and back again).
- Assign items (such as panels, four-wires, idents, labels, meters and monitors) to conferences and four-wire viewers.
- Remove / unassign items (usually by dragging the attached item away to a blank part of the screen) from conferences and four-wire viewers.

To drag and drop an item:

1. **Click and *hold*** the item (such as a panel) you want to move and drag to the desired onscreen location.

   Note:
   A dialog or message may be displayed, if the action you are attempting is either restricted or prohibited.

   Tip: *A range of prompts and restrictions can be set up in Settings, to help control the creation and management of conferences (*see ***4.19 Using the Settings screen***).

2. To place or release the item, release the mouse.

4.7 Undoing and redoing

Unless you have saved changes to the project file (***.ccr**), most of the actions you carry out in Production Maestro Pro can be undone.

To undo the last action, click **Undo** [Undo] in the toolbar at the top of the screen.

Clicking the **down arrow** associated with **Undo** [Undo], opens a drop-down list of previous actions. Selecting:

- The topmost action will undo the last action.
- An action further down the list will undo both that action and all the other actions after it, up to the top of the list.

Undone actions can also be redone.

To redo the last undone action, click **Redo** [Redo] in the toolbar at the top of the screen.

Clicking the **down arrow** associated with **Redo** [Redo], opens a drop-down list of undone actions. Selecting:

- The topmost action will redo the last undone action.
- An undone action further down the list will redo both that action and all the other actions after it, up to the top of the list.

4.8 Getting started with the palette

The palette is docked to the left of the screen. The palette is used to assemble, organize and deploy the items (such as conferences, panels, four-wires, idents, monitors and alias labels) that you use when configuring conferences and four-wire viewers. Most configuration tasks are performed on the canvas, the main working area of Production Maestro Pro (see ***4.9 Getting started with the canvas***).

The configuration tasks that you can perform with the palette and canvas vary according to the selected **operational mode.** For more information, see

Tip: *For a quick reference to the main features of the Production Maestro Pro screen, see* ***3.2.1 Quick reference to the Production Maestro Pro screen.***

4.8.1 Scrolling the palette

To scroll the palette using the scroll bar, move your mouse over the light gray bar within the palette scroll bar [ ].

The inner bar turns from light gray to white. Drag the inner bar up or down to scroll the canvas.

Alternatively, you can:

- **Click and *hold*** the arrow heads [ ] at either end of the scroll bar to scroll the palette. The arrow heads turn from light gray to white when clicked.
- **Right click** either the light gray bar within the scroll bar, or an arrow head. Select one of the following options from the dialog:
    - **Top**
    - **Bottom.**
    - **Page up** (to take you a page length up within the same palette tab).
    - **Page down** (to take you a page length down within the same palette tab)**.**
    - **Scroll up.**
    - **Scroll down.**

Note:
*Except in **Configure Palette** mode, the scroll bar is **not** displayed if there is only a limited number of items on the palette.*

4.8.2 Resizing the palette

To resize the palette:

1. Move your mouse over the right-hand edge of the palette screen (the left hand edge of the canvas).

   The mouse pointer tool [ ] changes to the double-headed arrow of the grab tool [ ].
2. Drag the screen to the right or left to resize the palette.

   Note:
   The canvas screen reduces in size when you expand the palette, and increases when you reduce the size of the palette.

4.9 Getting started with the canvas

The canvas screen is the larger right hand pane of the Production Maestro Pro screen. The canvas is the principal working area in Production Maestro Pro, where the majority of configuration and assignment tasks are performed.

The palette is used to assemble, organize and deploy the majority of the items (such as conferences, panels, four-wires, idents, monitors and alias labels) that you use on the canvas when configuring conferences and four-wire viewers (see ***4.8 Getting started with the palette***).

The functions of the palette and the canvas vary according to the selected **operational mode**. For more information, see

Tip: *For a quick reference to the main features of the Production Maestro Pro screen, see* ***4.1.1 Quick reference to the Production Maestro Pro screen.***

4.9.1 Changing between the two canvas screens

Two canvas screens are available. To move from the first canvas to the second canvas:

3. Move your mouse over the bottom edge of the toolbar at the top of the canvas screen.

   Note:
   *If the **Settings** screen is open, move your mouse over the light gray navigation bar underneath it* [ ].

   The mouse pointer tool [ ] changes to the double-headed arrow of the grab tool [ ].

4. Drag the bar downwards to reveal the second canvas.

4.9.2 Changing the canvas background image

The canvas background defaults to the supplied background image files in the Production Maestro Pro installation directory:

Canvas	Default background image file
First	Back.jpg
Second	Back2.jpg

Table 6: Default canvas background image files

You can replace either or both default background images in the installation directory with your own customized image file(s) (for example, an image that displays your company logo, user set up instructions, or conference information).

4.9.3 Zooming in and out of the canvas

You can zoom in on the canvas by any of the following methods:

- Rolling the mouse wheel over a blank section of canvas.
- Using the zoom slide bar at the bottom right of the screen [88%]. The canvas opens at 100% by default.
- Double-clicking the canvas.

  Tip: *Double-clicking toggles between **Zoom-To-Fit** and **standard zoom**.*

4.9.4 Scrolling the canvas

To scroll the canvas using the scroll bars, move your mouse over the light gray bar within either the lower or right hand scroll bar [ ]. The inner bar turns from light gray to white. Drag the inner bar to scroll the canvas.

Alternatively, you can:

- **Click and *hold*** the arrow heads [ ] at either end of the scroll bars to scroll the canvas. The arrow heads turn from light gray to white when clicked.
- **Right click** either the light gray bar within the scroll bar, or an arrow head.

  In a horizontal scroll bar, select one of the following options from the dialog:

  - **Scroll here** (the canvas tracks to the current position of the mouse).
  - **Left edge.**
  - **Right edge.**
  - **Page left.**
  - **Page right.**
  - **Scroll left.**
  - **Scroll right.**

  In a vertical scroll bar, select one of the following options from the dialog:

  - **Top**
  - **Bottom.**
  - **Page up** (to take you a page length up).
  - **Page down** (to take you a page length down)**.**
  - **Scroll up.**
  - **Scroll down.**

4.10 Full screen

To toggle between full screen and normal screen mode click **Full screen** [Full Screen] in the toolbar at the top right of the screen.

4.11 Operational modes

The configuration tasks you can perform in Production Maestro Pro vary according to the selected operational mode.

Operational mode	Summary
Assignment	Use **Assignment mode**, the main operational mode in Production Maestro Pro, to assign items (such as panels, four-wires, idents, monitors, keygroups and meters) to conferences and four-wire viewers in real-time.
Alias	Use **Alias mode** to create and apply alias labels to conferences and four-wire viewers.
Configure Canvas	Use **Configure Canvas mode** to locate, organize and size conferences, preset conferences, and fixed four-wire viewers on the canvas. You can also apply a meter control to conferences and four-wire viewers, and add notes (such as instructions or reminders) to the canvas.
Configure Palette	Use **Configure Palette** mode to search the canvas for the items (such as panels, four-wires, idents, monitors and keygroups) that you require for configuring conferences and four-wire viewers in Assignment mode. Add the required items to the palette. Use the palette tabs to create different sets of items.

