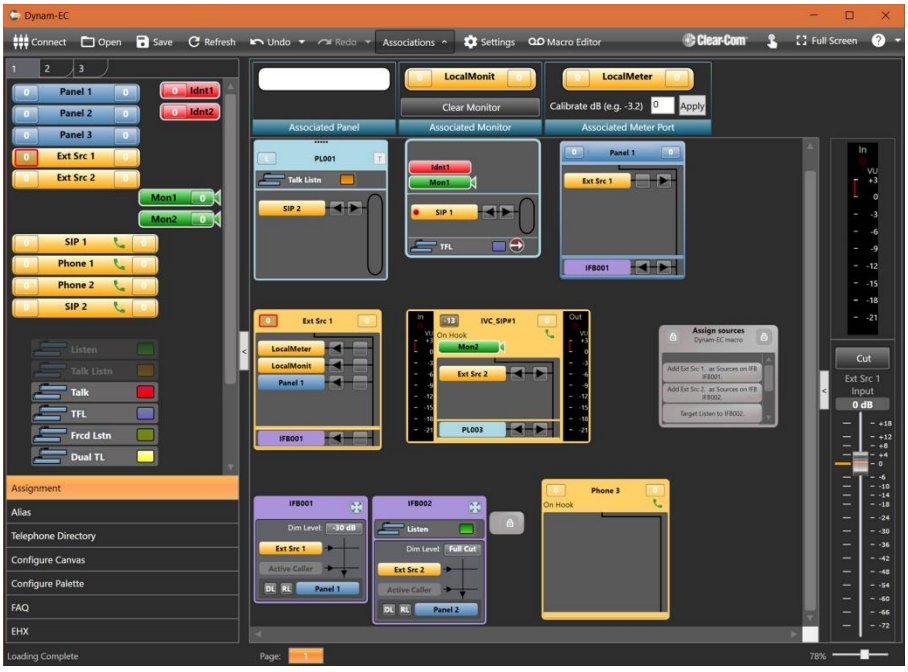
User Guide

Eclipse® 9.1 Dynam-EC



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Document Reference

Dynam-EC User Guide

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1 Introduction

Dynam-EC allows you to control small or large networked intercom systems. It is a PC or tablet based centralized routing application that offers quick, intuitive drag and drop audio routing control, and real time audio metering. You can:

- Create and manage audio across one or more matrices.
- Dynamically configure and assign IFBs.
- Re-label keys to ports, conferences and IFBs.
- Dynamically reconfigure conferences, to meet the rapidly changing requirements of the operating environment (for example, broadcast studios, IFBs, sports venues, MCR areas and Command and Control centers).
- Create, edit and run macros to save time in setting up conferences and venues.
- Host conferences across multiple matrices (linked by fiber or trunk connections).
- Monitor and adjust audio levels in real-time using on-screen meters.
- Initiate and end telephone calls over LQ SIP or TEL-14. Telephone numbers are stored in a contact directory.

This User Guide describes how to install, use and maintain this powerful conference management tool.

To find out more about Dynam-EC as you work, see **Help** in the top right hand corner of your Dynam-EC screen.

1.1 Licensing

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

Dynam-EC licenses are available for **up to 10 users** for each matrix in your Eclipse network. Site licenses are available.

Each matrix that Dynam-EC 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

Dynam-EC repeatedly validates the license on the connected matrix, while the program is being used. If the matrix license ceases to be valid, Dynam-EC disconnects from that matrix.

If you require more licenses / passcodes after adding either matrices to your Eclipse HX system, or Dynam-EC 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 Dynam-EC 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 Dynam-EC demo period has expired on System 1 (Hardware id 1,
Passcode 0000-0000-0000-0000). Please contact your Clear-Com
distributor to purchase Dynam-EC 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 to run Dynam-EC on a Windows PC are:

Specification	Description / Value
Processor	1GHz
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 Dynam-EC).
Operating systems	• Microsoft Windows 7 (32-bit and 64-bit). • Microsoft Windows 8.1 (32-bit and 64-bit). • Microsoft Windows 10 (32-bit and 64-bit). • Microsoft Windows Server 2008 R2 (64-bit). • Microsoft Windows Server 2012 R2 (64-bit). Operation on other platforms is no longer supported.

Table 1-1: Minimum system requirements

The **recommended** system requirements to run Dynam-EC on a Windows PC are:

Specification	Description / Value
Processor	2GHz 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 Dynam-EC).
Operating systems	Microsoft Windows 7 (32-bit and 64-bit). Microsoft Windows 8.1 (32-bit and 64-bit) Microsoft Windows 10 (32-bit and 64-bit) Microsoft Windows Server 2008 SP2 (32-bit and 64-bit). Microsoft Windows Server 2008 R2 (64-bit). Operation on other platforms is no longer supported.

Table 1-2: Recommended system requirements

1.3 Further information

For more information about Dynam-EC, see **Help** in the top right hand corner of your Dynam-EC screen.

For more information about EclipseHX system components (devices) referenced in this guide (including matrices, interface cards, interface modules and EHX (*Eclipse HX 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 Dynam-EC

This chapter describes how to install your Dynam-EC software.

Before installing Dynam-EC, check that your Windows PC meets the system requirements described in section ***1.2 System requirements***.

To find out more about Dynam-EC as you work, see **Help** in the top right hand corner of your Dynam-EC screen.

2.1 Before installing

Before installing Dynam-EC, check that your Windows PC meets the system requirements described in section ***1.1 Licensing***.

Dynam-EC includes a 30 day trial period. During the trial period, you can use Dynam-EC without a license on your Eclipse network. When the trial period expires, you must enter a passcode in your Eclipse HX Configuration Software (EHX) to continue using Dynam-EC.

Dynam-EC licenses are available for up to 10 users for each matrix in your Eclipse network. Site licenses are available.

Each matrix that Dynam-EC connects to must have its own passcode in EHX. Passcodes are entered in EHX >Preferences.

For further information, contact your Clear-Com representative.

2.1.1 Installing Dynam-EC as an update.

If you are installing Dynam-EC as an update to an existing Dynam-EC installation, you must **uninstall** your existing version of Dynam-EC.

Ensure that you save:

- **Your Dynam-EC palette and canvas screen layouts (*.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 Dynam-EC.
- **The EHX system configuration(s) (*.hxn files)** that relate to your Dynam-EC configuration(s), or an exported **.hxdeci** file based on your EHX system configuration.

2.2 Installing Dynam-EC

To install Dynam-EC 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: **PMSetup**

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

Figure 2-1 Setup loading

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

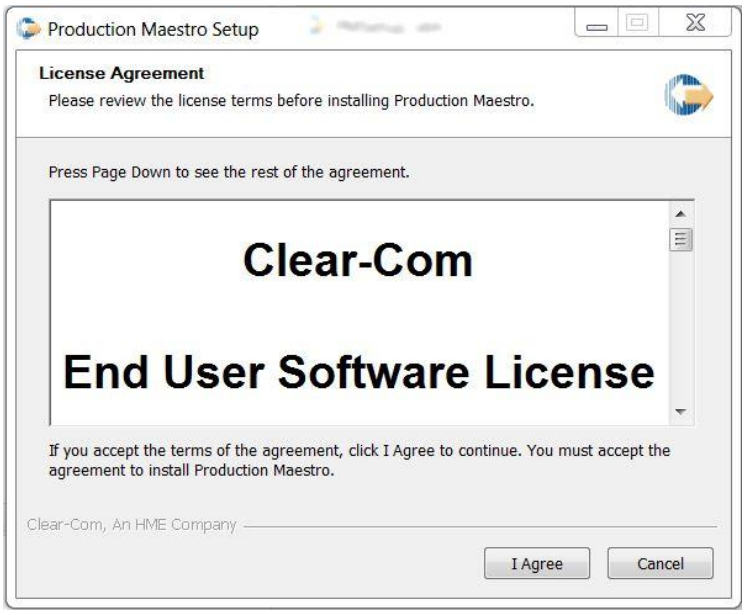


Figure 2-2 License Agreement

   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 Dynam-EC.

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

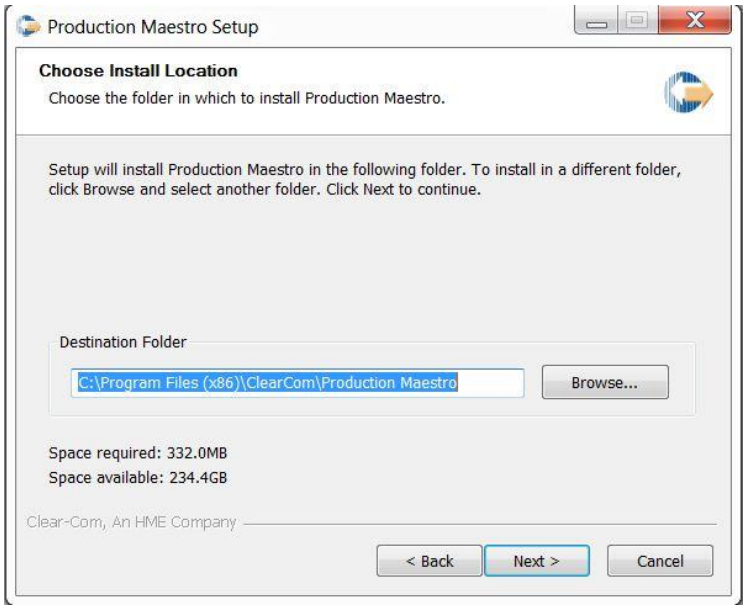


Figure 2-3 Dynam-EC Setup

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

To assist your decision, the amount of space required for Dynam-EC, 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:

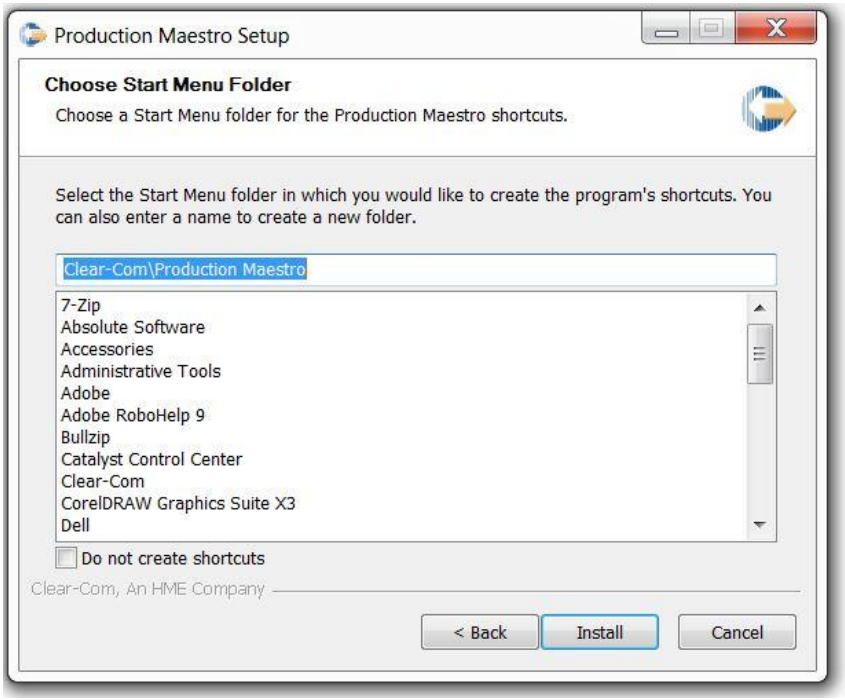


Figure 2-4 Choose Start Menu

The default Start Menu folders is **Clear-Com\ Dynam-EC**.

Note: 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**,** do one of the following:

- 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) Dynam-EC starts to install. During installation, an installation progress bar is displayed. For more detailed information about the progress of the installation, click **Show Details**.

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

Dynam-EC has now been installed to your PC. You are now ready to start Dynam-EC.

On installing Dynam-EC, a firewall dialog may be displayed asking if Windows should Block or Unblock Dynam-EC. Select Unblock Dynam-EC.

3 Starting Dynam-EC

This chapter describes how to start Dynam-EC (from both the Windows Start menu and the command line).

You can also start Dynam-EC from within the EXH Configuration Software.

To find out more about Dynam-EC as you work, see **Help** in the top right hand corner of your Dynam-EC screen.

3.1 Starting Dynam-EC from the Start menu

To start Dynam-EC:

1) Go to **Start** > **All Programs** > **Clear-Com** -> **Dynam-EC 9.1**.

2) Click one of the following:

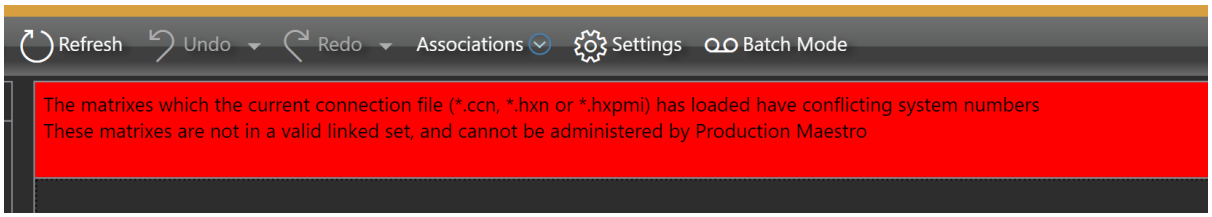
   - **Dynam-EC**
   - **Dynam-EC (Simulation)**. Simulation means that conference and port information is read only from the project **(*.hxn**) file or Dynam-EC Information **(*.hxdeci**) file. No attempt is made to connect to a matrix.

   Dynam-EC opens in **Assignment mode**, where assignments are made to conferences and Port viewers.

Assignment mode is the main operational mode for Dynam-EC. For more information about the different operational modes, see section **4 Using Dynam-EC**.

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

If Dynam-EC connects to matrices with conflicting ID numbers, the following error message appears:



3.2 Command line options

You can use the command line to modify the way Dynam-EC runs at start up:

Command line option	Description
/SIM	Runs Dynam-EC in Simulation mode. An entry to run Dynam-EC in simulation mode is automatically created in the Start > All Programs at installation (see above).
/ADMIN	Runs Dynam-EC 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 Dynam-EC connects. This does not include PiCo).

/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 Dynam-EC 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>` Different Dynam-EC 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 Dynam-EC to automatically load that system configuration file when it is run. Either a Dynam-EC Information File (***.hxdeci**) or a EHX Project File (***.hxn**) may be supplied, for example `C:\Program Files\ClearCom\ Dynam-EC \filename.hxdeci`
Project file	Including a Dynam-EC project (layout) path and filename (***.ccr**) within/outside (as required by your operating system) the quoted command line causes Dynam-EC to automatically load the project (layout) file when it is run.

Table 3-1: Command line options

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

4 Using Dynam-EC

This chapter describes how to use Dynam-EC, including:

- Opening and saving EHX Projects (***.hxn**), Dynam-EC information (***.hxdeci**) and Dynam-EC project files (***.ccr**).
- Navigating and using the palette and canvas screens, in the different operational modes (**Assignment**, **Alias**, **Configure Canvas**, **Configure Palette** and **EHX**).
- Configuring and managing conferences, preset conferences and Port Viewers.
- Configuring and controlling IFBs.
- Using **Settings** to control how conferences are configured and managed.
- Using **Port Viewers** to visually monitor and assign routing to and from four-wire ports, and also create IFB systems.
- Assigning **Alias labels** to conferences and Port Viewers.
- Using **audio level meters** to meter audio levels for conferences and four-wire ports in real-time.
- Using telephony interfaces to manage incoming and outgoing calls.

This chapter also provides a quick reference to color coding in Dynam-EC, and the main features of the Dynam-EC screen.

The use of audio level meters usually requires at least one LMC-64 audio metering interface card in a connected matrix. However, you can use an associated meter port, or use the command line to enable some audio metering without an LMC-64 (see section ***4.25 Using audio level meters (Clear-Vu ®)***).

To find out more about Dynam-EC as you work, see **Help** in the top right hand corner of your Dynam-EC screen.

4.1 Getting started with Dynam-EC

Before you can start configuring conferences, Dynam-EC must connect with the matrix (or matrices) using either a Dynam-EC Information file (***.hxdeci**) or an EHX Project File (***.hxn**) (See section ***4.2 Connecting to the matrices in an EHX***).

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, Dynam-EC will prompt the user to select the matrices that they wish to connect to.

When Dynam-EC connects to the matrices, it obtains the current active assignments from the matrix. All assignments made by Dynam-EC are sent directly to the matrix. You can now start to use Dynam-EC to configure conferences and IFBs.

If Dynam-EC loses the connection to the matrices:

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

For information about restoring lost connections, see section ***4.2.2 Restoring a lost connection***.

