ECLIPSE CONFIGURATION SOFTWARE

Version 5.2

Instruction Manual

Eclipse Configuration Software Instruction Manual

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1 INTRODUCTION TO ECS

The Eclipse Configuration Software (ECS) provides a powerfully visual and intuitive way to program the Eclipse matrix system.

The Eclipse Configuration Software (ECS) provides a powerfully visual and intuitive way to program the Eclipse matrix system. With the software's graphical views of matrices, cards and panels, the operator can quickly and efficiently create communication pathways between devices connected to the system.

This manual describes the features of ECS release V5.2.

A "configuration" or "map" forms a complete set of communication pathways between devices connected to the matrix.

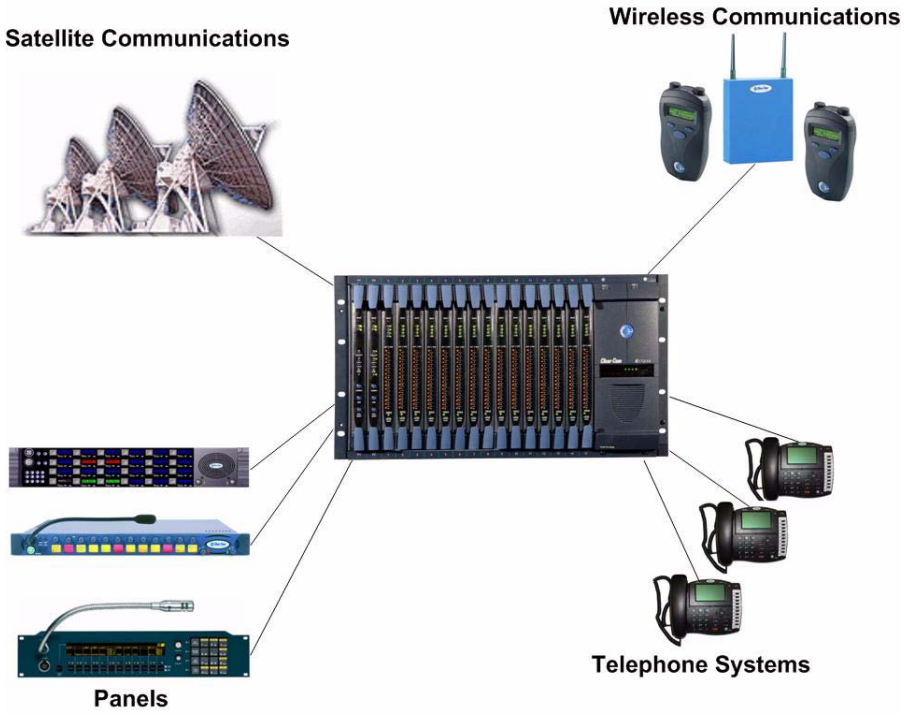

Figure 1-1: An Eclipse Matrix System

Specifically ECS can:

- Create individual, point-to-point talk and listen paths between members of a matrix intercom system.
- Create groups and one-to-many calls ("fixed groups").
- Create many-to-many conferences ("party lines").

- Store a complete system setup—called a “configuration map”— in an electronic file on a computer. Download the setup to the matrix to go into effect immediately.
- Store four complete configuration maps in the matrix’s on-board memory, any of which can be activated immediately from the front of the matrix with the push of a button.
- Communicate with CellCom/FreeSpeak beltpacks allowing direct communication between panels and roaming users.
- Communicate with remote panels over IP.
- Interface with the Clear-Com Concert™ multi-user conferencing system over IP.
- Interface the intercom system with telephones, two-way radios, camera intercoms, and more.
- Bring an outside audio source, such as program source, into the system’s audio stream and interrupt the program audio for announcements (IFBs).
- Use the GPIO facility to activate an applause light in a studio, a lock on a door, or other control functions each time an external device such as a switch is triggered.
- Control, monitor, or run diagnostics on a matrix system remotely from anywhere in the world, if the matrix is set up on a LAN network.
- Link matrices across cities, nations, and continents.
- And perform many other functions. For more information on individual panels, interfaces, and features of the Eclipse Matrix Systems, refer to the complete set of manuals, which are available at www.clearcom.com or on the Eclipse documentation CD (part 750017Z).