Table 7: Summary of operational modes

Note:

*The system administrator can restrict users to the **Assignment** and **Alias** modes, using **Settings**. If these user restrictions are in place, the **Configure Palette** and **Configure Canvas** modes are not displayed to the user. For more information, see **4.19 Using the Settings screen**.*

4.11.1 Configure Palette mode

To place Production Maestro Pro in **Configure Palette mode**, select **Configure Palette** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in **orange** [Configure Palette].

In Configure Palette mode, the canvas lists all the available items (panels, four-wires, idents, monitors and keygroups) that you can add to the palette.

The items that you drag and drop to the palette can be used in **Assignment mode** to make assignments to conferences and four-wire viewers in real-time (see ***4.11.4 Assignment mode***).

Organizing and searching for items on the Configure Palette canvas

Figure 4: Configure Palette canvas (Sorted by System / Port)

The principle function of the Configure Palette canvas toolbar is to help you organize and search the listed items.

To list and organize by system or port, click **Sort by System Type** [Sort by System/Port]. The **Sort by System / Port** button is underlined in white [Sort by System/Port].

The available items are:

- Organized by system / port name (for example, **System 1**).
- Listed in *ascending* name order.

To toggle between **ascending** and **descending** order, click the circled arrow next to the **Sort by System / Port** button [ ].

To list and organize by the item name, click **Sort by Name** [Sort by Name]. The **Sort by Name** button is underlined in white [Sort by Name].

The available items are:

- Organized by name (in **numeric order**, **letter order**, and / or **character order**, according to the item label).
- Listed in *ascending* order.

To toggle between **ascending** and **descending** order, click the circled arrow next to the **Sort by Name** button [ ].

To list and organize by the type of item, click **Sort by Type** [Sort by Type]. The **Sort by Type** button is underlined in white [Sort by Type].

The available items are:

- Organized by type (for example, **Panel**, **Direct** (four-wire), **Ident**, **Monitor, Keygroup or FreeSpeak Beltpack Role**).
- Listed in *ascending* order.

To toggle between **ascending** and **descending** order, click the circled arrow next to the **Sort by Type** button [ ].

To search for an item by name, enter the name of the item (or part of the name of the item) into the **Name Search** [Name Search].

The matching item(s) are listed onscreen.

Eraser tool and Meter tool

The Configure Palette canvas toolbar also includes the **Eraser tool** [Eraser] and the **Meter tool** [Meter]. Both of these tools be dragged and dropped to the palette for use in **Assignment mode**.

The Eraser tool is used to roll back the changes that are made to conferences in Production Maestro Pro. For more information about the Eraser tool, see ***4.15 Erasing changes to conferences***.

The Meter tool is used for adding a meter to a four-wire on the palette. For more information, see ***4.20.1 Adding a meter to a four-wire on the palette***.

Adding items to the palette

Drag and drop the items you require (such as panels, four-wires, idents, monitors and keygroups) from the canvas to the palette. Organize the items by dragging items anywhere on the palette. The items you add to the palette are those that will be available to you in **Assignment mode** (see ***4.11.4 Assignment mode***).

Note:
*The location of the items on the palette is **locked** in Assignment mode. To relocate items on the palette, you must return to Configure Palette mode.*

You can navigate between different palette configurations using the tabs [1 2 3] at the top of the palette screen.

Add a new tab by clicking **Add Tab** [Add Tab].

Remove the **selected** tab by selecting **Remove** [Remove].

4.11.2 Configure Canvas mode

To place Production Maestro Pro in Configure Canvas mode, select **Configure Canvas** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in **orange** [Configure Canvas].

Configure Canvas mode is used to locate, organize and size conferences, preset conferences, and fixed four-wire viewers on the canvas. You can also apply meters to conferences and four-wire viewers, and add notes (such as instructions or reminders) to the canvas.

Using the Configure Canvas palette

The **Configure Canvas** palette is divided into three tabbed sections, **Conferences**, **four-wires**, and **Other** [Conferences 4-wires Other].

The palette opens on **Conferences**, which lists all the available conferences [PL002 1] that can be added to the canvas for configuration.

Four-wires lists all the *fixed* four-wires [0 joe 0] that you can add to the canvas as fixed four-wire viewers.

Tip: *If the list of conferences or four-wires is particularly long, you can locate particular conference(s) using the **Name Search** facility* [Name Search].

The **Other** tab contains:

Facility	Comments / Description
Four-wire viewer [4-wire viewer]	Drag to the canvas to create an unassigned four-wire viewer. You can assign four-wires to this four-wire viewer in **Assignment mode** (see ***4.11.4 Assignment mode***)
Meter control [Meter]	Drag to the canvas to assign a meter to a fixed four-wire. (see ***4.20 Using audio level meters (Clear-Vu ®)***)
Preset conference [Preset Conference]	Drag to the canvas to create a preset conference. For more information about preset conferences, see ***4.13 Preset conferences***.
Note [ ]	Type your note (such as an instruction or reminder) into the note area, then drag the note to the canvas screen.

Table 8: Other tab facilities

Moving and resizing items on the canvas

You are free to move the conferences, four-wire viewers and other items that you can add to the canvas in Configure Canvas mode *anywhere* on the canvas (and to keep moving those items, until you are satisfied with their location).

To resize a conference, four-wire viewer or preset conference, drag the dotted edge of the item [ ].

Note:
*The location and size of the conferences, four-wire viewers and other items that you add to the canvas in Configure Canvas mode is **fixed** in Assignment mode. To adjust the size and location of these items, you must return to Configure Canvas mode.*

4.11.3 Alias mode

To place Production Maestro Pro in **Alias mode**, select **Alias** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in **orange** [Alias].

In Alias mode, the palette is used to create and assemble **alias labels** [Joe System] for assignment to conferences and four-wire viewers.

Type the name of the label **(up to 10 characters)** into the blank label area [ ] and drag the label to the palette. You can create as many alias labels as you require.

You assign an alias label by dragging the label to the conference or four-wire viewer on the canvas.

To remove an unwanted label from the palette, drag the label to the **trash can icon** [ ].

4.11.4 Assignment mode

To place Production Maestro Pro in **Assignment mode,** select **Assignment** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in **orange** [Assignment].

Assignment mode is the main operational mode for Production Maestro Pro, where assignments and other live changes (such as creating a temporary connection with the Assigned Panel) are made to conferences and four-wire viewers in real-time.

Assigning items to conferences and four-wire viewers

The items on the Assignment mode palette (such as panels, four-wires, idents, monitors and keygroups), including the number of tabs [1 2 3], correspond to your configuration of the palette in **Configure Palette** (see ***4.11.1 Configure Palette mode***).