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

4.1.1 Quick reference to the Dynam-EC screen

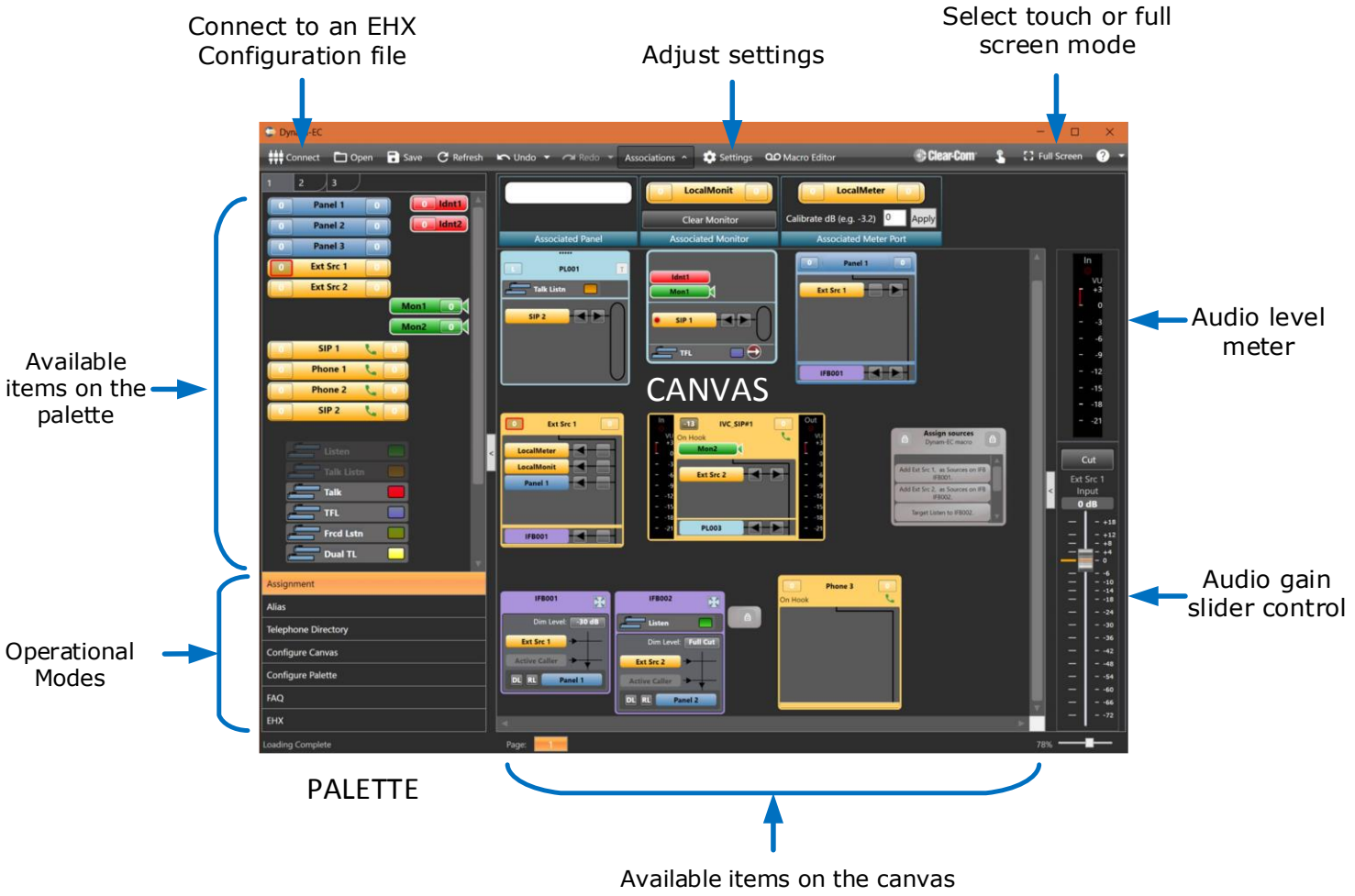


Figure 4-1: Quick reference to the Dynam-EC screen

4.1.2 Quick reference to color coding

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

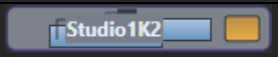
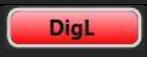
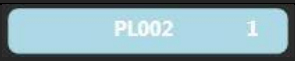
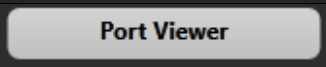
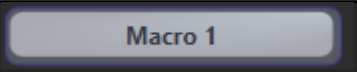
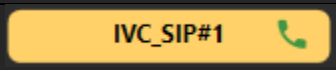
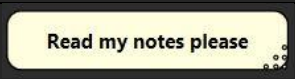
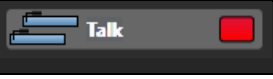
System component		Color coded icon
Four-wires and Port Viewers		
Panel		
Key group		
Split label port	Ident (Talk)	
	Monitor (Listen)	
Conference		
Preset conference		
Port viewer		
IFB		
Macro		
SIP Telephony		
Meter (Meter control shown)		
Note		
Alias label		
Keygroup		

Table 4-1: 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.

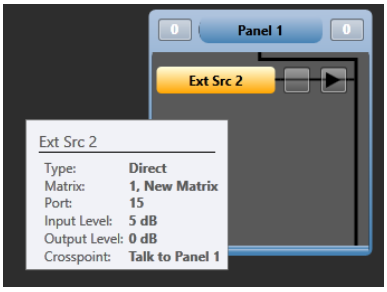
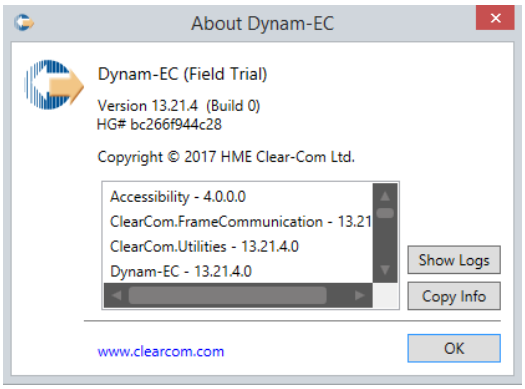


Figure 4-2: Example tool tip

4.1.4 Help

To find out more about Dynam-EC as you work, click the Help icon (?) 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 pane, search, or contents facilities.
Show meter status	Displays the status of the audio level meters (see section ***4.25 Using audio level meters (Clear-Vu ®)***).
About Dynam-EC	Version and logs information about Dynam-EC. 

Option	Description
	Figure 4-3: About Dynam-EC 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 Dynam-EC. 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 4-2: Help menu options

4.1.5 Frequently Asked Questions (FAQ)

Select FAQ on the palette to open a list of frequently asked questions.

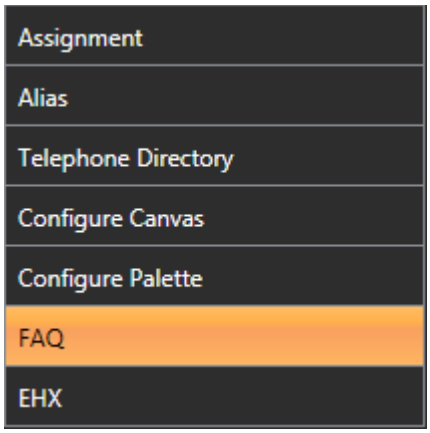


Figure 4-4 FAQ

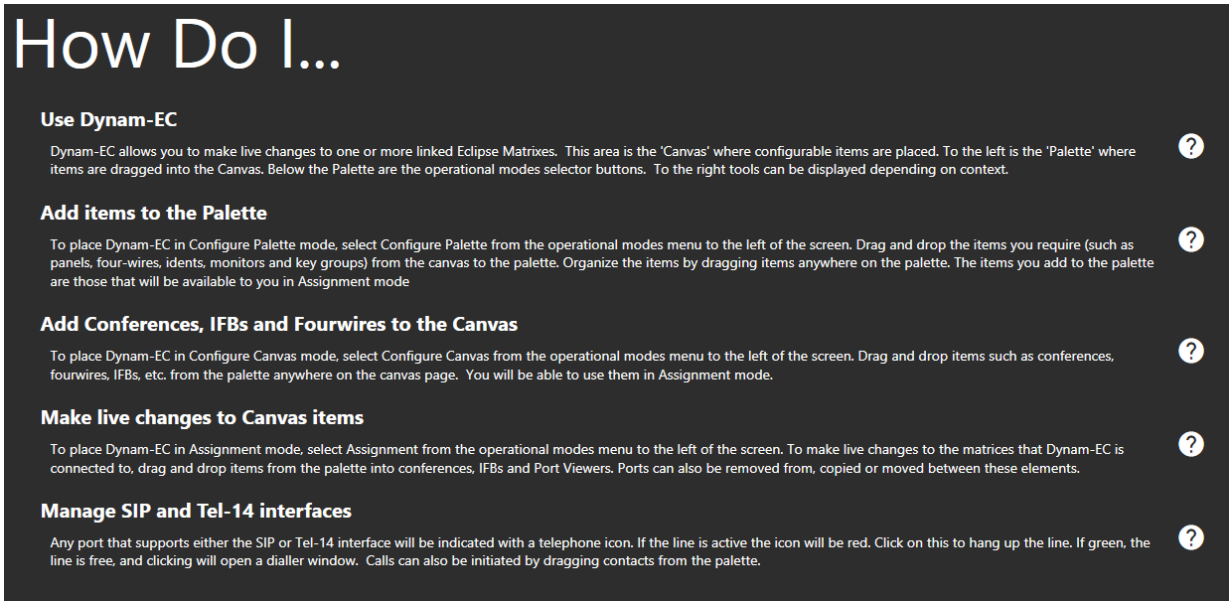


Figure 4-5 List of FAQs

4.2 Connecting to the matrices in an EHX system

Before you can start configuring and managing conferences, Dynam-EC must connect with the matrix (or matrices) Using either a Dynam-EC Information File (***.hxdeci**) 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 Dynam-EC Information File (***.hxdeci**) or EHX Project File (***.hxn**). The file format is pre-selected for the selection field.

3) Open the Dynam-EC 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, Dynam-EC will prompt the user to select the matrices 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 key groups is read **live** from the matrices. Dynam-EC clients are

automatically updated with any changes that are made to the configuration in EHX.

4.2.1 Generating a Dynam-EC Information File

A Dynam-EC Information File (***.hxdeci**) is a small file used specifically to provide information to Dynam-EC. Using the Dynam-EC 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 matrices they are interested in connecting to.

You can generate a Dynam-EC Information File from EHX by selecting **File** -> **Save Dynam-EC Information**.