TERMINOLOGY

Production-intercom technology has evolved over the years. Remote devices connected to the matrix were first called “panels” to correspond to the metal faceplates that were installed on racks. Later they were called “stations” when they became fully independent stand-alone units with metal housing covering the internal circuitry.

Since in many parts of the world, only one or the other of these terms is used, this manual normally refers to these units as panels. However, keep in mind that the terms “station” and “panel” generally refer to the same type of remote intercom device.

ELEMENTS OF A MATRIX COMMUNICATIONS SYSTEM

A complete Eclipse communication system consists of the Eclipse Configuration Software (ECS) programming software, a central hardware matrix, intercom panels and the remote devices - interfaces, 4-wire equipment—connected to the matrix. The following sections give a brief overview of the matrix system.

CENTRAL MATRIX

The matrix hardware assembly consists of the following components:

- The metal housing, sometimes called the “frame”
- The central processing unit (CPU)
- The internal circuitry which controls the attached devices
- Power supplies
- The rear panel interfaces which link the matrix to intercom panels and remote devices such as interfaces
- The rear panel interfaces which link the matrix to CellCom/FreeSpeak antennae
- The rear panel interfaces providing fiber-optic links between matrices

Figure 1-2: Eclipse Omega Matrix

Frame

The matrix chassis, or “frame”, is a metal rectangular box which houses the matrix internal circuitry and power supplies. Some matrices hold removable circuit cards, while others contain fixed internal circuitry. The larger matrices (Omega and Median) have removable power supplies, which can be exchanged when necessary.

The following are the main elements of the Eclipse central matrix:

Central Processing Unit (CPU)

The nucleus of the matrix communication system is the central processing unit (CPU). It provides the serial data and Ethernet connection to the connected PC computer. The CPU also coordinates the data flow for other features of the system, such as general-purpose outputs and inputs. The CPU stores four complete system configurations in its memory, which can be retrieved and activated directly from the matrix's front-panel controls, even when the matrix is not connected to a computer.

Each matrix system contains at least one central processing unit, located either on its own removable circuit card, or in internal circuitry. Some matrices, such as the Eclipse Omega, contain a backup CPU for fail-safe operation.

Internal Circuitry

The matrix's internal circuitry controls the operation of the panels and interfaces connected to it. Panels and interfaces connect to the matrix's internal circuitry through an RJ-45 connector, or "port", on the matrix's rear panel. The internal circuitry sends balanced duplex audio and RS-422 data signals to and from connected audio equipment through 4-pair shielded category-5 (CAT-5) cable (STP).

Each audio device connected to the matrix can communicate with all other audio devices in the system. For intelligent linking, shielded category-5 cable is run from a port on one Eclipse matrix to a port on a second Eclipse matrix to form a trunkline connection.

The Eclipse Omega and Median matrix internal circuitry can also control fiber optic interfaces to provide high-speed links between matrices and E1 interfaces to allow communication with wireless system antennae.

Power Supplies

Each Eclipse Omega or Median matrix can hold two independent power supplies. These may be connected to a main and backup power source for redundancy. In the event of failure of one of these power supplies, the second supply automatically takes over.

In the event of a complete power failure, a matrix can automatically restore itself to complete functioning by retrieving configuration information from its non-volatile operational memory.

The Eclipse Pico and Eclipse-32 matrices have a dual AC input power supply unit.

Rear-Panel Connectors

A matrix connects to remote devices such as intercom panels, interfaces, general purpose inputs and outputs, local area networks, a computer, and other matrices through its rear-panel connectors.

The rear-panel RJ-45 sockets, sometimes called “ports”, connect the matrix to intercom panels, beltpack antennas, Concert servers, other matrices and interfaces with shielded category 5 (CAT-5) cable.

ECLIPSE CONFIGURATION SOFTWARE (ECS)

The Eclipse Configuration Software (ECS) controls the operation of the system’s connected audio devices via a system map downloaded to the matrix by ECS.

The system is designed in a “star” configuration, in which each member of the system connects directly to the matrix rather than to each other. Audio signals are routed through the central matrix and out to the connected audio devices by the matrix under control of the map created by ECS.

ECS can also be used to monitor the matrix for faults and log errors to a logfile for analysis.