Note:
*The location of the items on the palette is **locked** in Assignment mode. To relocate items on the palette, you must return to Configure Palette mode.*

To make live changes to the matrices that Production Maestro Pro is connected to, drag and drop:

- Items from the palette into conferences [PL002 1 , Preset Conference] and four-wire viewers . 4-wire viewer
- Items from one conference / four-wire viewer to another.
- Conferences into preset conferences [Preset Conference].

Important note:
*If you assign a direct four-wire to a conference using Production Maestro Pro rather than EHX, that four-wire will not be listed when viewing conference members on a **V-Series panel**. This is because such assignments are temporary rather than fixed in the EHX configuration.*

Copy, Move and Exclusive assignments

When you drag items (such as panels, four-wires, idents, monitors and keygroups) to conferences or four-wire viewers, an icon is displayed next to the mouse pointer to indicate the type of assignment that is being made.

If you click an item on the palette and drag it (copy it) to a conference or four-wire viewer, the **Copy icon** [ ] is displayed.

Figure 5: Copy icon

If you click an item in a conference or four-wire viewer and drag it (move it) to another conference or four-wire viewer, the **Move icon** [ ] is displayed.

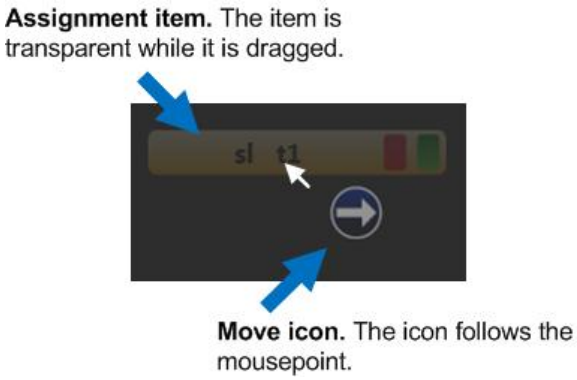


Figure 6: Move icon

If you want to copy (rather than move) an item from one conference or four-wire viewer to another, then ***right click*** the item and drag. The **Copy icon** [ ] is displayed (see ***Figure 5: Copy icon***).

If you want to make an **exclusive assignment** from the palette to a conference or four-wire viewer, right click the item in the palette and drag. The **Exclusive assignment icon** [ ] is displayed.

Exclusively assigned panels, four-wires, idents and monitors are removed from any other conference to which they have been assigned (but **not** four-wire viewers to which they have been assigned).

Keygroups are removed from both conferences and four-wire viewers.

Figure 7: Exclusive assignment icon

Important note:
It is not possible to place a panel as both a fixed source and a destination into a conference.

4.12 Controlling input and output levels

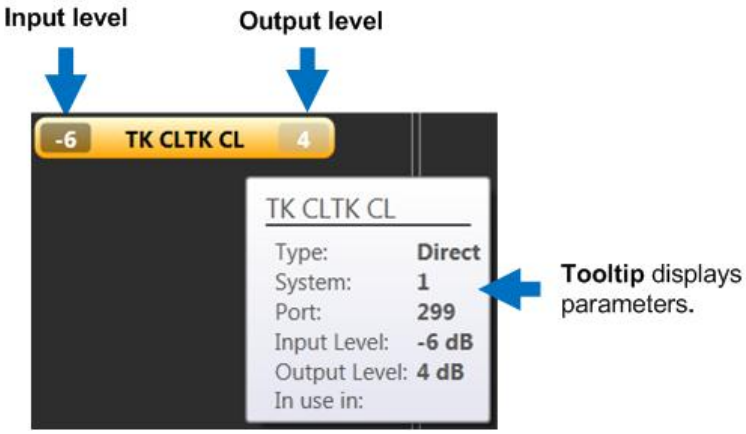


Figure 8: Input and Output levels

The **input** and **output** levels are displayed on panels, four-wires, idents and monitors while they are in the palette. The (output) level of idents [t1 0] and the (input) level [sl 0] of monitors is also displayed when they are assigned to conferences (but not four-wire viewers).

To display the parameters for the panel, four-wire, ident or monitor, move the mouse over the item.

4.12.1 Increasing or decreasing levels

The ability to adjust the levels on panels, four-wires, idents and monitors is enabled in **Settings** (see ***4.19.3 Configuring prompts and other settings***).

To change the **input level** of the panel or four-wire (for example, a four-wire [0 MusicMusic 0]), roll the mouse wheel over the selected **left-hand** level display.

To change the **output level** of the item (for example, a four-wire [0 MusicMusic 0]), roll the mouse wheel over the selected **right-hand** level display.

For idents [t1 0] and monitors [sl 0], where only one level is displayed, roll the mouse wheel over the level display.

The color and density of the level display changes from **black** [Cut], to **gray** [-42], to transparent [1], to **orange** [9] and finally **red** [18] as you travel up fthrough the **-72dB (Cut) to +18dB** level range (and reverses as you travel down).

Note:
The color of the levels is impacted by the background color of the item (in this case, the yellow four-wire).

Tip: *The panel, four-wire, monitor or ident will display **-72dB** as **Cut** on the item. However, the tooltip will display the level as **-72dB**.*

4.12.2 Cutting levels

To instantly set the level to **Cut** (**-72dB**), double click the level on the item. To restore the level to its previous level, double click the level on the item again.

4.12.3 Audio presence tally

To display an Audio Presence Tally on a four-wire on the palette, you must enable the **Audio Presence Tally** option for that four-wire in EHX.

When audio is detected on the four-wire port, the input level on the four-wire on the palette turns **green** 0 MusicMusic 0

Note:
This feature is only available provided that the PC running Production Maestro Pro is on the same network as the matrix the four-wire port belongs to.

*The input level on a four-wire on the palette will also display green if a meter [ ] is applied. See **4.20.1 Adding a meter to a four-wire on the palette**.*

4.13 Preset conferences

Production Maestro Pro enables you to create preset conferences [Preset Conference] that you can copy into live conferences as required.

Assigning preset conferences to existing conferences enables you to manage multiple changes to conferences in a single assignment operation. For example, by assigning a preset conference to an existing news conference you might instantly change the communication lines to those from a different OB truck, or swap the conference to a different studio keygroup (erasing existing four-wire members).

Note:
*Preset conferences are only created within Production Maestro Pro are **not** sent to the matrix. Only when they are applied to **existing** conferences are changes sent to the matrix.*

To create a preset conference:

1. Go to **Configure Canvas > Other tab** in the palette.
2. Drag and drop the preset conference icon [Preset Conference] onto the canvas.

Tip: *For more information about **Configure Canvas mode** and the **Other** tab in the palette, see **4.11.2 Configure Canvas mode**.*

To give the preset conference a name, using an alias label:

1. Go to **Alias**.
2. Type the name of the label **(up to 10 characters)** into the blank label area [ ].
3. Drag the alias label [Joe System] to the preset conference.

Note:
Creating and assigning an alias label to a preset conference is the same as for normal, EHX conferences.