4.2.2 Restoring a lost connection

If Dynam-EC 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 Dynam-EC 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>
```

Dynam-EC continues to attempt to reconnect indefinitely (or until the connection is restored).

When the connection is restored, Dynam-EC 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 Dynam-EC project file (***.ccr**) (also referred to as a layout file), stores the Dynam-EC 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 Dynam-EC (see section **4.1 Getting started with Dynam-EC***).*
- The alias level or routing assignments made by Dynam-EC.

To open a Dynam-EC project file (***.ccr**):

1) Click **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.

4) Dynam-EC loads the layout information.

4.4 Saving a project (layout) file

To save a Dynam-EC project file (***.ccr**):

1. Click **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 Dynam-EC 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 Dynam-EC.

4.5 Refreshing information from the matrices

To reload the current device information from the connected matrices, click

Refresh in the toolbar in the top of the screen.

The information displayed by Dynam-EC is updated.

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, telephones and monitors) to conferences and Port Viewers.
- Remove / unassign items (usually by dragging the attached item away to a blank part of the screen) from conferences and Port 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.

Note: A range of prompts and restrictions can be set up in Settings, to help control the creation and management of conferences (see section ***4.24 Using the Settings screen***).

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

Use the **Control** key to select more than one item. You can also use the mouse to lasso multiple items.

4.7 Undoing and redoing

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

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

Clicking the **down arrow** associated with **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** in the toolbar at the top of the screen.

Clicking the **down arrow** associated with **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.

You can also press Control-Z to undo the last action, or Control-Y to redo the last action.

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 Port Viewers. Most configuration tasks are performed on the canvas, the main working area of Dynam-EC (see section ***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 a quick reference to the main features of the Dynam-EC screen, see section ***4.1.1 Quick reference to the Dynam-EC 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.

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 and hiding 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).

2) The mouse pointer tool changes to the double-headed arrow of the grab tool.

3) 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.

To hide the palette, click the gray rectangle on the right hand edge of the palette screen.

You can also hide the audio volume monitoring section by clicking the equivalent area to the right of the canvas.

4.9 Getting started with the canvas

The canvas screen is the larger right hand pane of the Dynam-EC screen. The canvas is the principal working area in Dynam-EC, 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 Port Viewers (see section ***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

For a quick reference to the main features of the Dynam-EC screen, see section ***4.1.1 Quick reference to the Dynam-EC screen***.

4.9.1 Changing between page views

In **Assignment, Alias** and **Configure Canvas** modes, you can select between 12 different canvas pages. The selected page is highlighted in orange.

Figure 4-6 The Configure Canvas page buttons

To add and remove pages, select **Configure Canvas,** and use the **Add Tab** (green) and **Remove Tab** (red). The following apply:

- If you add a page it always appears as the last page.
- You can only remove the last page. If this page contains items, a warning appears. If you continue, all items on the page are deleted. You cannot remove earlier pages, even if they are selected (orange button).
- The last page is removed even if it is not the selected page (orange button).

You can also press Control+# to select a page, where # is the page number (1 to 10).

The page views are saved as separate **.CCR** files.

You can use background images on each page. For more information, see section ***4.9.3 Changing the canvas background image***.

4.9.2 Renaming canvas pages

You can only rename page buttons from the **Configure Canvas** page.

To rename canvas pages:

1) Select **Edit Canvas Names**.

   All the page buttons become text boxes.

2) Rename the required page buttons.

3) Select **Confirm Canvas Names**, to complete renaming.

4.9.3 Changing the canvas background image

You can replace either or both default background images with your own customized image file(s) (for example, an image that displays your company logo, user set up instructions, or conference information). To do so, name your customized files as follows and copy them to the Dynam-EC installation directory:

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

Table 4-3: Default canvas background image files

Before you can copy your customized images to the installation directory, you must have administrator access rights.

You must close and restart Dynam-EC before the changes take effect.

4.9.4 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. The canvas opens at 100% by default.
- Double-clicking the canvas.

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

4.9.5 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** a**nd *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** in the toolbar at the top right of the screen.

4.11 Optimise for touch

To select touch screen mode, click **Optimise for touch** in the toolbar at the top right of the screen. To return to normal mode, click **Optimise for Mouse** at the bottom right of the screen.

4.12 Operational modes

The configuration tasks you can perform in Dynam-EC vary according to the selected operational mode.

Operational mode	Summary
Assignment	Use **Assignment** mode, the main operational mode in Dynam-EC, to assign items (such as panels, four-wires, idents, monitors, key groups and meters) to conferences and Port Viewers in real-time. In Assignment mode, you also configure and assign routes to virtual IFBs.
Alias	Use **Alias** mode to create and apply alias labels to conferences and Port Viewers.
Telephone Directory	Use the **Telephone Directory** to make or end telephone calls.
Configure Canvas	Use **Configure Canvas** mode to locate, organize and size conferences, preset conferences, and fixed Port Viewers on the canvas. You can also apply a meter control to conferences and Port 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 key groups) that you require for configuring conferences, IFBs and Port Viewers in Assignment mode. Add the required items to the palette. Use the palette tabs to create different sets of items.
FAQ	Use **FAQ** to access a list of frequently asked questions.
EHX	Use **EHX** to automatically start the EHX Configuration Software, or switch to an active instance of the software. EHX also contains a button to start or switch to Dynam-EC.

Table 4-4: Summary of operational modes

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 section ***4.24 Using the Settings screen***.

4.12.1 Configure Palette mode

To place Dynam-EC 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.

In **Configure Palette** mode, the canvas lists all the available items (panels, four-wires, idents, monitors, and key groups) 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 Port Viewers in real-time (see section ***4.12.4 Assignment mode***).

Organizing and searching for items on the Configure Palette canvas

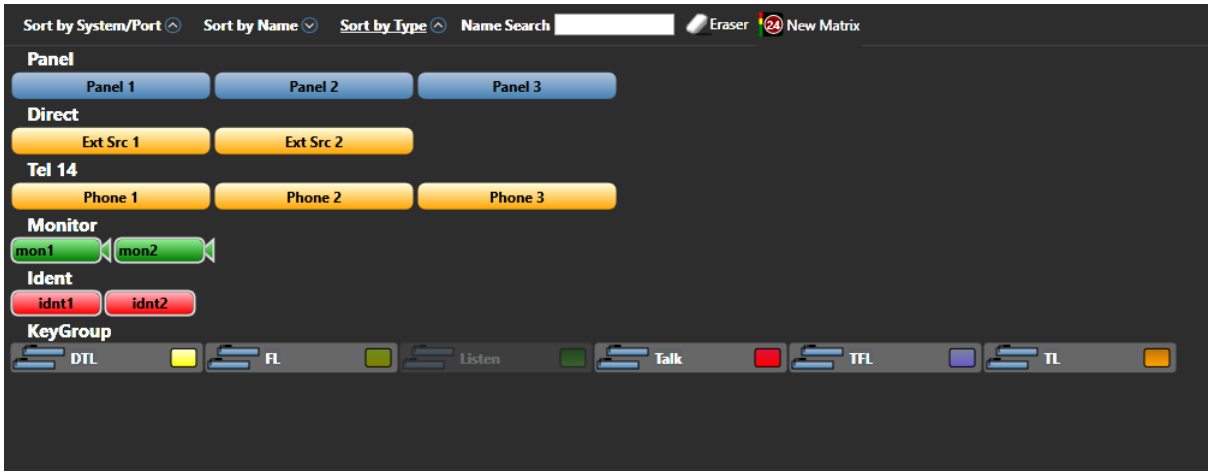


Figure 4-7: Configure Palette canvas (Sorted by System / Port)

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 Type**.

The **Sort by Type** button is underlined in white.

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**. The **Sort by Name** button is underlined in white.

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**. The **Sort by Type** button is underlined in white.

The available items are:

- Organized by type (for example, Panel, Direct (four-wire), Ident, Monitor, Key group, FreeSpeak® Beltpack Role or FreeSpeak II™ 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**.

The matching item(s) are listed onscreen.

Eraser tool and Meter tool

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

Use the Eraser tool to roll back the changes that are made to conferences and IFBs in Dynam-EC. For more information about the Eraser tool, see section ***4.17 Erasing changes to conferences***.

The Meter tool is used for adding a meter to a four-wire on the palette. For more information, see section ***4.25.1 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 key groups) 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 section ***4.12.4 Assignment mode***).

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 at the top of the palette screen.

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

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

4.12.2 Configure Canvas mode

To place Dynam-EC 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 mode is used to locate, organize and size conferences, preset conferences, and fixed Port Viewers on the canvas. You can also add, remove and re-order canvas pages, and apply meters to conferences and Port Viewers. You can add notes (such as instructions or reminders) to the canvas.

Using the Configure Canvas palette

The **Configure Canvas** palette is divided into five tabbed sections: **Conferences**, **four-wires**, **IFBs, Macros** and **Other**.

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

Four-wires lists all the *fixed* four-wires that you can add to the canvas as fixed Port Viewers.

IFBs lists all the IFBs that you can add to the canvas.

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

Macros lists all the macros that you can add to the canvas. Double-click the macro to make it active in the macro viewer.

The **Other** tab contains:

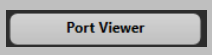
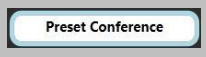
Facility	Comments / Description
Port Viewer []	Drag to the canvas to create an unassigned Port Viewer. You can assign four-wires to this Port Viewer in **Assignment mode** (see section ***4.12.4 Assignment mode***)