Tip: *For more information about **Alias mode**, see **4.11.3 Alias mode**.*

To assign items (such as panels, four-wires, monitors, idents and keygroups) to a preset conference:

1. Go to **Assignment**.
2. Drag and drop available items from the palette onto the preset conference (as you would with any other conference).

To apply the preset conference to an **existing** conference [PL002 1]:

1. Go to **Assignment**.
2. Drag and drop the preset conference [Preset Conference] onto the target conference.

   The **contents** of the preset conference are added to the target conference. The **name** of the target conference changes to that of the preset conference.

Tip: *For more information about **Assignment mode**, see **4.11.4 Assignment mode**.*

4.13.1 Using Drag as Preset with conferences

You can use existing conferences [PL002 1] in the same way as preset conferences by using the **Drag as Preset** facility.

To use **Drag as Preset** with existing conferences:

1. Go to **Assignment**.
2. Move your mouse over the top part (the dotted line) of the conference you want to use.

   The Drag as Preset facility is displayed [Drag as Preset].
3. Drag the conference onto the target conference to copy its contents to the target conference.

   The source conference is **not** changed by this operation. The name of the target conference is **not** changed by this operation.

4.13.2 Using Drag as Preset with preset conferences

You can also use **Drag as Preset** to copy an existing conference [PL002 1] to a preset conference [Preset Conference].

To **copy** the contents of an existing conference to the preset conference:

1. Go to **Assignment**.
2. Move your mouse over the top part (the dotted line) of the conference you want to use.

   The Drag as Preset facility is displayed [Drag as Preset].
3. Drag the conference onto the target preset conference to copy its contents to the preset conference.

   The source conference is **not** changed by this operation. The name of the target conference is **not** changed by this operation.

To **replace** the contents of the preset conference with the contents of the existing conference:

1. Go to **Assignment**.
2. Move your mouse over the top part (the dotted line) of the conference you want to use.

   The Drag as Preset facility is displayed [Drag as Preset].
3. ***Right click*** the conference and then drag onto the preset conference. The contents of the preset conference are replaced by the contents of the existing conference.

   Any alias label [Joe System] that had been assigned to the preset conference is deleted.

Note:
Copy or replace operations to a preset conference will not display warning prompts if the members already exist in another conference.

4.14 Filtering members in conferences

The ability to filter members in conferences is enabled in **Settings** (see ***4.19.3 Configuring prompts and other settings***).

If filtering is enabled, the **member filter icon** [ ] is displayed in the right hand corner of conferences in **Configure Canvas** mode.

Click the filter icon to display the types of conference members [Idt (2)] in the top bar of the conference. The number displayed with each conference member type shows you how many items of that type can be filtered.

To filter a member out of the conference, click a member. To indicate that a member has been filtered from the conference, the filter icon changes to **black** [ ].

To restore the member to the conference, click the filter icon again.

Figure 9: Filtered conference

Important note:
Filtering members is part of the conference configuration process. You can only use member filtering in Configure Canvas mode. Filtering does not change any assignments to a conference.

4.15 Erasing changes to conferences

The **Eraser** [Eraser] is used to reset conferences to the EHX configuration default, erasing any changes that were made in Production Maestro Pro.

To use the Eraser:

1. In **Configure Palette**, drag the Eraser [Eraser] from the Configure Palette toolbar (directly above the canvas) onto the palette.
2. In Assignment, drag the Eraser to a conference to erase the assignments you made in Production Maestro Pro.

   Important note:
   *If you enable the **Eraser leaves monitors, idents and alias names** setting in **Settings**, any idents [DigL], monitors [DigT 0] and alias labels [Joe System] that you added to the conference are preserved when you use the Eraser. All other items are erased as usual.*

   *If you enable the **Prompt when erasing conference** setting in Settings, a prompt is displayed asking you to confirm the erasure operation.*

   *For more information, see **4.19.3 Configuring prompts and other settings.***

4.15.1 Erasing changes to preset conferences

If you apply the Eraser [Eraser] to a preset conference [Preset Conference], and then add that preset conference to an existing conference [PL002 1], the members are erased and then replaced with the members of the preset conference.

Note:
*Preset conferences are only created within Production Maestro Pro are **not** sent to the matrix. Only when they are applied to **existing** conferences are changes sent to the matrix.*

Tip: *For more information about preset conferences, see **4.13 Preset conferences***

4.16 Controlling Talk and Listen buttons

Panels and direct four-wires that have been assigned to conferences and four-wire viewers display a **red Talk** button and a **green Listen** button on the right hand of the item [].

Clicking a **Talk / Listen** button turns it off. The button is no longer displayed on the panel or four-wire (for example, ).

Clicking the space where the **Talk / Listen** button was formerly located turns the button on again. The button is displayed again on the panel or four-wire.

Tip: *You must be in **Assignment mode** to turn Talk / Listen buttons on and off on panels and four-wires.*

Important note:
*If you turn off **both** the Talk and the Listen buttons, the panel or four-wire is effectively excluded from the conference or four-wire viewer, and removed from the list of members.To restore the panel or four-wire (and Talk / Listen labels), you must reassign the item to the conference or four-wire viewer.*

Idents and monitors (split label ports) do not display Talk / Listen buttons (see next section).

Keygroups display a panel on the right hand side of the item [] to show if the group is **active talk** (**red**) or **active listen** (**green**). However, you **cannot** change the talk or listen status of a keygroup in Production Maestro Pro.

4.17 Idents and monitors (split label ports)

In **Configure Palette** mode, split label ports are displayed on the canvas as **both:**

- Paired idents (**Talk** capability (**red**)) and monitors (**Listen** capability (**green**)) [].

  Note:
  *It is possible to grant **Talk and Listen** capability to idents / 'Talk' keys in some user panels (for example, pushbutton V-Series panels, and 4000 series panels) in EHX.*

  *However, idents are always treated as **Talk only** in Production Maestro Pro.*

- Four-wires [].

You can assign the ident [] and monitor [] parts of a split label as separate items to a conference or four-wire viewer.

The ident is added as a **Talk only** member. The monitor is added as a **Listen only** member.

If you assign a split label as a four-wire [] to a conference, it is added as *separate* **Talk only** and **Listen only** members.

If you assign a split label as a four-wire [] to a four-wire viewer, the split label is listed as both:

- A normal four-wire in the membership list [].
- An ident [] and a monitor [] at the top of the viewer.

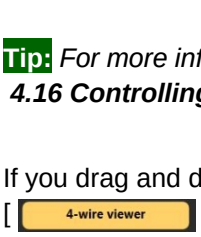
Dragging away either the ident or the monitor from the four-wire viewer is equivalent to turning off either the **Talk** or **Listen** button on the four-wire (the Talk or Listen button on the four-wire is no longer displayed, for example ).

Turning off a Talk / Listen button on the four-wire will also result in the ident / monitor disappearing from the top of the four-wire viewer.

If you click the space where the Talk or Listen button was displayed on the four-wire:

- The ident or monitor is restored to the top of the four-wire viewer.
- The Talk or Listen button reappears on the four-wire in the membership list.

Tip: *For more information about Talk and Listen buttons, see* ***4.16 Controlling Talk and Listen buttons***.

If you drag and drop a split label as a four-wire into an available / unassigned fixed four-wire viewer [], then it is displayed in the same way as any other four-wire.

Tip: *For more information about four-wire viewers, see the* ***next section****.*

4.18 Four-wire viewers

Four-wire viewers enable you to visually monitor routing to and from a four-wire port, and also to assign four-wires to four-wires (sometimes known as **XY routing**).

In **Configure Canvas** mode, you can create:

- A **pre-populated** four-wire viewer by dragging to the canvas one of the four-wires [] listed under the **palette > four-wires tab**.

  The target four-wire for the viewer cannot be changed.

- An **unpopulated (empty)** four-wire viewer by dragging to the canvas the four-wire viewer icon [] from the **palette > Other tab**.

  To populate the viewer, drag and drop a four-wire to the viewer in **Assignment mode**. The target four-wire for the viewer can be changed for any other four-wire.

Tip: *For more information about creating four-wire viewers, see* ***4.11.2 Configure Canvas mode****.*

The four-wire viewer displays:

- The **conferences** [] of which the monitored four-wire is a member.
- All the **ports** (panels, four-wires, idents, monitors and keygroups) the monitored four-wire is connected to.

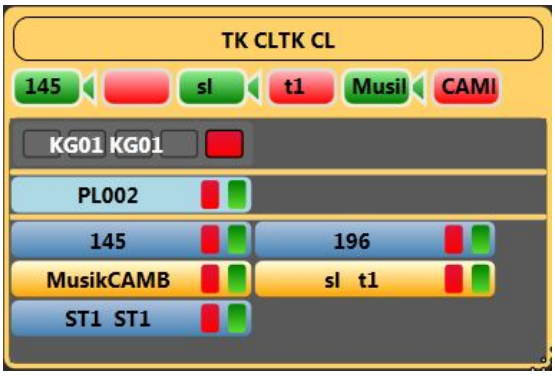


Figure 10: Four-wire viewer (conferences and port connections)

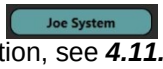
The connections list of the four-wire viewer is automatically updated whenever a port is assigned to (or removed from) a conference [] of which the monitored four-wire [] is a member.

To connect an additional port (such as a panel, four-wire, ident, monitor or keygroup) to the monitored four-wire, drag and drop the item into the four-wire viewer.

The new port is displayed in the connections list for the four-wire viewer, and a new **talk and listen crosspoint** is created between the new port and the monitored four-wire [].

The matrices are updated by Production Maestro Pro with the new configuration.

Tip: *You can copy, move, or exclusively assign panels, four-wires, idents, monitors or keygroups to a four-wire viewer. For more information about making assignments, see* ***4.11.4 Assignment mode > Copy, Move and Exclusive assignments.***

You can assign an alias label [] to a four-wire viewer in exactly the same way as conferences. For more information, see ***4.11.3 Alias mode***.

For more information about using audio meters [] with four-wire viewers, see ***4.20 Using audio level meters (Clear-Vu ®).***

4.18.1 Remote crosspoints display

Production Maestro Pro displays **remote** crosspoints (crosspoints that are remote to the matrices that Production Maestro Pro is connected to) in the four-wire viewer in exactly the same way as **local** crosspoints.

4.18.2 Using four-wire viewers for IFBs

You can use an unpopulated (empty) four-wire viewer to dynamically manage your IFB setups.

To use a four-wire viewer to manage your IFBs:

1. Define all IFB destinations, program feeds and interrupt sources in EHX and then download to the matrix.

   Note:
   *In **EHX > Advanced Settings > Global Settings**, ensure that **Global IFB** is set to **True** for all IFB destinations (normally four-wire ports). You should also ensure that the audio dimming level for IFB destinations is configured.*

   Tip: *For more information about EHX, see **EHX Help** or your EHX documentation.*

2. Create an IFB system, comprising an IFB destination and program feeds, by dragging the IFB destination (normally a four-wire port []) into an unpopulated (empty) four-wire viewer [].

   The IFB destination becomes the monitored port, and the program feeds are added to the connections list of the four-wire viewer.

In the procedure above, the program feeds placed in the four-wire Viewer are heard by the IFB destination.

If a **talk key** on a panel [] that has been assigned to the IFB destination (the panel is an IFB source) is selected, then:

- An audio path is established between that panel / IFB source and the IFB destination.
- The program feeds are dimmed.
- The panel / IFB source audio is heard by the IFB destination for as long as the audio path is present.

If the IFB destination is also a member of a conference [], then:

- The conference is added to the four-wire viewer.
- The conference audio is heard by the IFB destination.

4.19 Using the Settings screen

The **Settings** screen [Settings] is used to:

- Set up a temporary connection between a panel and a conference, using the **Associated Panel** facility.
- Configure a direct four-wire port as an **Associated Meter Port**, connected directly to the Production Maestro.
- Enable prompts and various other settings that help you manage the configuration of conferences.
- Enable system administrators to set user restrictions.

To open the Settings screen into the top part of the canvas screen, click **Settings** [Settings] in the toolbar.

4.19.1 Setting up a temporary connection between an Associated Panel and a conference

To set up a temporary connection between a local panel and any current conference:

1. In **Settings**, drag and drop a panel from the palette onto the **Associated Panel** segment of the Settings screen. The panel is now an **Associated Panel**.

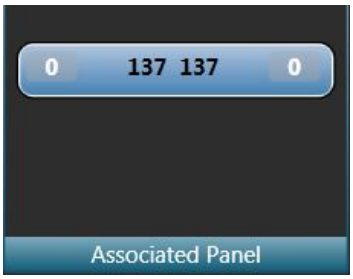


Figure 11: Example Associated Panel segment

2. To connect the Associated Panel with a conference on the canvas screen, **click and *hold*** the **T button** [T] in the top right of the conference display.

   The Associated Panel is added to the conference list, and the **T button** turns **red** [T].

   Release the **T button** to break the connection with the Associated Panel.

4.19.2 Setting up an Associated Meter Port

You can use a four-wire port as an audio meter, connected directly to the PC running Production Maestro Pro, when you assign that four-wire port to **Associated Meter Port** status.

To set up an Associated Meter Port:

1. Ensure that the four-wire port to be used as an audio meter is directly connected to the PC running Production Maestro Pro.

   The following table shows the pin connection from a four-wire port (RJ-45 connector) to a 3.5mm microphone jack on the PC:

Four-wire port pins	PC 3.5mm audio jack
1	N / C
2	N / C
3	N / C
4	Tip
5	Ring
6	N / C
7	N / C
8	N / C

Table 9: Four-wire port to 3.5mm microphone jack on the PC

2. In **Settings**, drag and drop a direct four-wire port from the palette onto the **Associated Meter Port** segment of the Settings screen.