Meter control []	Drag to the canvas to assign a meter to a fixed four-wire. (see section ***4.25 Using audio level meters (Clear-Vu ®)***)
Preset conference []	Drag to the canvas to create a preset conference. For more information about preset conferences, see section ***4.15 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 4-5: Other tab facilities

Moving and resizing items on the canvas

You are free to move the conferences, Port 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, Port Viewer or preset conference, drag the dotted edge of the item.

You can only resize if the checkbox in **Settings > General > Fixed Size Viewers** is unchecked.

The location and size of the conferences, Port 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.

4.12.3 Alias mode

To place Dynam-EC in **Alias mode**, select **Alias** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in orange.

In Alias mode, the palette is used to create and assemble **alias labels** for assignment to conferences, IFBs and Port 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 Port Viewer on the canvas.

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

Alias mode in Dante enabled networks

If the matrix that Dynam-EC is connected to forms part of a Dante network, and if **Dante Auto Alias Updates** is enabled in the EHX configuration software, the following applies:

- Dynam-EC automatically displays the Dante alias updates.
- For any Dante port that has **Dante Auto Alias Updates** enabled, Dynam-EC cannot assign its own alias label.
- For any Dante port that has **Dante Auto Alias Updates** enabled, Dynam-EC cannot remove the Dante alias label.
- For split ports, Dynam-EC can only assign alias labels if the port is also a split port in the Dante network.

4.12.4 Assignment mode

To place Dynam-EC in **Assignment mode,** select **Assignment** from the **operational modes** menu to the left of the screen.

The selected mode is highlighted in orange.

Assignment mode is the main operational mode for Dynam-EC, where assignments and other live changes (such as creating a temporary connection with the Assigned Panel) are made to conferences and Port Viewers in real-time.

Assigning items to conferences and Port Viewers

The items on the Assignment mode palette (such as panels, four-wires, idents, monitors and key groups), including the number of tabs, correspond to your configuration of the palette in **Configure Palette** (see section ***4.12.1 Configure Palette mode***).

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 Dynam-EC is connected to, drag and drop:

- Items from the palette into conferences, IFBs and Port Viewers.
- Items from one conference, IFB or Port Viewer to another.
- Conferences into preset conferences.

If you assign a direct four-wire to a conference using Dynam-EC 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 key groups) to conferences or Port 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 Port Viewer, the **Copy icon** is displayed.

Figure 4-8: Copy icon

If you click an item in a conference or Port Viewer and drag it (move it) to another conference or Port Viewer, the **Move icon** is displayed.

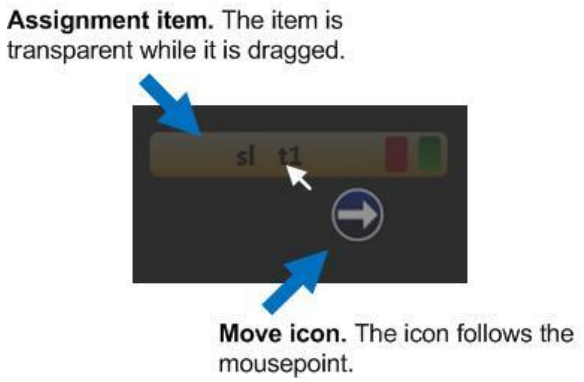


Figure 4-9: Move icon

If you want to copy (rather than move) an item from one conference or Port Viewer to another, then ***right click*** the item and drag. The **Copy icon** is displayed (see section ***Figure 4-8: Copy icon***).

If you want to make an **exclusive assignment** from the palette to a conference or Port 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** Port Viewers to which they have been assigned).

Key groups are removed from both conferences and Port Viewers.

Figure 4-10: Exclusive assignment icon

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

4.12.5 Telephone directory

To place Dynam-EC in **Telephone Directory mode,** select **Telephone Directory** from the **operational modes** menu to the left of the screen.

You can use the telephone directory to make and end SIP and TEL-14 calls. For more information, see **4.27 Managing SIP and TEL-14 telephone interfaces**.

4.13 Viewing and running macros

From the canvas, you can view and run macros. The macros are represented on the canvas by macro icons. Each macro icon has a play forward and a play back button. These are locked, and before running a macro forwards or backwards, you must click the button to unlock it.

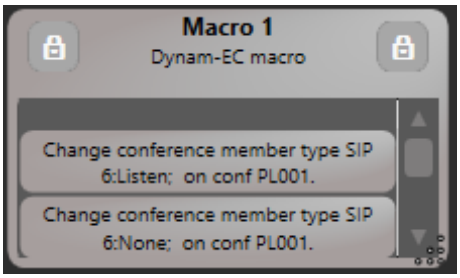


Figure 4-11 Macro icon with locked buttons

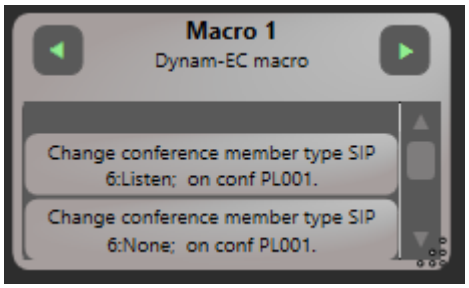


Figure 4-12 Macro icon with unlocked buttons

To run a macro forwards or backwards, click the right-hand or left-hand arrow respectively.

For information about creating and editing macros, see **4.28 Macro Editor**.

4.14 Controlling input and output levels

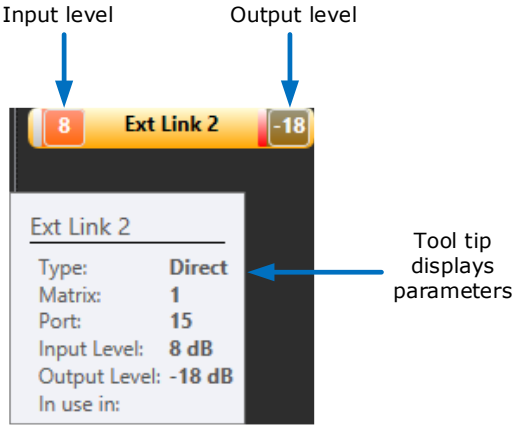


Figure 4-13: Input and Output levels

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 and the (input) level of monitors is also displayed when they are assigned to conferences (but not Port Viewers).

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

4.14.1 Increasing or decreasing levels

The ability to adjust the levels on panels, four-wires, idents and monitors is enabled in **Settings** (see section ***4.24.1 Configuring prompts and other settings***).

To change the **input level** of the panel or four-wire (for example, a four-wire), do one of:

- Roll the mouse wheel over the selected **left-hand** level display.
- Click on the left-hand level display, and use the slider control on the right hand side of the canvas.

To change the **output level** of the item (for example, a four-wire), do one of:

- Roll the mouse wheel over the selected **right-hand** level display.
- Click on the right-hand level display, and use the slider control on the right hand side of the canvas.

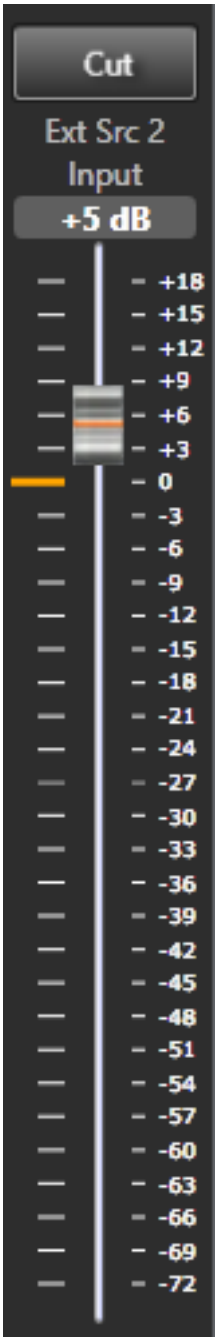
For idents and monitors, where only one level is displayed, do one of:

- Roll the mouse wheel over the level display.
- Click on the level display, and use the slider control on the right hand side of the canvas.

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

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

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



You can adjust the slider control by dragging the slider with a mouse.

You can also position the mouse cursor anywhere in the slider area and use a mouse wheel to increase or decrease volume.

To cut the audio, select **Cut** at the top of the slider control.

> You can also use the slider control to change the audio levels of IFB inputs and outputs. See section ***4.26.3 Adjusting audio levels***.

Figure 4-14 Slider control

4.14.2 Cutting levels

To instantly set the level to **Cut** (**-72dB**), double click the level on the item, or click the **Cut** button above the slider control. To restore the level to its previous level, double click the level on the item again. You can also set the level to **Cut** (**-72dB**) using the **Cut** button above the volume slider control.

4.14.3 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.

This feature is only available provided that the PC running Dynam-EC is on the same network segment 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 section ***4.25.1 Adding a meter to a four-wire on the palette***.

4.15 Preset conferences

Dynam-EC enables you to create preset conferences 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 key group (erasing existing four-wire members).

Preset conferences are only created within Dynam-EC 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 onto the canvas.

   Note: For more information about **Configure Canvas mode** and the **Other** tab in the palette, see section **4.12.2 Configure Canvas mode**.

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

1) Go to Alias.

   Type the name of the label **(up to 10 characters)** into the blank label area.

2) Drag the alias label to the preset conference.

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

For more information about **Alias mode**, see section ***4.12.3 Alias mode***.

To assign items (such as four-wires, monitors, idents and key groups) 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:

1) Go to Assignment.

2) Drag and drop the 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.

For more information about **Assignment mode**, see section ***4.12.4 Assignment mode***.

4.15.1 Using Drag as Preset with conferences

You can use existing conferences 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.

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.

4.15.2 Using Drag as Preset with preset conferences

You can also use **Drag as Preset** to copy an existing conference to a 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.

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.

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 that had been assigned to the preset conference is deleted.

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

4.16 Filtering members in conferences

The ability to filter members in conferences is enabled in **Settings** (see section ***4.24.1 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 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.

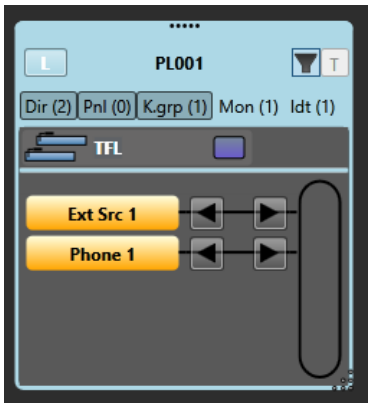


Figure 4-15: Filtered conference

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.

4.17 Erasing changes to conferences and IFBs

The **Eraser** is used to reset conferences to the EHX configuration default, erasing any changes that were made in Dynam-EC. You can also use the eraser tool to remove IFBs

To use the Eraser:

1) In **Configure Palette**, drag the Eraser from the **Configure Palette** toolbar (directly above the canvas) onto the palette.

2) In Assignment:

   a. Drag the Eraser to a conference to erase the assignments you made in Dynam-EC.

b. Drag the eraser to an IFB. You can erase an entire IFB or only erase sources, destinations and retuns.

If you select **Settings > General > Eraser leaves monitors, idents and alias names**, any idents, monitors and alias labels that you added to the conference are preserved when you use the Eraser. All other items are erased as usual.

If you select **Settings > General > Prompt when erasing conferences**, a prompt is displayed asking you to confirm the erasure operation.

For more information, see section ***4.24.1 Configuring prompts and other settings***.

4.17.1 Erasing changes to preset conferences

If you apply the Eraser to a preset conference, and then add that preset conference to an existing conference, the members are erased and then replaced with the members of the preset conference.

Preset conferences are only created within Dynam-EC are **not** sent to the matrix. Only when they are applied to **existing** conferences are changes sent to the matrix.