   Note:
   *Once the four-wire port has been assigned as the Associated Meter Port, it is treated by Production Maestro Pro as **audio meter zero**.*

3. Calibrate the audio meter, by entering the required audio threshold in dB (for example, **- 3.2**). Click **Apply** [Apply].

4.19.3 Configuring prompts and other settings

The **Settings** and **Advanced Settings** segments of the Settings screen list prompts and other controls / settings to help you manage the configuration of conferences.

For more information about configuring conferences, see [link to configuring conferences].

Tip: *To select or deselect a setting, click the checkbox next to it* [ ].

The list of settings comprises:

Setting	Comments / Description
Prompt when erasing conference	The **Eraser** [Eraser] is used to reset conferences to the EHX configuration default, erasing any changes that were made in Production Maestro Pro. **Tip:** *To use this tool in **Configure Canvas**, add the tool to the palette from the **Configure Palette** toolbar.* When the erase tool is dragged to a conference, a dialog is displayed asking you to confirm its erasure. To leave the conference unchanged, click **Cancel**. To continue with the erasure, click **Erase**. For more information about the Eraser, see ***4.15 Erasing changes to conferences***.
Prompt when adding items (other than monitors and idents) to a conference that are already in use in another conference	A dialog is displayed to warn you that items you want to add to a conference (such as panels, four-wires, idents and monitors), are already in use by another conference. To cancel the item assignment, click **Cancel**. To complete the assignment, click **Apply anyway**. **Note:** *Operational issues may arise if you assign items that are already in use. For example, if a port is present in multiple conferences, **all** the audio from those conferences will be present on that port. The audio interference this causes can make it difficult to use that port for conference communications.*
Only allow items (other than monitors and idents) to be used in one place, prompt when adding	This setting does not permit you to add items, such as ports, panels and meters, to more than one conference. This setting avoids the operational issues caused by such conflicts (see row above). A dialog is displayed to warn you that the item(s) are already in use in another conference.

Eraser leaves monitors, idents and alias names	When you use the **Eraser Tool** [Eraser] in **Configure Palette mode** to reset conferences to the EHX configuration default, any monitors, idents and aliases that were added are **preserved**. All other changes that you made in Production Maestro Pro are erased. For more information about the Eraser, see ***4.15 Erasing changes to conferences***.
Show and apply idents in fourwires	An ident [DigL] is applied and displayed on four-wires / panels used in conferences.
Enable conference member filters	When this setting is enabled, the **member filter icon** [ ] is displayed in the right hand corner of conferences in **Configure Canvas** mode. To use the member filter, see ***4.14 Filtering members in conferences***. **Important note:** *Filtering members is part of the conference configuration process. You can only use member filtering in Configure Canvas mode.*
Enable level adjustment	Enables you to adjust the audio levels on panels, four-wires, monitors and idents (see ***4.12 Controlling input and output levels***).
Only allow 1 source to be added to a monitor's fourwire viewer	To prevent issues arising from competing audio sources, you can restrict the number of sources that can be added to a monitor [DigT 0] in a four-wire viewer to a single audio source.
Advanced setting	**Comments / Description**
Enable idents / monitoring of fourwires on the palette that are not in use	A way to expedite the preparation of four-wires for conference configuration. Enables you to assign idents [DigL] and monitors [DigT 0] to four-wires on the palette, in both Configure Palette and Assignment modes.

Table 10: Settings

4.19.4 Setting user restrictions in Administrator mode

When Production Maestro Pro is started in **Administrator mode** (see ***3.2 Command line options***), the **User Restrictions** segment is displayed in the **Settings** screen. The settings in this segment enable a system administrator to restrict the changes that users can make to the project file (***.ccr**).

Note:
*To save any user restrictions to the project file, the project file **must** be in **Administrator mode**. Any user restrictions are lost if the system administrator switches to another operating mode, and then saves the file.*

Tip: *To select or deselect a setting, click the checkbox next to it* [☑].

The list of **User Restrictions** settings comprises:

Setting	Comments / Description
Remove configure palette and canvas	When Production Maestro Pro is **not** in Administrator mode, **Configure Canvas mode** and the **Settings** button are removed. Only the **Assignment** and **Alias Label modes** are available to the user. This means that the user **cannot**: • Add conferences, four-wire viewers, or preset conferences to the canvas, or remove them. • Change the items / devices available to them on the palette. • Change any prompts or other settings. • Assign or modify the **Assigned Panel**. The user continues to have **full control** of the conferences and four-wire viewers already on the canvas. The user **can**: • Assign items from the palette, and assign aliases. • Remove items from both conferences and four-wire viewers (even if those items are not present in the palette and / or have been assigned by another user).
Restrict to items on palette	Except in Administrator mode, the user **cannot** modify the members of conferences and four-wire viewers, if they are not present on the palette. **Tip:** *Conference members that are not on the palette are displayed in a semi-transparent state to show that they cannot be modified.*
Prevent level adjustment	Except in Administrator mode, the user **cannot** modify port input or output levels. When the user tries to use the mouse wheel to adjust port levels, the level appear to change, but then reverts to the original setting as soon as the adjustment ceases. No level

	change is sent to the matrix.
Remove cursor [*dynamic*] meter	Except in Administrator mode, the user does not have access to the dynamic / cursor audio levels meter, located to the right of the canvas screen (see ***4.20.7 Dynamic meter***). This restriction may be imposed to prevent the unnecessary usage of system resources.

Table 11: User restrictions

4.20 Using audio level meters (Clear-Vu ®)

You can apply Clear-Vu ® audio level meters [ ] to conferences and four-wire ports in real-time with Production Maestro Pro. The meter setups can be saved to the project (layout) file (***.ccr**). Audio level meters can be added to four-wire ports in the palette in a reduced format.

This facility normally requires at least one **LMC-64 audio metering card** to be fitted to the matrix (system frame).

Tip: *You can set up a single audio meter **without** an LMC-64 card in **Settings > Associated Meter Port**. For more information, see **4.19.2 Setting up an Associated Meter Port**.*

You can configure the number of audio meters provided by an LMC-64 card to **16, 32, 48** or **64** meters in EHX. The same audio meter data can be used by multiple Production Maestro Pro clients, which means that multiple assignments of the same audio meter will not use up additional meters.

The total number of available meters:

- Is displayed in Production Maestro Pro within the **red circle** of the meter icon (for example , or).
- Updated on all Production Maestro Pro clients, every time a meter is applied.

You can still assign meters to a four-wire or conference when zero free meters [ ] are reported, provided that the four-wire or conference:

- Already has a meter assigned to it.
- The audio level data is already being broadcast.

In this case a new meter does not need to be assigned to the target.