For more information about preset conferences, see section ***4.15 Preset conferences***.

The eraser also applies to IFBs. You can erase an entire IFB, or only erase sources, returns and destinations.

4.18 Controlling Talk and Listen arrows

Clicking a **Talk / Listen** arrow turns it off. The arrow is no longer displayed on the panel or four-wire.

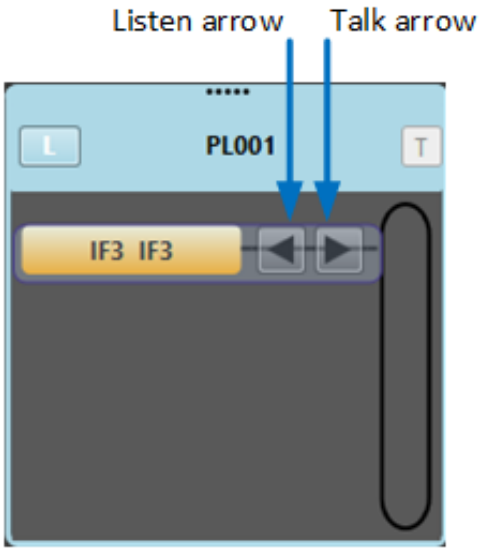


Figure 4-16 Talk and Listen arrows

Permanent members of a conference cannot have their Talk/Listen arrow turns off. This can only be done in EHX.

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

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

If you turn off both the Talk and the Listen arrows, the panel or four-wire is effectively excluded from the conference or Port 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 Port Viewer.

Idents and monitors (split label ports) do not display Talk / Listen arrows (see section ***4.19 Idents and monitors (split label ports)***).

Key groups 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 key group in Dynam-EC.

4.19 Idents and monitors (split label ports)

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

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

Note: You can configure the colors from **Settings > General > Show monitor in green**.

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

  However, idents are always treated as **Talk only** in Dynam-EC.

- Four-wires.

You can assign the ident and monitor parts of a split label as separate items to a conference, IFB or Port 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 Port 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 Port 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.

Turning off a Talk / Listen button on the four-wire will also result in the ident / monitor disappearing from the top of the Port 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 Port Viewer.
- The Talk or Listen button reappears on the four-wire in the membership list.

For more information about Talk and Listen buttons, see section ***4.18 Controlling Talk and Listen*** .

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

For more information about Port Viewers, see section **4.20 Port Viewers**.

4.20 Port Viewers

Port Viewers enable you to visually monitor routing to and from a four-wire port, and also to assign entities to four-wires (sometimes known as **XY routing**). An entity can be a four-wire, panel, telephone, ident or monitor.

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

- A **pre-populated** Port Viewer by dragging to the canvas one of the four-wires listed under the **Configure Canvas > Directs**.

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

- An **unpopulated (empty)** Port Viewer by dragging to the canvas the Port 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.

For more information about creating Port Viewers, see section ***4.12.2 Configure Canvas mode***.

The Port Viewer displays:

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

Figure 4-17: Port Viewer (conferences and port connections)

The connections list of the Port 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 key group) to the monitored four-wire, drag and drop the item into the Port Viewer.

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

The matrices are updated by Dynam-EC with the new configuration.

You can copy, move, or exclusively assign panels, four-wires, idents, monitors or key groups to a Port Viewer. For more information about making assignments, see section ***4.12.4 Assignment mode***.

You can assign an alias label to a Port Viewer in exactly the same way as conferences. For more information, see section ***4.12.3 Alias mode***.

For more information about using audio meters with Port Viewers, see section ***4.25 Using audio level meters (Clear-Vu ®).***

4.20.1 Remote crosspoints display

Dynam-EC displays **remote** crosspoints (crosspoints that are remote to the matrices that Dynam-EC is connected to) in the Port Viewer in the same way as **local** crosspoints.

4.21 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) From the toolbar, select **Meters**, and drag and drop a panel from the palette onto the **Associated Panel** segment of the **Meters** screen. The panel is now an **Associated Panel**.

Figure 4-18: Example Associated Panel segment

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

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

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

4.22 Setting up an associated monitor

You can associate a monitor with a Dynam-EC session. Usually, this will be a speaker unit (monitor split port).

1) Drag and drop the monitor port onto the **Meters > Associated Monitor** area.

2) You can adjust the input and output volume by selecting the right-hand or left-hand area respectively and then using the mouse wheel or the audio slider control.

If **Hide cursor metering** is not selected (default), you can select **Monitoring Enabled** to the right of the canvas and this will route any dynamically metered audio to the associated monitor port as well as to the meter.

4.23 Setting up an Associated Meter Port

You can use a four-wire port as an audio meter, connected directly to the PC running Dynam-EC, when you assign that four-wire port to **Associated Meter Port** status. This is useful if you do not have an LMC 64 card fitted in your matrix.

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 Dynam-EC.

   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 4-6: Four-wire port to 3.5mm microphone jack on the PC

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 Dynam-EC as **audio meter zero**.

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

4.24 Using the Settings screen

The **Settings** screen is used to:

- Enable prompts and various other settings that help you manage the configuration of conferences.
- Select what is visible on the canvas in IFB display modes

To open the **Settings** screen, select **Settings** in the toolbar. You can now select:

- General
- IFB Display
- Advanced

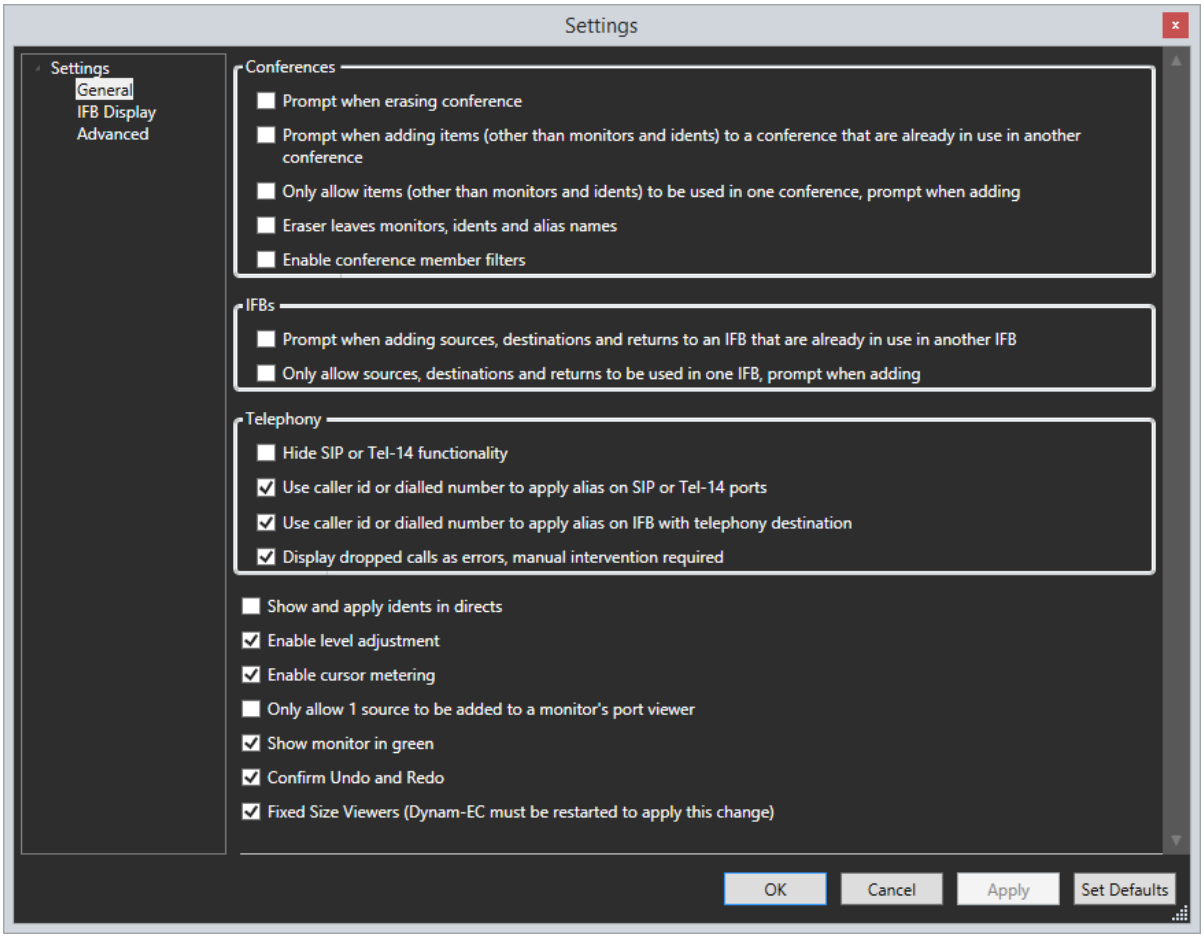


Figure 4-19General settings

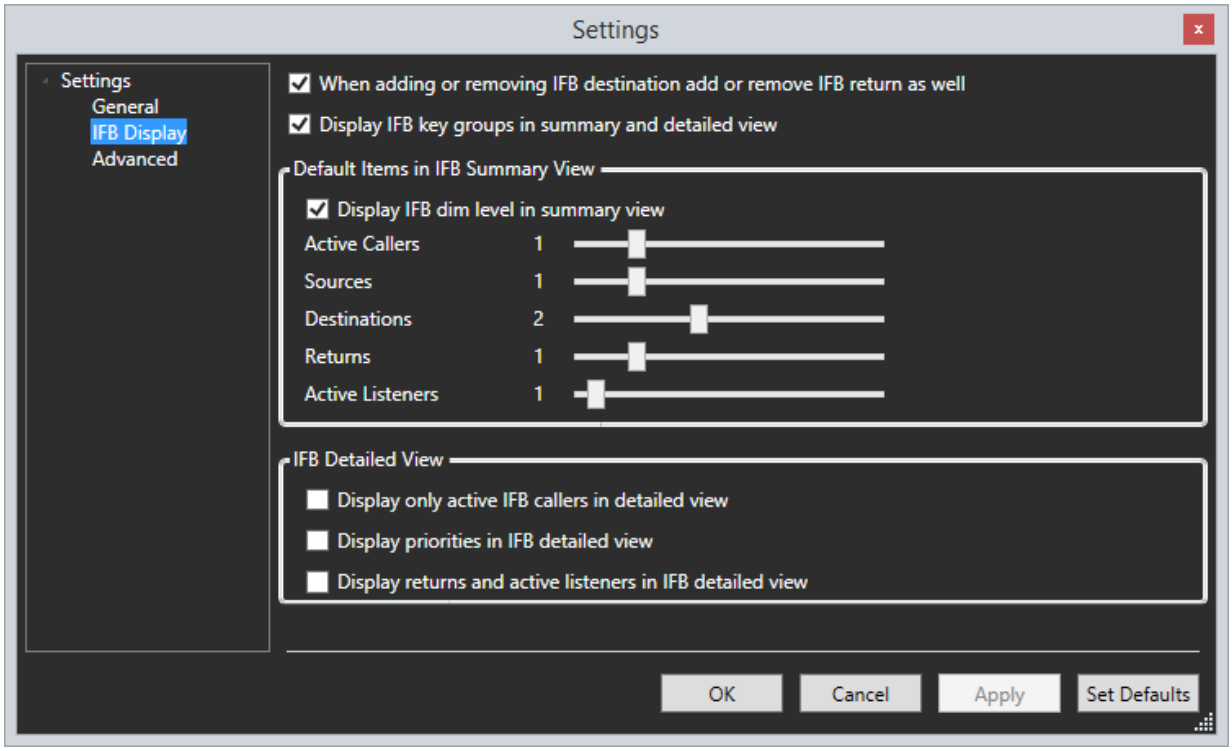


Figure 4-20 IFB Display settings

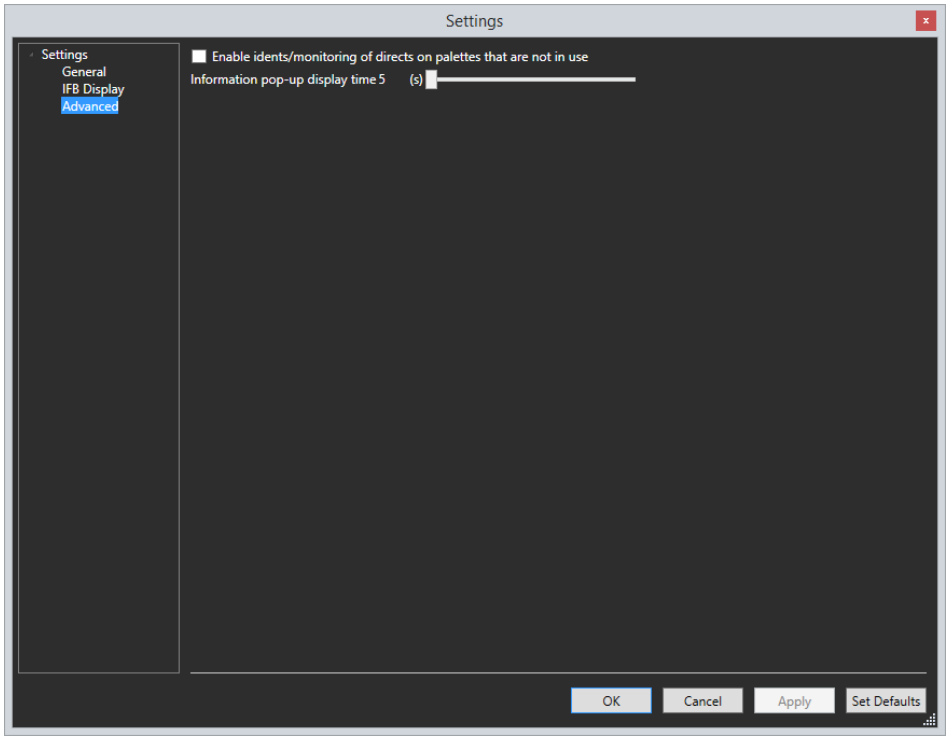


Figure 4-21 Advanced settings

4.24.1 Configuring prompts and other settings

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

To select or deselect a setting, click the checkbox next to it.

The list of settings comprises:

General	Comments / Description
Prompt when erasing conference (default: off)	The **Eraser** is used to reset conferences to the EHX configuration default, erasing any changes that were made in Dynam-EC. 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.

General	Comments / Description
	To leave the conference unchanged, click **Cancel**. To continue with the erasure, click **Erase**. For more information about the Eraser, see section ***4.17 Erasing changes to conferences***.
Prompt when adding items (other than monitors and idents) to a conference that are already in use in another conference (default: off)	A dialog is displayed to warn you that items you want to add to a conference (such as panels and four-wires), are already in use by another conference. To cancel the item assignment, click **Cancel**. To complete the assignment, click **Apply anyway**. 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 (default: off).	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 (default: off).	When you use the **Eraser Tool** 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 Dynam-EC are erased. For more information about the Eraser, see section ***4.17 Erasing changes to conferences***.
Enable conference member filters (default: off)	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 section ***4.16 Filtering members in conferences***.

General	Comments / Description
	Filtering members is part of the conference configuration process. You can only use member filtering in **Configure Canvas** mode.
Prompt when adding sources, destinations and returns to an IFB that are already in use in another IFB.	Displays a warning if you add sources, destinations or returns to an IFB if they are used in a different IFB. You can either cancel or copy the entity to another IFB.
Only allow sources, destinations and returns to be used in one IFB, prompt when adding.	Displays a warning if you add sources, destinations or returns to an IFB if they are used in a different IFB. You can move to the new IFB removing it from the old IFB or cancel the change.
Hide SIP or TEL-14 functionality	You can choose not to display SIP or TEL-14 information.
Use caller id or dialled number to apply alias on SIP or TEL-14 ports.	Enables you to specify whether aliases apply to SIP or TEL-14 ports.
Use caller id or dialled number to apply alias on IFB with telephony destination.	Enables you to specify whether aliases apply to IFBs with a telephony destination.
Display dropped calls as errors, manual intervention required.	When enabled, a dropped call appears as an error notification.
Show and apply idents in directs (default: off)	An ident is applied and displayed on four-wires / panels used in conferences.
Enable level adjustment (default: on)	Enables you to adjust the audio levels on panels, four-wires, monitors and idents (see section ***4.14 Controlling input and output levels***).
Enable cursor metering (default: off)	Allows you to visually monitor audio from an associated monitor.
Only allow 1 source to be added to a monitor's port viewer (default: off)	To prevent issues arising from competing audio sources, you can restrict the number of sources that can be added to a monitor in a Port Viewer to a single audio source.
Show monitor is green (default: on)	Displays monitors as green.
Confirm Undo and Redo	Displays a warning for Undo and Redo.

General	Comments / Description
Fixed Size Viewers (PM must be restarted to apply this change)	Allows you to specify whether port viewers and conferences can be resized. To apply the change, you must save the layout, restart PM and then open the saved layout. Now the change will be visible.
User caller ID or dialled number to apply alias on IFB with telephony destination.	Allows a telephone contact alias to apply to an IFB that has a telephony port as a destination.

IFB	Comments / Description
When adding or removing IFB destination add or remove IFB return as well (default: on)	Automatically creates an IFB return to the caller.
Display IFB key groups in summary or detailed view (default: on)	Allows you to see the IFB key groups on the canvas.
Display IFB dim level in summary view	Allow you to display or hide IFB dim level in summary view.