However, if an attempt is made to assign a meter that requires an **additional** meter and no free meters are available, the following message is displayed:

```
There were not enough free meters to fulfil the request.
```

Because the audio level information is broadcast by the LMC-64 cards, the Production Maestro Pro clients must be on the same network as the LMC-64 cards (unless switches or routers are configured to forward the broadcast data between networks).

Note:
*Production Maestro Pro does **not** require the IP address of the LMC-64 card.*

Warning:
*The use of meters consumes PC system resources. If extensive use is being made of audio level metering, a minimum specification PC may not be suitable (see **1.2 System requirements**).*

Meter functions	Comments / Description
Input meter	Input meters display the audio level into the matrix from a port, after input level adjustment has been applied.
Output meter	Output meters display the audio output level from the matrix to a port after output level adjustment has been applied.
Conference meter	Conference meters display the mixed audio level. Conference members can hear their own audio output if their output level is set to **0 dB**.

Table 12: Meter functions

4.20.1 Adding a meter to a four-wire on the palette

To add a meter to a four-wire on the palette:

1. In **Configure Palette**, add the required four-wire [] to the palette.

2. To add an **input meter**, drag the meter [] from the Configure Palette toolbar to the **left-hand** side of the four-wire:

   The left-hand side of the four-wire turns **green** [].

   The meter scale [] is displayed at the **top** of the four-wire.

3. To add an **output meter**, drag the meter [ ] from the Configure Palette toolbar to the **right-hand** side of the four-wire.

   The right-hand side of the four-wire turns **green** [MusicMusic].

   The meter scale [ ] is displayed at the **bottom** of the four-wire.

   Note:
   *You cannot perform output level metering on ports that are **not** on the same system as the LMC-64 card.*

   If you are performing cross-system metering in a fiber-linked Eclipse system (the port being metered and the LMC-64 card are in different matrices), Clear-Com recommends placing the LMC-64 card in the matrix where most metering is likely to *occur.*

4.20.2 Removing a meter from a four-wire on the palette

To remove a meter from a four-wire port on the palette:

1. Go to **Configure Palette**.

2. Drag the audio meter away from the four-wire and drop it on the palette.

4.20.3 Adding a meter to a four-wire on the canvas (pre-populated four-wire viewer)

You can add a meter to a four-wire that has been dragged to the canvas, to form a pre-populated four-wire viewer.

You can find a list of the available four-wires under the four-wire tab of the palette in Configure Canvas. All the four-wire ports present in the system configuration are displayed under the four-wires tab, except four-wire ports configured as either monitors [DigT] or idents [DigL].

Important note:
*You **cannot** add a meter to an unpopulated (empty) four-wire viewer, even after you have assigned a four-wire to that viewer. You can meter activity on this kind of viewer, however, by using the dynamic (cursor) meter* (*see **4.20.7 Dynamic meter***).

Tip: *For more information about pre-populated and unpopulated (empty) four-wire viewers, see **4.18**. **Four-wire viewers.***

To add an audio meter to a four-wire on the canvas (pre-populated four-wire viewer):

1. In **Configure Canvas > four-wire tab**, add the four-wire [] to the canvas.

2. Select the **Other tab**. The meter control [] is displayed in the list of available items.

3. To add an **input meter**, drag the meter control [] to the **left-hand** side of the pre-populated four-wire viewer.

   The meter is displayed on the left-hand side of the viewer:

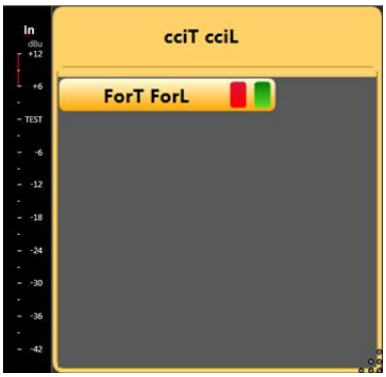


Figure 12: Pre-populated four-wire viewer with input meter

4. To add an **output meter**, drag the meter control [] to the **right-hand** side of the pre-populated four-wire viewer.

   The meter is displayed on the right-hand side of the viewer:

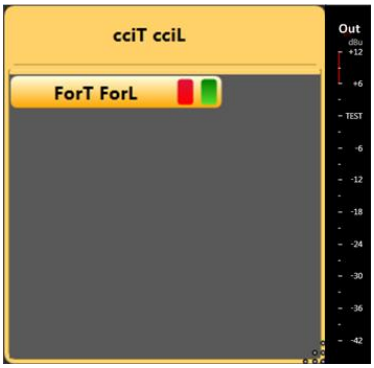


Figure 13: Pre-populated four-wire viewer with output meter

Note:
*You cannot perform output level metering on ports that are **not** on the same system as the LMC-64 card.*

If you are performing cross-system metering in a fiber-linked Eclipse system (the port being metered and the LMC-64 card are in different matrices), Clear-Com recommends placing the LMC-64 card in the matrix where most metering is likely to occur.

4.20.4 Removing a meter from a four-wire on the canvas (pre-populated four-wire viewer)

To remove a meter from a four-wire you have dragged to the canvas (pre-populated four-wire viewer):

1. Go to **Configure Canvas**.

2. Drag the attached audio meter away from the four-wire viewer and drop it on the canvas.

4.20.5 Adding a meter to a conference

You can only add output meters to conferences, to measure the audio levels being heard by the members of the conference.

To add a meter to a conference:

1. In **Configure Canvas > Conferences tab**, add the conference [PL002 1] to the canvas.

2. Select the **Other tab**. The meter control [Meter] is displayed in the list of available items.

3. To add the **output meter**, drag the meter control [Meter] to the conference.

   The meter is displayed on the right-hand side of the conference:

Figure 14: Conference with output meter attached

4.20.6 Removing a meter from a conference

To remove a meter from a conference:

1. Go to **Configure Canvas**.

2. Drag the attached audio meter away from the conference and drop it on the canvas.

4.20.7 Dynamic meter

The dynamic meter (also referred to as the cursor meter) is used to dynamically meter audio levels while in Assignment mode.

Note:
*Unlike the fixed four-wire meters (see **4.20.3 Adding a meter to a fixed four-wire on the canvas**) the dynamic meter allows metering of four-wires placed in a four-wire viewer.*

To access and use the meter:

1. In **Assignment mode**, reveal the meter by clicking the meter toggle bar [ ] to the right of the canvas screen.

2. Click the meter icon [ ] to attach the meter to the mousepoint. The meter icon follows the mousepoint, wherever it is moved on the screen [ ].

3. Move the meter [ ] over the item (the conference, four-wire or four-wire viewer) on the canvas or palette you want to meter:

   - To meter the **input** of a four-wire on either the palette or canvas, move the meter over the **left-hand side** of the four-wire.
   - To meter the **output** of a four-wire on either the palette or canvas, move the meter over the **right-hand side** of the four-wire.
   - To meter the **input** of a four-wire placed in a four-wire viewer on the canvas, move the meter over the **left-hand side** of the four-wire.
   - To meter the **output** of a four-wire placed in a four-wire viewer on the canvas, move the meter over the **right-hand side** of the four-wire.
   - To meter a conference on the canvas, move the meter **over the conference**.

   After a short delay (500ms), the heading above the large meter on the right of the screen changes to match the point you want to meter, and metering begins.

   The audio level is displayed on the scale to the right of the canvas screen [ ].

4. To stop metering, move the meter / mouse to a blank area of the screen.

5. To hide the meter scale, click the meter toggle bar again. This action also detaches the meter from the mouse.

   You can also click the meter icon again [ ] to detach the meter.

Tip: *To prevent the unnecessary usage of system resources, system administrators can restrict users from using the dynamic meter.See* ***4.19.4 Setting user restrictions in Administrator mode****.*

5 Glossary

Term	Definition
Analog Port	Any of the matrix's analog input/output RJ-45 connectors that are used to connect cable from the matrix to panels and interfaces. Each port connects to a separate audio channel in the matrix.
Alias label	A label that is temporarily assigned and replaces a previously labeled port or conference.
Bus	A bus is the channel or path between the components in the matrix along which electrical signals flow to carry information from one component to the next. In the Eclipse matrix the bus is located in the etched surface of the midplane.
Call signal	A call signal is an electronic signal sent from one panel or interface to another. A call signal can be audible and/or visual. Typically a call signal is sent to get the attention of a panel operator who may have turned down their intercom speaker's volume or removed their headset. It can also be sent to activate an electronic relay.
Canvas	The assignment area of the Production Maestro Pro software which can have any user labeled background.
Category-5 (CAT-5) cable	EIA/TIA 568 category specification relating to network cabling. Shielded category-5 cabling is required for Eclipse matrix wiring.
CellCom	Digital wireless communications product. Sold under the CellCom name in USA and as FreeSpeak in Europe and Asia.
Central matrix	The term **central matrix** is used to differentiate the central hardware and software of the intercom system from the connected audio devices. The central matrix consists of: • The metal housing for the circuit cards and power supplies. • The circuit cards. • The power supplies. • The rear panel connectors which connect the matrix's hardware to panels and interfaces.

Conference	An internal matrix virtual partyline or busbar where many panels and interfaces can talk onto or listen from the party line without talking to themselves.
Destination	A device such as an intercom panel, beltpack, or interface to which audio signals are sent. The device from which audio signals are sent is called a **source**.
Duplex	All real-time communication between individuals talking face to face is full duplex, meaning that they can both talk and listen simultaneously. The Eclipse matrices provide full-duplex audio.
EHX	EHX is the EclipseHX configuration software. EHX guides the operation of the matrix circuit cards and connected panels.
Ethernet	International standard which describes how information is transmitted across a network. Provides for the efficient organization of network components.
Fiber optic cable	A fiber-optic cable consists of a glass core covered with a reflective material called **cladding** and several layers of buffer coating to protect the cable from the environment. A laser sends light pulses through the glass core to the other end of the cable.
FreeSpeak	Digital wireless communications product. Sold under the FreeSpeak name in Europe and Asia and CellCom name in USA.
Full duplex	Refers to transmission of signals in two directions simultaneously.
Hopping	Refers to making a trunk connection through other matrices to a destination matrix.
IFB	**Interruptible Foldback**. The term **foldback** refers to sending program audio / feed, or some other audio mix, back to announcers while they are on the air. Doing so allows announcers to monitor themselves, other announcers, videotapes of commercials, or some mix of sources, while they on the air. This is typically found in television news and live broadcast events. Announcers typically wear a small ear piece so they can hear the selected foldback audio mix. When a director wants to give directions to an announcer on air, or to announce changes in the program, the director must **interrupt** the foldback. To do this, the director uses a channel specifically set up to interrupt the foldback audio.
Interface module	A piece of electronic hardware designed to convert the four-wire signals of a central matrix port to some other form of communication, such as 2-wire partyline, telephone, etc. The interface module is connected to a central matrix port. The external non-four-wire device is then connected to the interface module.
i-Series	The i-Series family of user panels includes two display stations, two non-display stations, two expansion panels, and a level-control panel. Eclipse also supports V-Series panels (see below).
ISO	The ISO function, short for **panel ISOlation**, allows a panel operator to call a destination, interrupting all the other audio paths for that destination, and establish a private conversation. When the call is completed the destination's audio pathways are restored to their original state before the interruption.

Keygroup	KeyGroups provide a way of assigning a label to multiple panels simultaneously even within a networked matrix system. Once the KeyGroups have been defined using EHX, all the keys within a KeyGroup can be changed with a single assignment in Production Maestro Pro (Pro mode only).
Label	A label is an alphanumeric name of up to five characters that identifies a source, destination, or control function accessed by an intercom panel. Labels appear in the displays of the intercom panel. Labels can identify panels, ports interfaced to other external equipment, fixed groups, party lines, and special control functions.
MADI	Multichannel Audio Digital Interface. The MADI or AES10 electronic communications protocol defines the data format and electrical characteristics of an interface carrying multiple channels of digital audio.
Multiplexing	The process by which two or more signals are transmitted over a single communications channel. Examples include time division and wavelength division multiplexing.
Non-volatile Memory	Data stored in the CPU's firmware (ROM) that is not lost when the power is turned off.
Palette	The port, keyGroup and Monitor selection screen in Production Maestro Pro.
Panel	Any intelligent intercom device connected to the rear-panel analog ports of the central matrix. This term does not refer to devices connected through interface modules.
Partyline	A wired shared communication system based on a single screened pair of wires. See the Encore range. Matrix requires the CCI-22 to interface to it.
Port	Any of the input/output connections (RJ-45 connectors) on the back panel of the central matrix. These connectors and the attached cables connect the central matrix to remote intercom devices. The term **port** emphasizes that the connection is a portal between the central matrix and the remote intercom devices.
Program	Any separate audio source that is fed into the intercom channels. In television applications, for example, the program audio is the audio that is broadcast on air.
Rack Unit (RU)	Standardized unit of mounting space on a rack panel. Each rack unit is 1.75 inches (44.45 mm) of vertical mounting space. Therefore 1 RU is 1.75 inches (44.45 mm) of vertical mounting space, 2 RU is 3.5 inches (88.9 mm), 3 RU is 5.25 inches (133.35mm), and so on.
Remote panel	Any intelligent intercom device connected to the back-panel ports of the system frame (matrix). This term does not refer to devices connected through interfaces.
Sidetone	The sound of the panel operator's voice, as heard in their own earphone(s) as they speak.
Source	In this guide, the term source refers to a device (such as an intercom panel, interface, or beltpack) that sends audio into the matrix. The device to which audio is sent is called a destination.

VOX	In the Eclipse system, when audio at a panel exceeds a threshold, a light switches on at the panel's port card to visually cue the operator. The threshold level is set in the EHX configuration software.
V-Series	User panels used with Eclipse systems, providing advanced intercom facilities. Available in rack mount and desktop formats. i-Series user panels are also supported (see above).