Number of active callers displayed	Allows you to use slider controls to determine how many entities are displayed in IFBs in summary view.
Number of sources displayed	
Number of destinations displayed	
Number of returns displayed	
Number of active listeners displayed	
Display only active IFB callers in detailed view (default: off)	Allows you to hide potential callers in detailed view.
Display priorities in IFB detailed view (default: off)	Allows you to show or hide priorities in detailed view.
Display returns and active listeners in IFB detailed view	Allows you to show or hide returns and active listeners in detailed view.

Advanced setting	Comments / Description
Enable idents / monitoring of directs on palettes that are not in use	Enables you to assign idents and monitors] to four-wires on the palette, in both **Configure Palette** and **Assignment** modes.
Information pop-up display time	Enables you to specify how long pop-up notifications last.

Table 4-7: Settings

When you select **OK** from the **Settings** screen, the settings are saved locally. These settings reload automatically the next time that you start Dynam-EC. The settings are also stored in the .CCR file, and are applied every time you load the .CCR file.

To return to the system default settings, select **Set Defaults**.

4.24.2 Setting user restrictions in Administrator mode

When Dynam-EC is started in **Administrator mode** (see section ***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**).

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.

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 Dynam-EC 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, Port 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**.

Setting	Comments / Description
	The user continues to have **full control** of the conferences and Port Viewers already on the canvas. The user **can**: Assign items from the palette, and assign aliases. Remove items from both conferences and Port 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 Port Viewers, if they are not present on the palette. 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 appears 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 section ***4.25.7 Cursor meter***). This restriction may be imposed to prevent the unnecessary usage of system resources.
Restrict macro	The user cannot create or edit macros, but can use macros the already exist in the configuration file.

Table 4-8: User restrictions

4.25 Using audio level meters (Clear-Vu ®)

You can apply Clear-Vu ® audio level meters to conferences and four-wire ports in real-time with Dynam-EC. 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.

You can set up a single audio meter **without** an LMC-64 card in **Settings > Associated Meter Port**. For more information, see section ***4.23 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 Dynam-EC 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 Dynam-EC within the red circle of the meter.
- Updated on all Dynam-EC 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 Dynam-EC 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).

Dynam-EC 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* section ***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 0dB.

Table 4-9: Meter functions

4.25.1 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.

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

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.

4.25.2 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.

4.25.3 Adding a meter to a four-wire on the canvas (pre-populated Port Viewer)

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

You cannot add a meter to an unpopulated (empty) Port 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 section ***4.25.7 Cursor meter***).

For more information about pre-populated and unpopulated (empty) Port Viewers, see section 4.19 Idents and monitors (split label ports).

To add an audio meter to a four-wire on the canvas (pre-populated Port 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 Port Viewer.

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

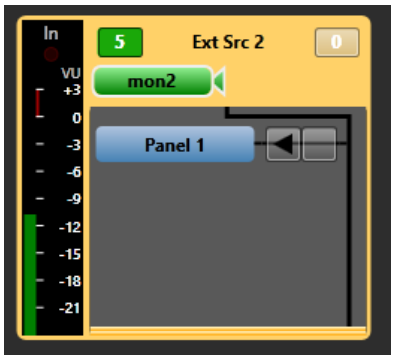


Figure 4-22: Pre-populated Port Viewer with input meter

4) To add an **output** meter, drag the meter control to the **right-hand** side of the pre-populated Port Viewer.

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

Figure 4-23: Pre-populated Port Viewer with output meter

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.

4.25.4 Removing a meter from a four-wire on the canvas (pre-populated Port Viewer)

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

1) Go to **Configure Canvas**.

2) Drag the attached audio meter away from the Port Viewer and drop it on the canvas.

4.25.5 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 to the canvas.

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

3) To add the **output meter**, drag the meter control to the conference.

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

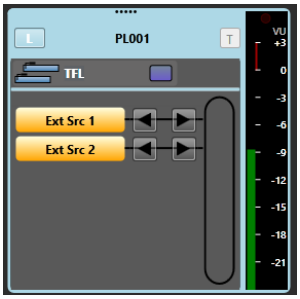


Figure 4-24: Conference with output meter attached

4.25.6 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.

4.25.7 Cursor meter

The cursor meter is used to dynamically meter audio levels while in **Assignment** mode.

In **Assignment** mode, if Cursor metering is enabled, and the monitoring enabled button is selected, any level control or monitoring point selected will trigger cursor metering:

- Move the cursor to the item you want to meter.
- To meter the input level of any port, select the level control to the left of the port name.
- To meter the output level of any port, select the level control to the right of the port name.
- To meter a conference, select the **L** control.
- To meter the return feed of an IFB, select the **RL** control, to listen to the IFB feed as heard by the destinations, select the **DL** control.

Unlike the fixed four-wire meters (see section ***4.25.3 Adding a meter to a four-wire on the canvas (pre-populated Port Viewer)*** the cursor meter allows metering of four-wires placed in a Port 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 mouse point. The meter icon follows the mouse point, wherever it is moved on the screen.

3) Move the meter over the item (the conference, four-wire or Port 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 Port 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 Port 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**.

4) 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.

5) The audio level is displayed on the scale to the right of the canvas screen.

6) To stop, minimise the metering area, or unselect the monitoring enabled button.

To prevent the unnecessary usage of system resources, system administrators can restrict users from using the cursor meter. See section ***4.24.2 Setting user restrictions in Administrator mode***.

4.26 Virtual Interruptible Foldbacks

Eclipse HX and above offers a new, much-enhanced architecture for interruptible foldbacks (IFBs). IFBs are now created and configured as virtual software entities

This section explains how to:

- Display IFBs
- Interpret the IFB information available within Dynam-EC
- Dynamically control and configure IFBs

Dynam-EC 9.1 uses virtual IFBs. These virtual entities have a number of advantages over more traditionally configured interfaces. They:

- Are easier to configure without the need for complicated cabling
- Support multiple sources, destinations and returns.
- Support multiple callers. The callers to the IFB destination, typically the talent such as a news anchor, are given a priority level from 1 – 5 (level 5 has highest priority).
- Allow members of a key group to trigger the IFBs.
- Allow monitoring of program feeds anywhere in the system without the need for patch panels. This enables troubleshooting of audio feeds.

A program feed is typically a mix of audio. Listeners at different locations hear different program feeds as required.

You create IFBs in the EHX Configuration Software. These IFBs are then visible within Dynam-EC, where you can configure them.

An IFB allows a caller to cut or dim the audio from a configured source to a configured destination. This is typically used in broadcasts where an anchor (destination) listening to a program feed (source) can be interrupted by a director (caller). The anchor will receive audio from the director while the program feed is either dimmed or muted. If the caller priority is set to 1, the audio is mixed with the program feed.

An IFB contains the following components:

- Source – the audio that is heard when the IFB is not triggered.
- Destination – where the audio is routed.
- Dim level – the extent to which the source audio is reduced.

- Caller – an audio source that triggers the IFB. The IFB destination now hears the Caller audio, and the Source audio in dimmed or muted according to the Dim level setting. Callers are prioritized from 1 (lowest) to 5 (highest) to determine who has precedence in the feed. The default priority is 3.
- Return/Listen:
  - A return listen enables the caller to hear the anchor/talent.
  - A destination listen can be used to monitor program feeds. The destination listen allows a caller to monitor the audio sent to the anchor.

Typical IFB use in a broadcasting scenario is illustrated in Figure 4-25 and Figure 4-26.

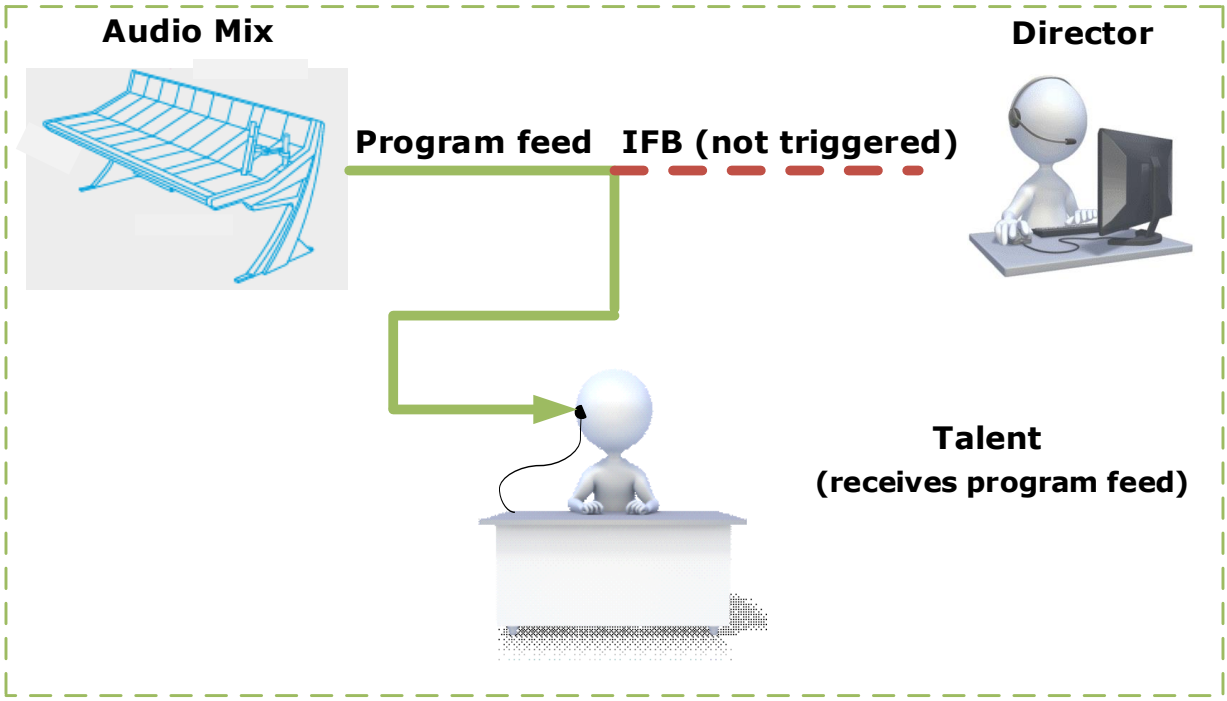


Figure 4-25 Broadcast scenario with no IFB trigger.

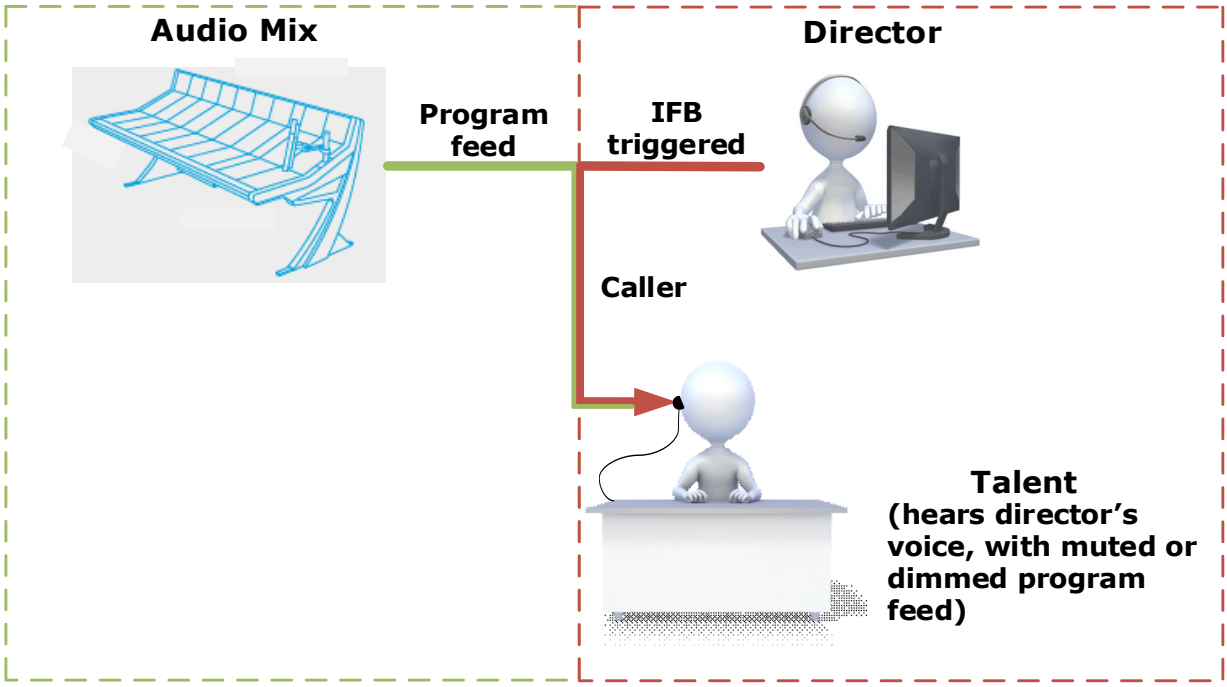


Figure 4-26 Broadcast scenario with IFB trigger

Audio mix

The program feed usually consists of a mix minus combination of audio. This means different listeners in the broadcast location are fed different audio mixes as required. Figure 4-27 shows a broadcasting application with audio mixing, where:

- **Mix minus 1** is Anchor 1 + Anchor 2 minus Remote
- **Mix minus 2** is Anchor 2 + Remote minus Anchor 1
- **Mix minus 3** is Anchor 1 + Remote minus Anchor 2

.

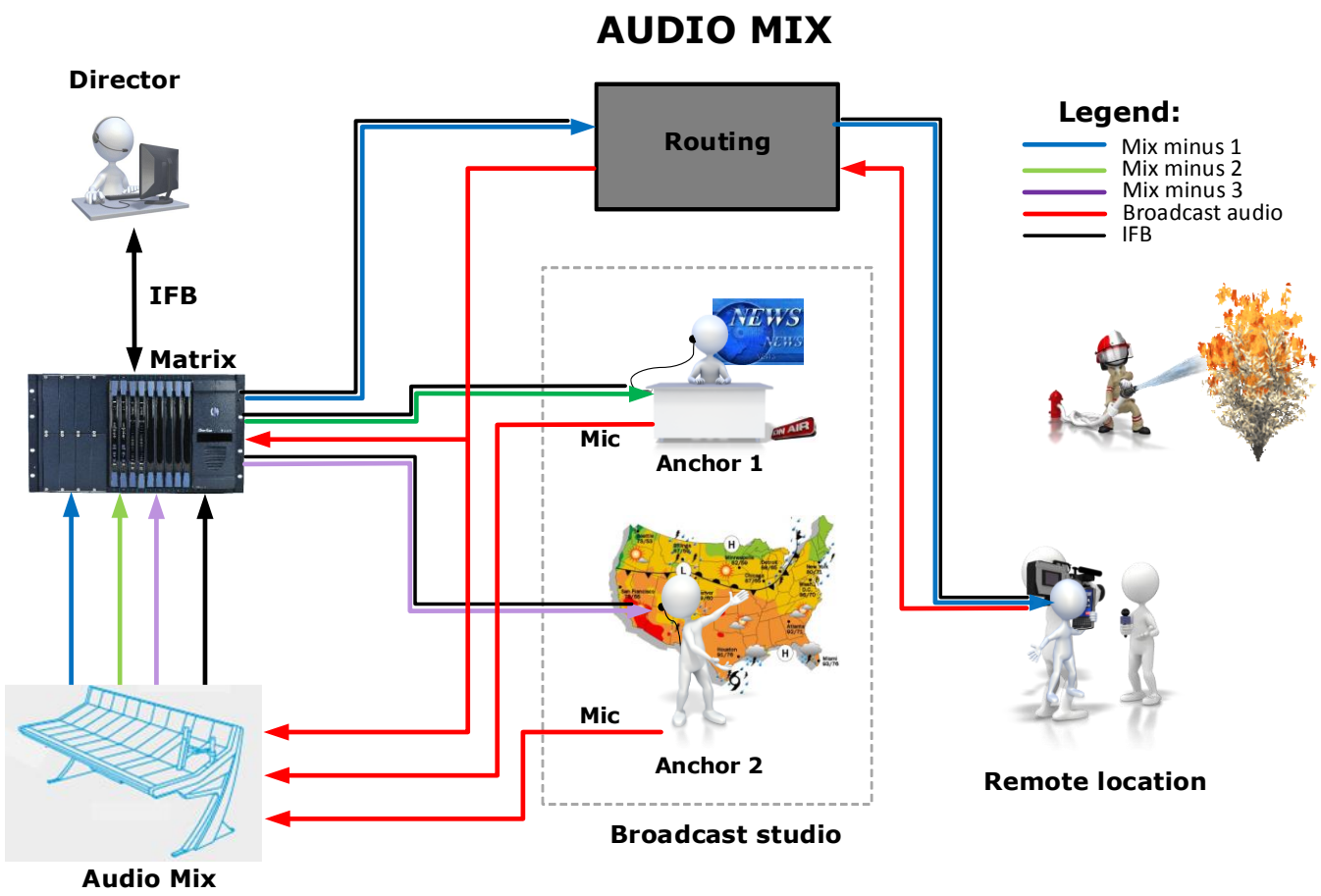


Figure 4-27 Audio mix in broadcasting application

4.26.1 Displaying and selecting IFBs

To display IFBs:

1) Select **Configure Canvas**.

2) At the top of the palette, select **IFBs**.

   A list of available IFBs appears.

Note: The IFBs that appear are created in the EHX Configuration Software. You can dynamically configure and route them from Dynam-EC.

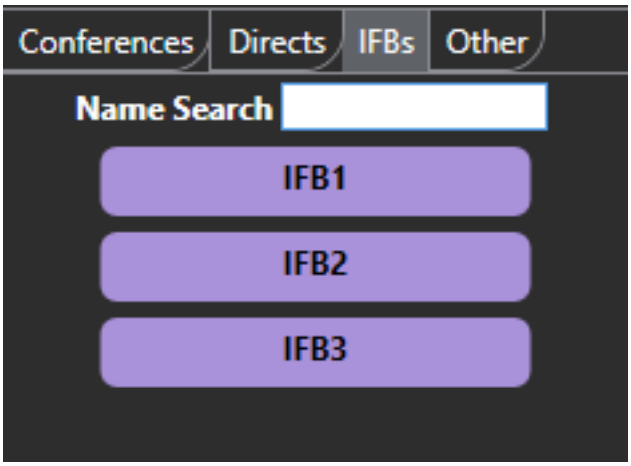


Figure 4-28 List of available IFBs

You can drag an IFB from the palette to the canvas in the same way as a conference or port viewer.

Note: Use the **Control** key to select more than one IFB.

4.26.2 Dragging IFBs to the canvas

If you drag an IFB to the canvas, it displays in summary view:

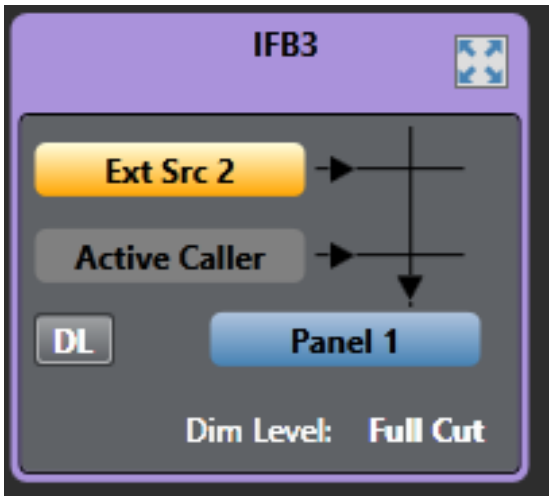
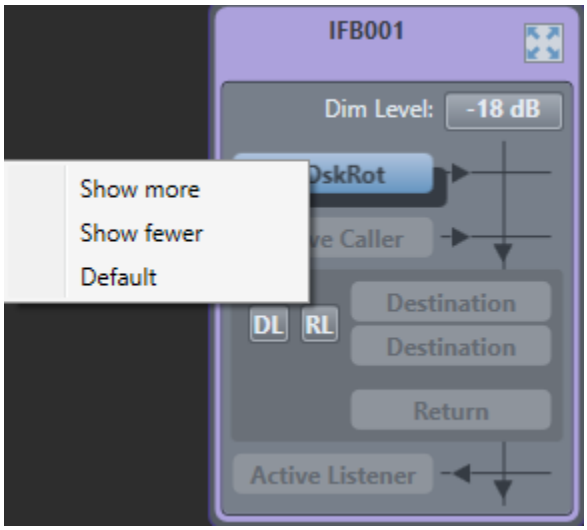


Figure 4-29 IFB in summary view

In **Assignment** or **Alias** mode, you can also display an IFB in detail view. See section ***4.26.4 Viewing an IFB in Detail view***.

If an IFB has more than one Source or Destination, the corresponding port on the IFB screen displays with a gray shadow.

If you right-click on the port, the following context menu appears:



Select **Show more** or **Show fewer** to make more or fewer sources and destinations visible.

You can also drag and drop a Key Group to an IFB from another IFB, a port viewer or a conference.

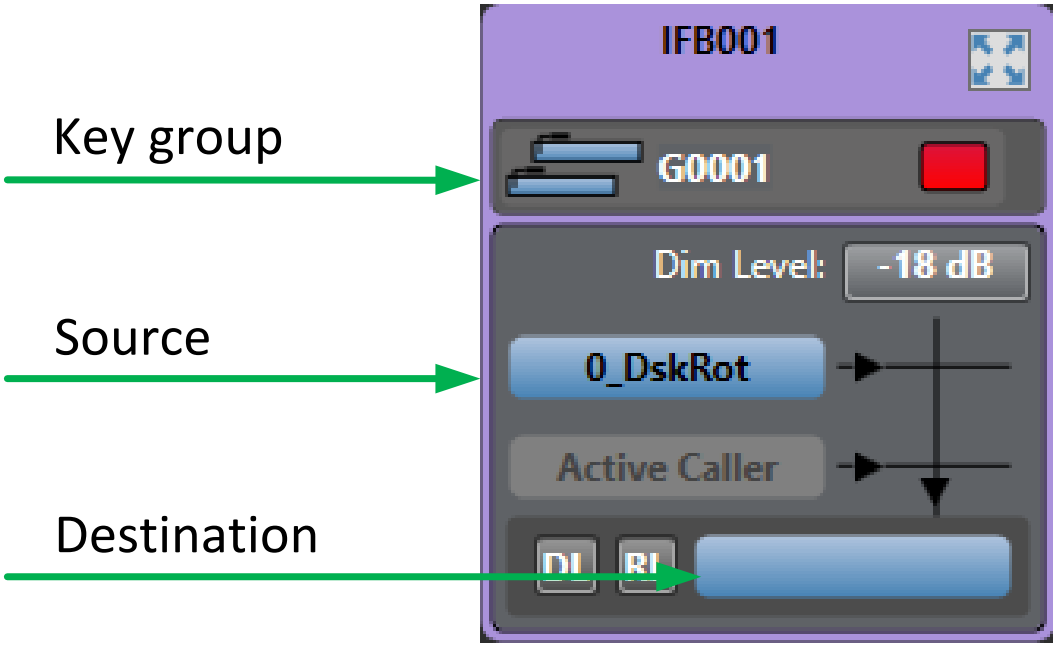


Figure 4-30 IFB with Key Group

The information displayed in the IFB in summary view depends on what you select in the **Settings > IFB Display > Default Items in IFB Summary View**. You can choose to view or hide:

- The IFB dim level

You can also use the slider controls to determine how many of the following appear:

- Active Callers
- Sources
- Destinations
- Returns
- Active Listeners

The IFB summary and Detailed views can show the current Active listeners for an IFB (configurable in the respective Settings areas). Active listeners are ports that are currently listening to the IFB, that is hearing the audio from the ports defined as Returns for that IFB. This only occurs if the listen is triggered via an IFB listen key or via a Route configured as Listen to IFB Return. It does not occur if a listen key to a port that is also configured as a Return is pressed.

For more information, see section **4.24 Using the Settings screen**.

All IFB elements can be located on different matrices.

If no trunk is available for a remote IFB element a message like the following is displayed in the Event log of the Matrix that owns the IFB.

The IFB on the PM canvas will also Pulse between its normal colour and a dimmed colour when there is a remote IFB element (Source, Caller etc.) that is not being routed due to no trunk being available.

When you have positioned your IFBs in the canvas, switch to **Assignment** mode to add or remove sources, destinations or returns.

To add a source, destination or return:

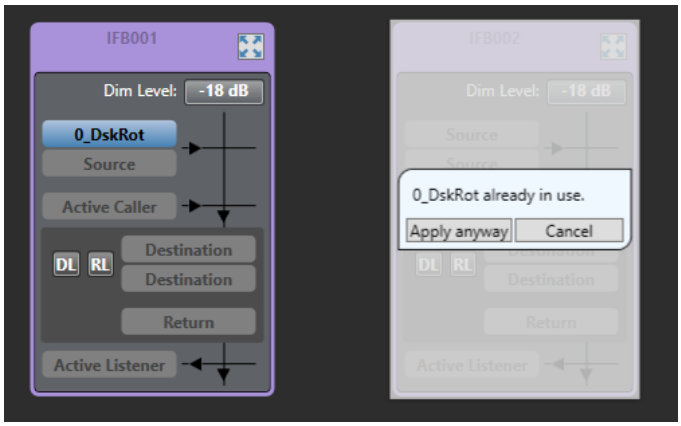
1) Ensure that Dynam-EC is in **Assignment** mode.

2) Drag the port from the palette to the source, destination or return area on the IFB. If one or more ports are already positioned on the source or destination area, they are replaced by the drag and drop. If it is dropped onto an empty IFB entity location (shown by a grayed port outline with the entity type written in it, for example Source) then it is added to the other assignments.

Note: Use the **Control** key to select multiple ports.

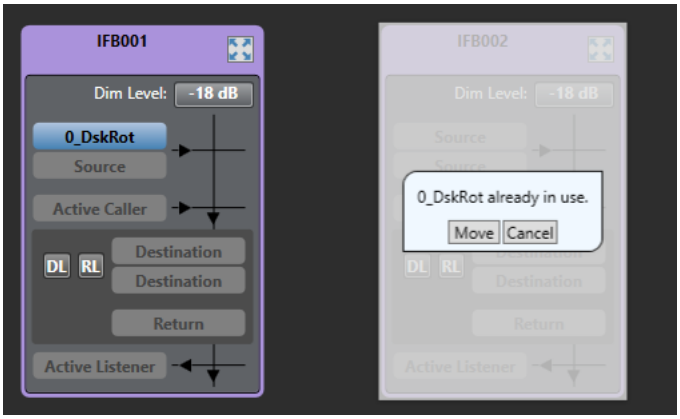
Note: Any port added as an IFB destination is automatically added to the IFB returns if this feature is enabled in **Settings**.

Note: If **Prompt when adding sources, destination or returns to an IFB that are already in use in another IFB** is enabled in the **Settings** screen under IFBs, a warning message appears if you attempt to add a port that is already used in another IFB:



3) Click **Apply anyway** to complete the assignment. The port will now be assigned to multiple IFBs. Or **Cancel**.

If **Only allow sources, destinations and returns to be used in one IFB, prompt when adding** is enabled in the **Settings** screen under IFBs, a warning message appears if you attempt to add a port that is already used in another IFB:



4) Click **Move** to complete the assignment or **Cancel**. Clicking **Move** will move the port from it's present position to the new IFB.

To remove a source, destination or return:

1) Ensure that Dynam-EC is in **Assignment** mode.

2) Drag the port from the source, destination or return area to the palette.

   If there is more than one source, destination or return, only the displayed port is removed.

4.26.3 Adjusting audio levels

From summary view, you can adjust the IFB dim level.

Ensure that you first select **Settings > IFB Display** and then select **Display IFB dim level in summary view.**

1) Select the **Dim Level**.

2) Use the dim level meter to adjust the dimming. You can either drag the slider control to the required level, or use your mouse wheel.

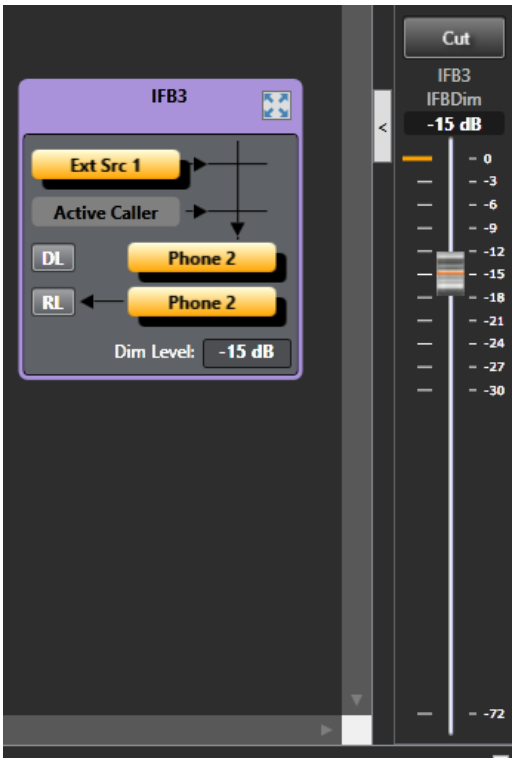


Figure 4-31 Dim level button and meter

If you have a monitor port, you can dynamically monitor the Destination Listen (DL) and Return Listen (RL), but you cannot adjust the audio levels. For more information, see section **4.22 Setting up an associated monitor**.

4.26.4 Viewing an IFB in Detail view

In **Assignment** view, you can open an IFB in Detail view. This shows an expanded version of the IFB. In this view you can see the audio crosspoints that exist in the IFB. To open an IFB in Detail view from summary view, either:

- Click on the expand button
- Double-click anywhere on the title area at the top of the IFB window.

Figure 4-27 and 4-28 show the IFB detailed views.

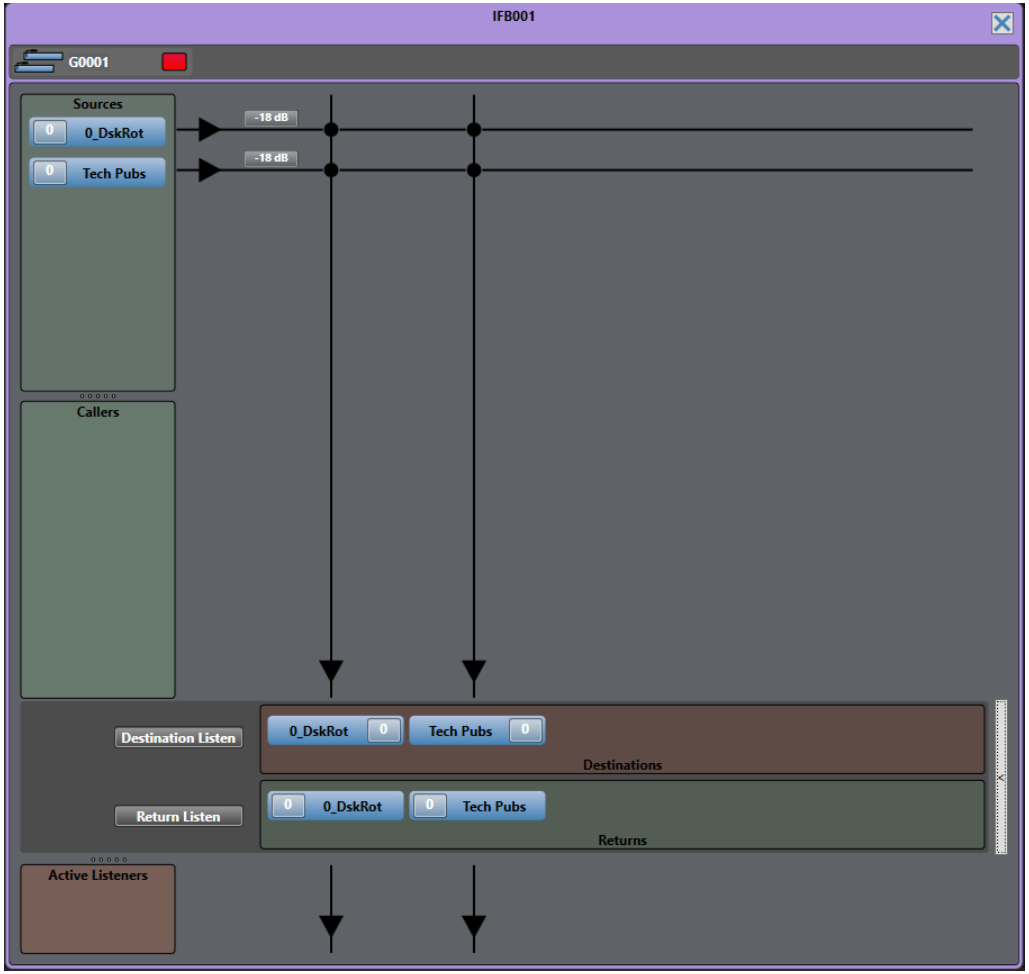


Figure 4-32 IFB in detailed view

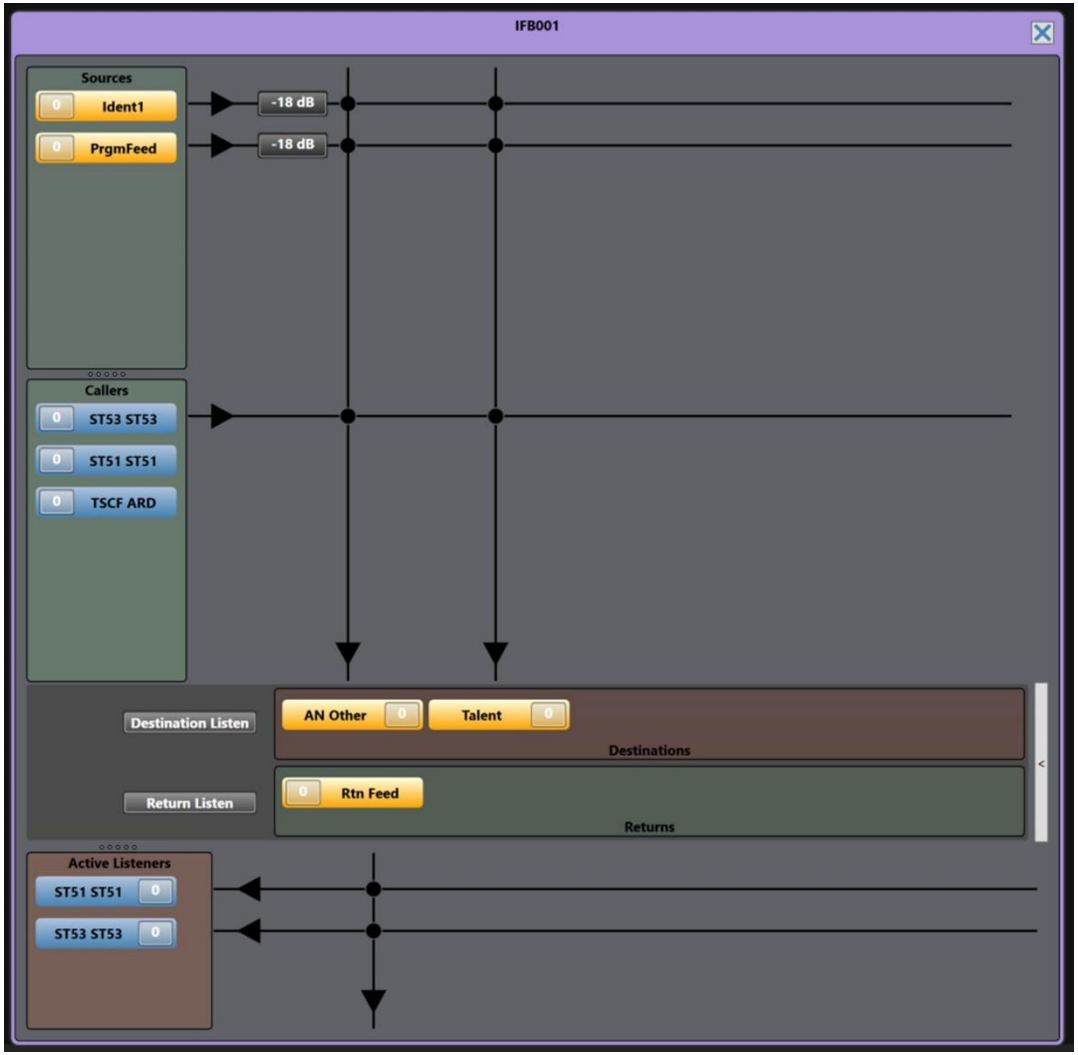


Figure 4-33 IFB in detailed view with active caller

The information displayed in the IFB in Detail view depends on what you select in the **Settings > IFB Display > IFB Detailed View**. You can choose to display:

- Only the active IFB callers
- The IFB priorities
- The advanced IFB detailed view. This view shows the IFB return routing to the caller.
- Active listeners.

For more information, see section ***4.24 Using the Settings screen***.

In detailed view you can:

- View, add and remove sources, destinations and returns

Note: You can view the IFB priority for sources. Select **Settings > IFB Display > Display priorities in IFB detailed view**.

- View a list of active and potential callers. This list is sorted alphanumerically. An active caller displays with a crosspoint to the destination.

Note: You can choose not to display potential callers in the **Callers** list. Select **Settings > IFB Display > Display only active IFB callers in detailed view**.

- Adjust port input gain on callers and sources
- Adjust port output gains on destination and port input gains on return listens.
- Adjust IFB dim levels

You can also adjust port input and output gains from the canvas. See section ***4.14 Controlling input and output levels***.

Add and remove sources, destinations and returns by drag and drop as for the summary view.

Use the level meter to adjust port gains as for the summary view.

When an IFB caller is active, the source and any other caller of lower priority are dimmed.

Audio from IFB callers with the same priority is mixed.

Cursor metering is available on the input and output levels of the ports. In the IFB, Destination Listen and Return Listen metering points are also available.

4.27 Managing SIP and TEL-14 telephone interfaces

From Dynam-EC, you can make and break SIP and TEL-14 calls. From a directory of stored numbers, you can drag and drop, or click and select to make a call.

4.27.1 Contact directory

Telephone numbers are stored in the contact directory. To access this, select **Telephone Directory** from the palette.

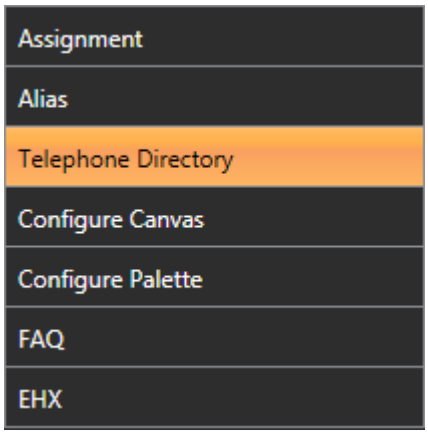
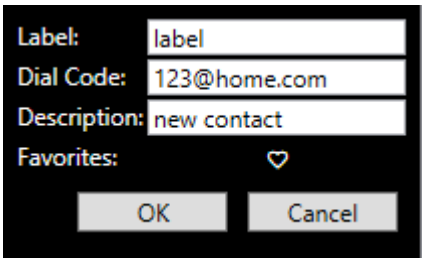


Figure 4-34 Telephone directory

4.27.2 Adding a contact

To add a contact, select  from the toobar.

The following screen appears:



Label: Add a name for the contact. You can use up to 10 characters. The label functions as an alias, and is used on the SIP or TEL-14 port when a call is underway.

Note: You can also apply the alias label to an IFB that has a telephone port as its destination. For more information, see **4.24.1 Configuring prompts and other settings**.

Dial Code: This can contain up to 80 characters. It can contain either SIP addresses or POTS numbers.

Description: For convenience, add a description of the contact.

Favorites: If you designate a contact as a favorite, it appears high on the sort list when searching contacts. To do so, click  .

4.27.3 Importing contacts

You can import contact information stored in contact files (.vcf).

To import contacts:

1) Select  and navigate to the location of the contact file that contains the required contact information.

2) Click **Open**.

4.27.4 Exporting contacts

You can export contact information and save it in a contact file (.vcf).

To export contacts:

1) Select  and navigate to the location where you want to save the contact file.

2) Click **Save**.

4.27.5 Deleting contacts

To delete a contact, select the contact and then click  .

4.27.6 Searching for contacts

You can use the Search facility to match contacts with:

- Contact label
- Dial code
- Description

The search results are listed with favorite contacts appearing first, followed by contacts in alphabetical order.

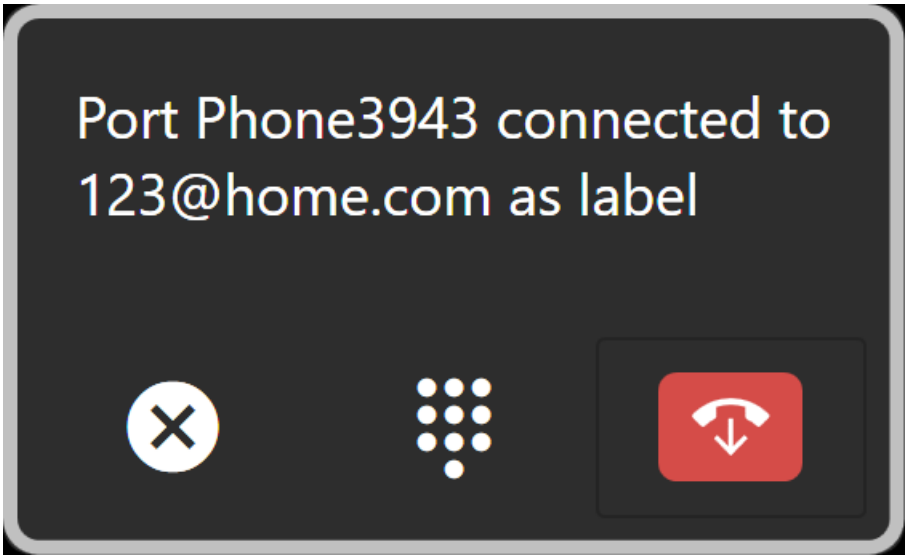
To use the Search facility, enter a string into the **Search:** field.

4.27.7 Making a call

To make a telephone call, drag a contact from the palette onto a four-wire telephony port viewer on the canvas.

If the call is successfully connected, the phone status appears:

Select the red off-hook icon to view the call-in-progress screen:

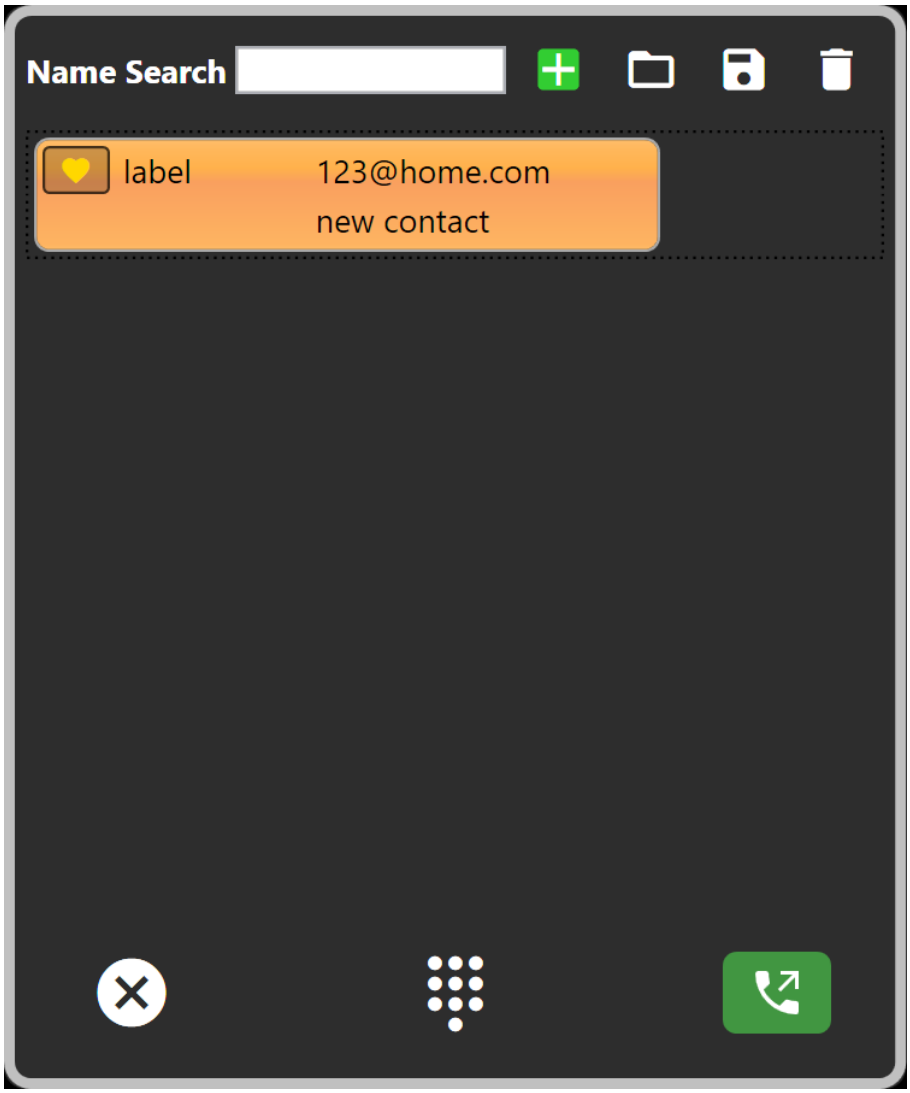


From this screen, you can:

- End the call - select the red hang-up icon to end the call.
- Send DTMF information – select the dial pad icon

You can also make a call by using the telephone icon on a four-wire port viewer or port display.

Click on the telephone icon to open the dial window:



Select the required contact, and then click the green call button.

You can also use **Name Search** field to search for a contact.

You can also initiate a call by double-clicking a contact.

On-screen dial pad

To view the on-screen dial pad:

1) Click the dial pad icon  . The on-screen dial pad appears:

2) Use the pad to dial the required number, and then click the call button.

Dropped and terminated calls

When a call is ended or the connection fails, a message appears in the notification area in the bottom right of the window. You can specify how long it remains here. For more information, see **4.24.1 Configuring prompts and other settings**.

Port aliasing

By default, aliases are applied to all SIP and TEL-14 ports when a call is underway. If the number is known in the directory, the associated name is used, otherwise the first 10 digits of the called party or caller id. Additionally, numbers can be imported from text files. When the call is dropped, the alias is removed.

When the matrix reports that a call, incoming or outgoing has been set up, if PM has a matching Contact in the Directory, the name of that contact will be applied to the port as an alias. When the call is dropped, the alias is removed.

To prevent aliases applying to SIP and TEL-14 ports, deselect **Settings > General > Use caller id or dialled number to apply alias on SIP or TEL-14 ports**.

IFB aliasing

By default, aliases are applied to all IFB ports that have a telephony port as a destination

To prevent aliases applying to IFBs, deselect **Settings > General > Use caller id or dialled number to apply alias on IFB with telephony destination**.

Piecemeal dialing

Once a call is initiated, further digits can be sent during the connection.

For TEL-14, this method can be used to make the initial call. For SIP, only prepared dialling can be used to create an initial connection.

For both TEL-14 and SIP clients, the in-band digits can be used, for example to navigate remote PABX menu systems.

4.28 Macro Editor

From Macro Editor, you can record, edit and run macros that enable you to quickly set a conference or venue. It also enables you to easily reapply Dynam-EC actions in the event of a matrix reset. In Macro Editor you can:

- Record a macro
- Edit a macro
- Run a macro forwards or backwards
- Export a macro to a storage file

- Import a macro from a storage file
- Delete a macro
- Concatenate macros

You can also view and run macros from the Canvas. For more information, see **4.12.2 Configure Canvas mode**.

Each macro consists of a series of recorded actions. You can include any action that has a direct affect on the matrix such as adding ports or changing audio levels. Every action that you record appears in the Macro Editor window on the right-hand side of screen.

In Simulation Mode, you can record and save a macro offline for later use in an online configuration.

Macros created using Macro Editor will NOT apply the some of the settings specified in **4.24 Using the Settings screen**. For more information, refer to this section.

4.28.1 Viewing the Macro Editor screen

To see the Macro Editor screen, select **Macro Editor** on the main menu bar. The screen appears to the right of the canvas. Select **Macro Editor** again to remove the screen.

Figure 4-35 Macro Editor screen

The screen contains a row of icons along the top, and a window that displays any macro steps that are recorded.

4.28.2 Recording and running a new macro

To record a new macro:

1) Select **Macro Editor** on the main menu bar.

Figure 4-36 Menu bar

The Macro Editor screen appears.

2) In the title bar, edit the default macro name as required.

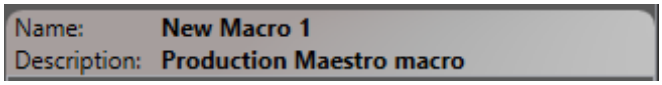


Figure 4-37 Title bar

3) Click 

Note: When macro recording is active, the Record icon flashes.

4) Start using Dynam-EC as normal. All the actions that affect the Matrix will be recorded. Each step appears listed the Macro Editor window.

5) To stop recording the macro. Click 

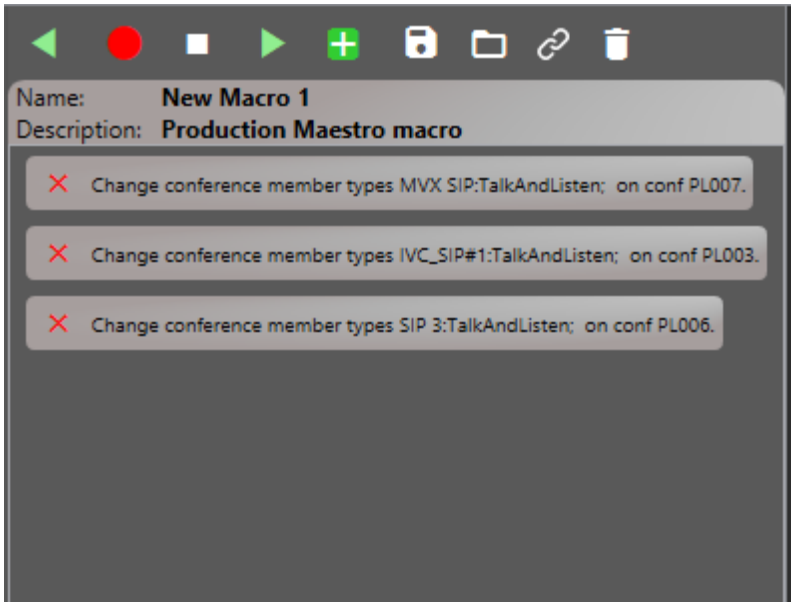


Figure 4-38 An example of a macro

4.28.3 Exporting a macro

To export a macro:

1) Click 

2) Navigate to a location to save the macro.

   Note: Dynam-EC macros are saved in `.hxpmm` format.

4.28.4 Importing and running a macro

To import a macro that has already been recorded:

1) Click  , and navigate to the location where the macro is stored.

2) Select the macro and click **Open** or double-click the macro. The macro is loaded into Dynam-EC.

3) To run the macro, click 

4) To run the macro in reverse, click 

5) To stop the macro. Click 

4.28.5 Deleting a macro

To delete a macro that is loaded into Dynam-EC:

Click 

Note: This will delete the macro from Dynam-EC. If the macro is saved to another location, you can still retrieve it.

4.28.6 Editing macros

You can add or remove steps from an existing macro. To do so:

1) Click  to locate and import the required macro.

2) To add one or more steps:

   a) click  to begin recording, and then add any required steps. These are appended to the existing steps in the macro.

   b) When you are finished adding steps, click  to stop.

3) To remove steps from a macro:

   a) From the Macro Editor window, select the step to be removed.

   b) Click  .

4.28.7 Concatenating macros

To append the steps in one macro to the steps in another:

1) Click  to locate and import the first macro.

2) Click  and navigate to the location of the second macro.

3) Select the macro and click **Open** or double-click the macro. The steps of the second macro are appended to those of the first.

5 Installing Dynam-EC on an iOS handheld device

You can use Dynam-EC on a handheld device. Devices currently supported include:

- iPad
- iPhone

To use Dynam-EC on a handheld device you must:

1) Install Microsoft Remote Desktop on the handheld device from your device's application store.

2) Install a virtual machine on your PC for each handheld device.

3) Install Dynam-EC on each virtual machine.

4) Use Microsoft Remote Desktop to log into the virtual machine assigned to the device.

5.1 Installing Microsoft Remote Desktop

To install Microsoft Remote Desktop:

1) Open your device's application store.

2) Search for Microsoft Remote Desktop.

3) Select **Install**.

5.2 Installing a virtual machine on your PC

You require a virtual machine for each handheld device that runs Dynam-EC.

Each virtual machine requires approximately 2 Gigabytes of RAM. Before installing virtual machines, ensure that you have sufficient memory. For example, with 8 Gigabytes of RAM, you could install up to three virtual machines and retain 2 Gigabytes of RAM for other applications.

To install a virtual machine:

1) In the left hand side of the Windows 8.1 taskbar, right click on the **Windows** icon, and then select **Programs and Features**.

2) In the right hand side of the screen, select **Turn windows features on or off**.

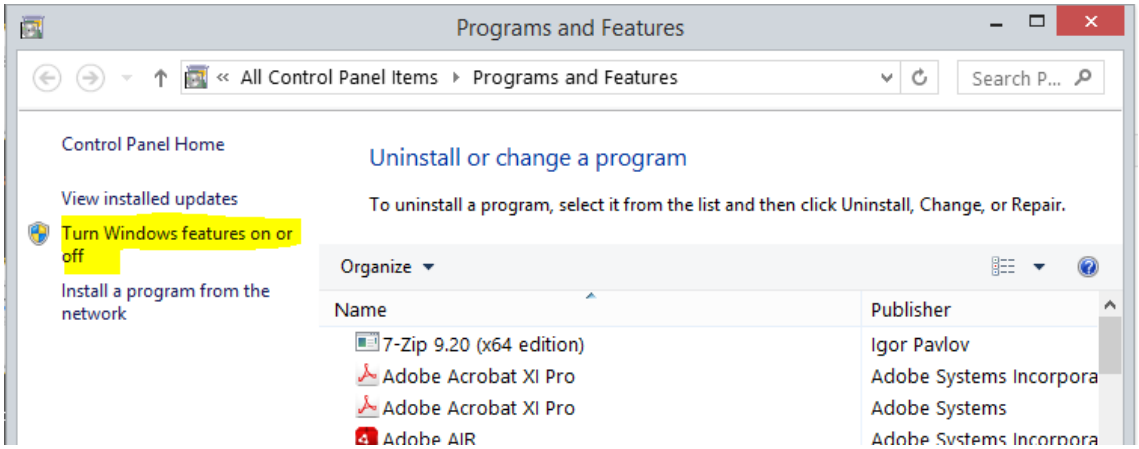


Figure 5-1 Programs and Features

3) In the **Windows Features** screen, select **Hyper-V** and then **OK**.

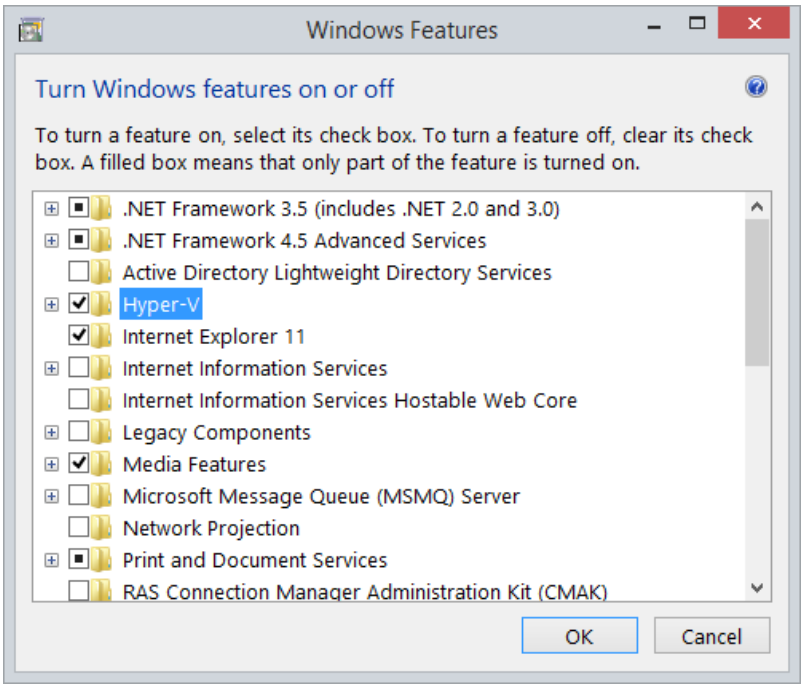


Figure 5-2 Windows Features

4) Start Hyper-V Manager.

5) From the left hand hand of the **Introduction** screen, select **Hyper-V Manager**, and then select **Connect to Server ...**

6) Select **Local computer**.

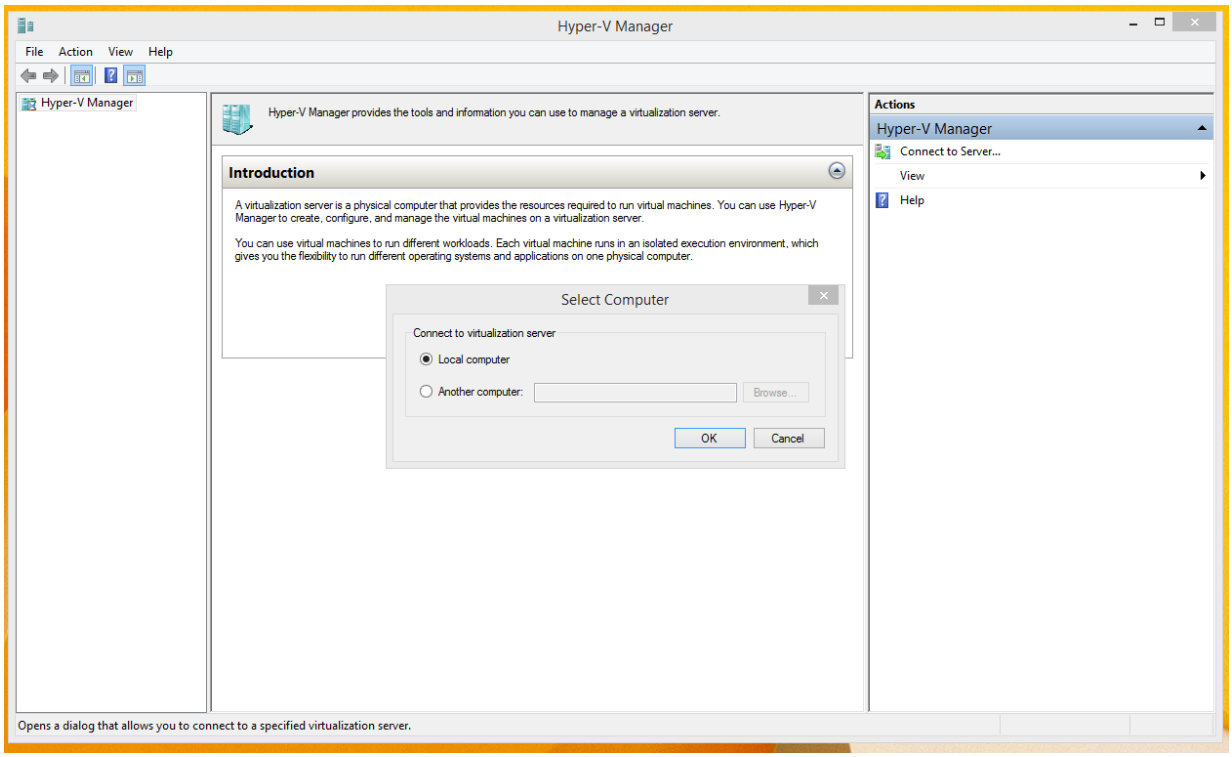


Figure 5-3 Hyper-V Manager

7) From the right hand side of the **Hyper-V Manager** screen, select **Virtual Switch Manager...**

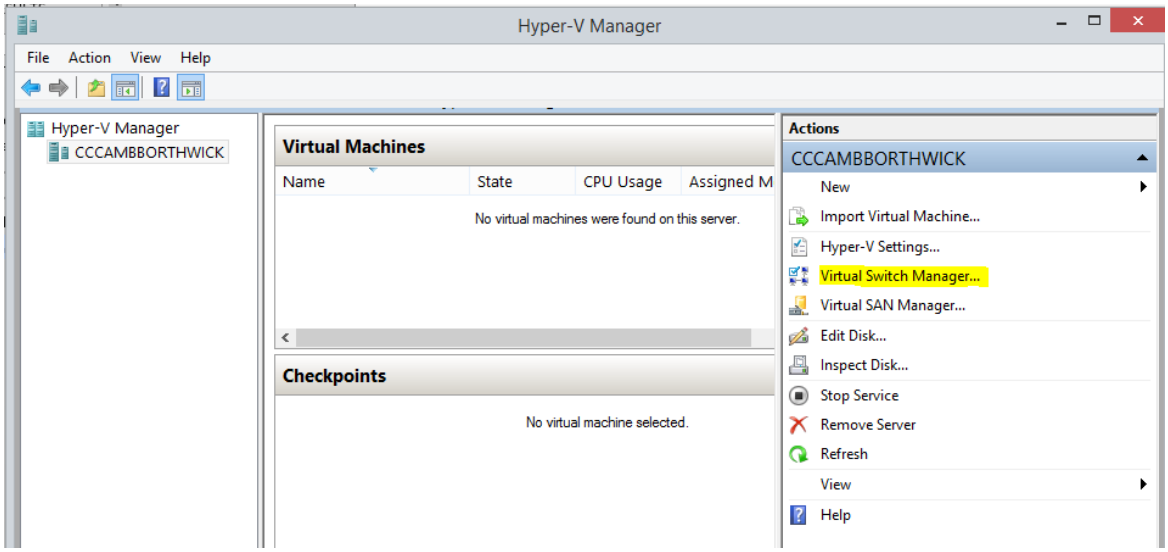


Figure 5-4 Hyper-V Manager

8) From the **Virtual Switch Manager** screen, select **External** and then **Create Virtual Switch**.

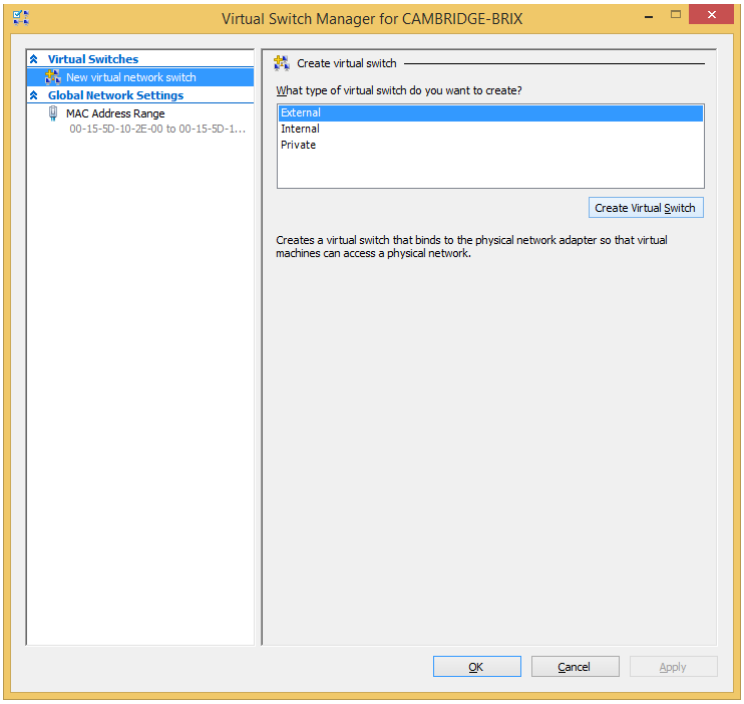


Figure 5-5 Virtual Switch Manager

9) From the **Virtual Switch Properties** window:

- Enter a name for the virtual switch
- Select **External Network**, and then, from the drop down list, select the wired control that is installed on your system.
- Select **Allow management operation system to share this network adaptor**.

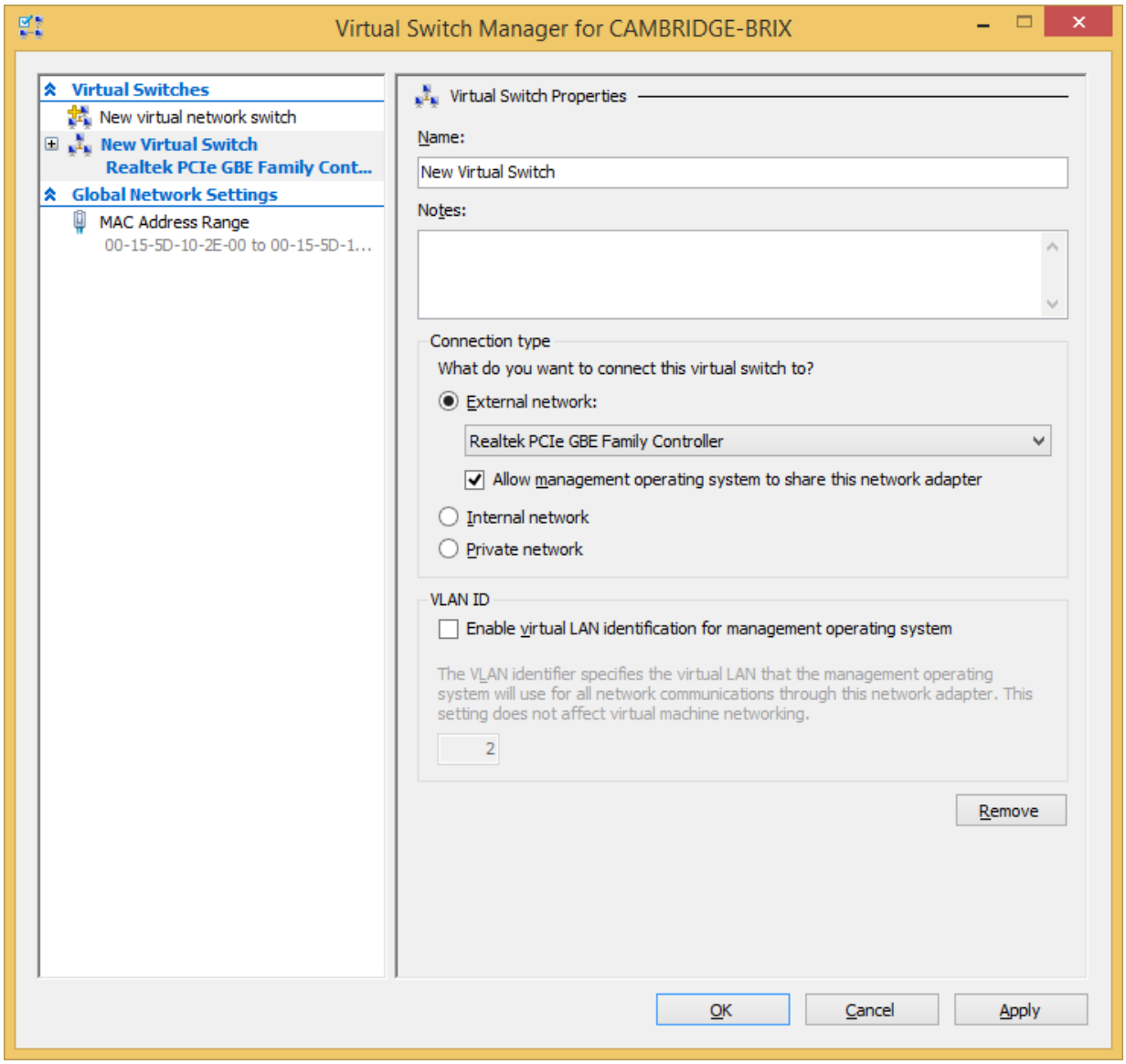


Figure 5-6 Virtual switch options

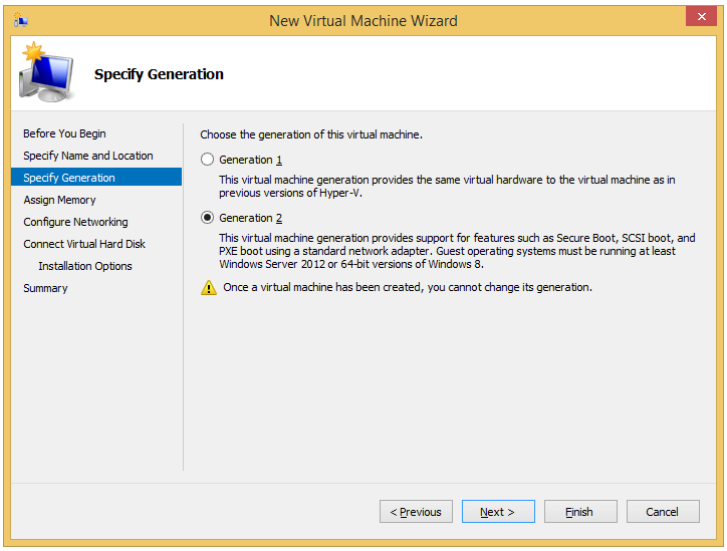
10) The **Apply Networking Changes** warning dialog appears. To continue, select **Yes**.

11) If you have a virtual machine already installed on your system, from the Hyper-V Manager screen, select **Import Virtual Machine … and follow**

the instructions from the wizard. You will be asked to navigate to the location of the virtual machine.

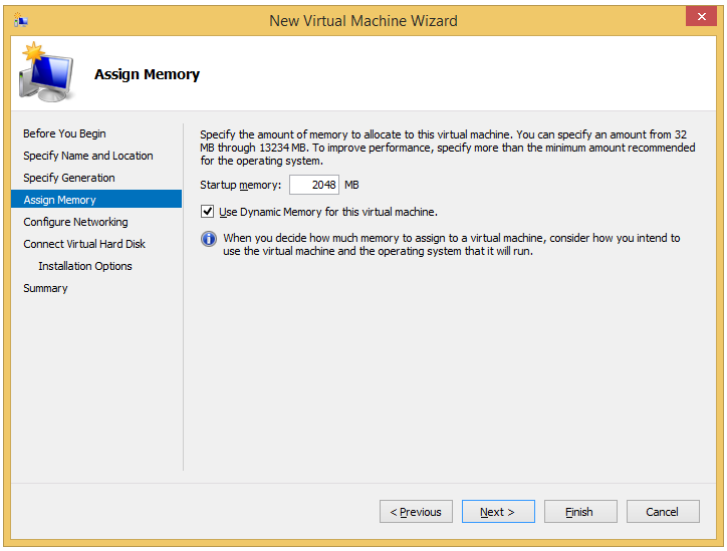
If you do not have a virtual machine already installed on your system, select **New > Virtual Machine ...** and follow the instructions from the wizard.

Note: When asked to specify a generation, select **Generation 2**.



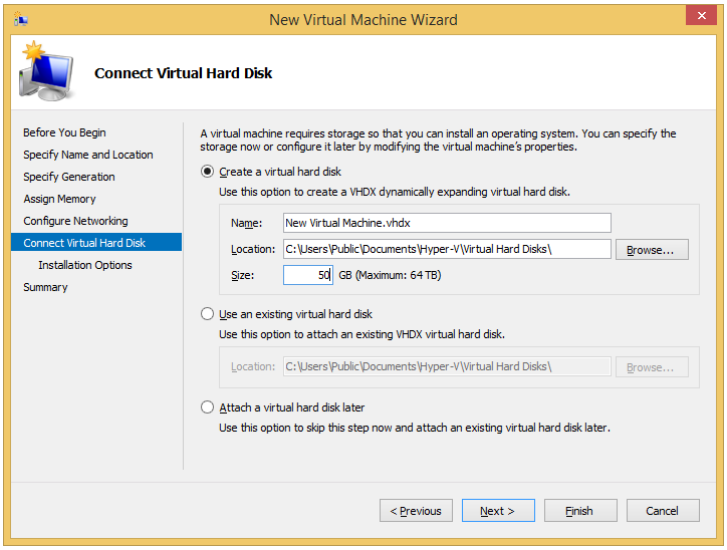
When asked to assign memory, enter **2048** in the **Startup memory** field.

Note: You can install a minimum of 1024 MB.

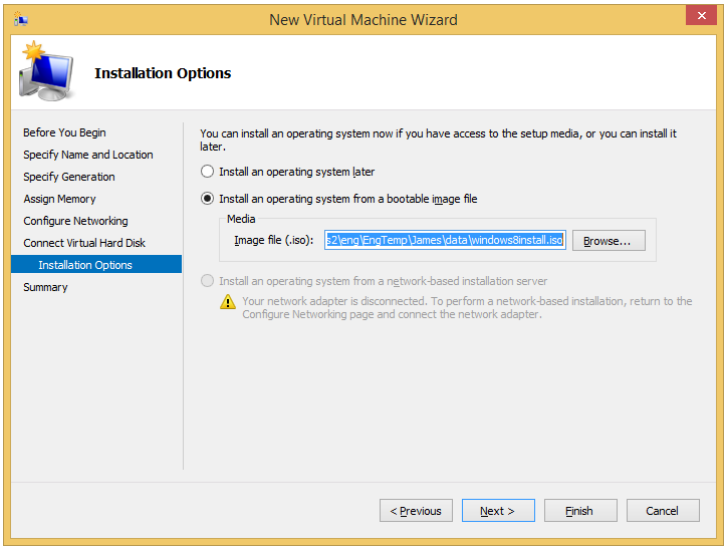


In **Configure Networking**, select the virtual switch that you created earlier.

In **Connect Virtual Hard Disk**, enter **50** in the **Size** field.



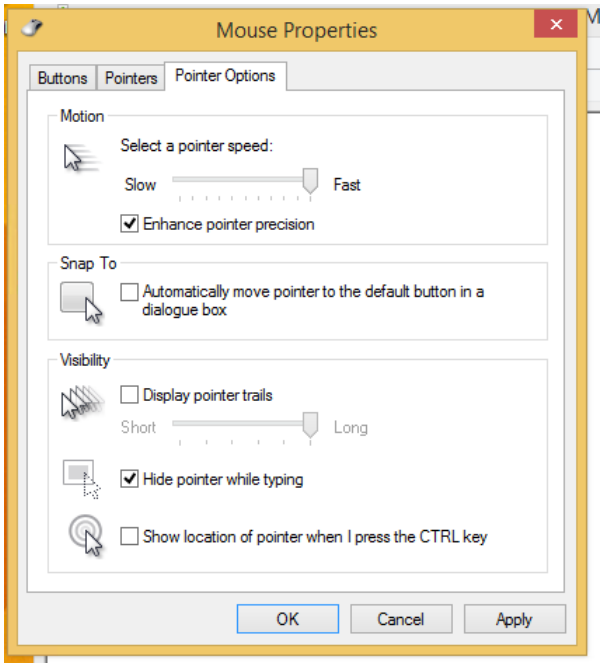
In **Installation Options**, select a bootable Windows installation file (.iso).



12) Select **Start Virtual Machine**.

13) Follow the instructions to install and configure Windows 8.1.

After Windows 8.1 is loaded, for ease of use, select **Control Panel > Mouse > Pointer Options** and increase the pointer speed.



14) Install Dynam-EC on the new virtual machine. For more information, see section **2 Installing Dynam-EC**.

15) Start Dynam-EC, and assign it to the Startup menu.

5.3 Using Dynam-EC on a handheld device

1) Start the **Microsoft Remote Desktop** application.

2) Enter the IP address of the virtual machine that you installed in section 5.2, your User Name and Password.

Dynam-EC is now visible on your handheld device.

6 Glossary

Term	Definition
Analog Port	Any of the matrix 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 Dynam-EC 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 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.

Term	Definition
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.
E-DANTE64-HX	A matrix interface card that is enabled to work with Dante network protocols and software, allowing you to transport many channels of high quality audio via a Clear-Com matrix to multiple Dante enabled devices using standard Ethernet network structure (up to 64 channels per E-DANTE64 card).
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.
FreeSpeak II™	Digital wireless communications product.
Full 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.
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.

Term	Definition
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.
Key group	Key groups provide a way of assigning a label to multiple panels simultaneously even within a networked matrix system. Once the Key groups have been defined using EHX, all the keys within a Key group can be changed with a single assignment in Dynam-EC.
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.
Macro	You can record, edit and run macros that enable you to quickly set a conference or venue.
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, key group and Monitor selection screen in Dynam-EC.

Term	Definition
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 (44.45mm) of vertical mounting space, 2 RU is 3.5 inches (88.9mm), 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 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.
SIP	Session Initiation Protocol. A standard used to make telephone connections.
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.
Virtual IFB	A new IFB model included in Eclipse 8.7 and above.
VOX	In the Eclipse system, when audio at a panel exceeds a threshold, a light is activated 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.

Term	Definition
	i-Series user panels are also supported (see above).