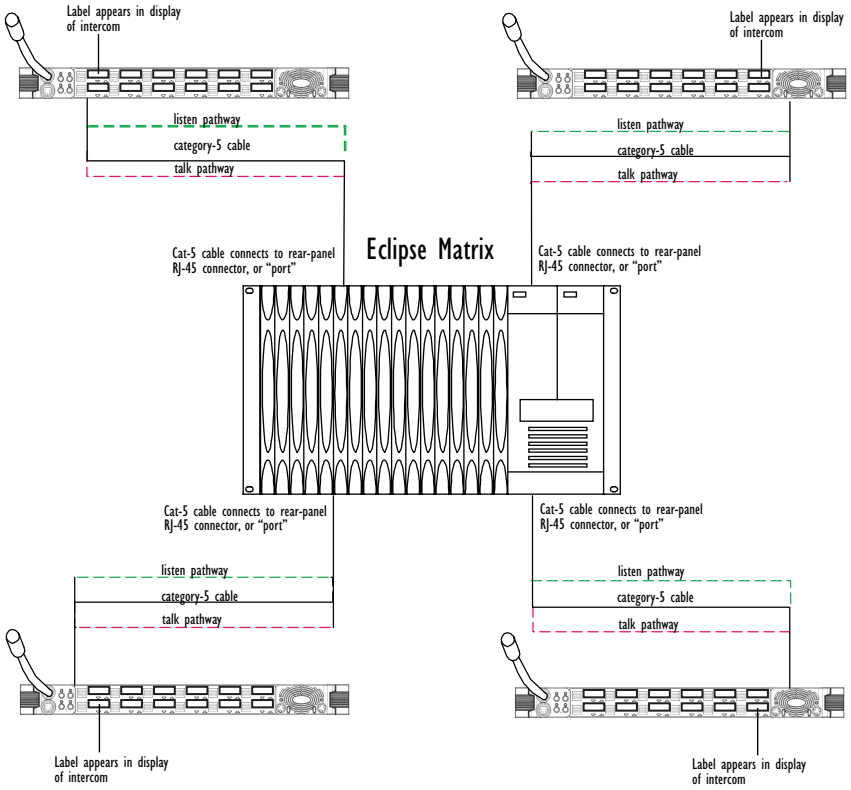

Figure 1-3: An Eclipse Configuration

Basic Setup Steps

The basic steps for setting up an Eclipse matrix system are:

1. Ensure that there is a working connection between the ECS PC and the matrix (see chapter 3 for information on selecting the connection type and setting ethernet addresses).
2. Click on the 'System' menu to open the systemscreen and right click over the systems pane to open the 'Add Matrix Frame' option.
3. Click on the 'Add Matrix Frame' to add a new matrix. Click on the highlighted 'Please choose a matrix type' button to open the matrix type menu and select the required matrix type.
4. Click on the 'New Matrix Frame' window on the new matrix icon and enter the name of the new matrix.
5. Click over the 'Matrix IP Address' window of the new matrix icon and enter the IP address of the new matrix.

The **Talk Label** is the name of the port the operator talks to (output).

The **Listen Label** is the name of the port the operator listens to (input).

6. Click on the ‘Hardware’ menu to open it and click on ‘Cards and Ports’ to open to hardware configuration screen.
7. Select each MVX-A16 card to display the system ports list and add panels and interfaces to the ports (Median and Omega only).
8. Select each E-QUE card fitted and configure the card ports according to the type of card configured via the ‘Card Properties’ link (median and omega only).
9. Select each IVC-32 card fitted and configure the card for IP communication via the ‘Card Properties’ link (median and Omega only).
10. Select each LMC-64 card fitted and configure the card for IP communication via the ‘Card Properties’ link (Median and Omega only).
11. From the ‘Configuration’ menu select ‘Panels’ and configure the keys on the panels from the list of sources and destinations.
12. When the panel programming is complete click on the ‘Apply changes To System’ link on the system menu to download the map to the matrix.

The following sections describe some of the main elements of the Eclipse Configuration Software. The subsequent chapters in this manual describe these elements in detail.

Setting Up Matrix Port Functions

Each physical port on the matrix needs to know what type of remote device connects to it. This could be one of the many different types of Clear-Com intercom panels, control panels, or interfaces that connect the matrix to telephones, 2-way radios, and so on.

In addition each port needs a name to identify it on intercom panels and other connected equipment. Each port has two available labels.

A Talk label identifies a port sending audio to a destination.

A Listen label identifies a port receiving audio from a source.

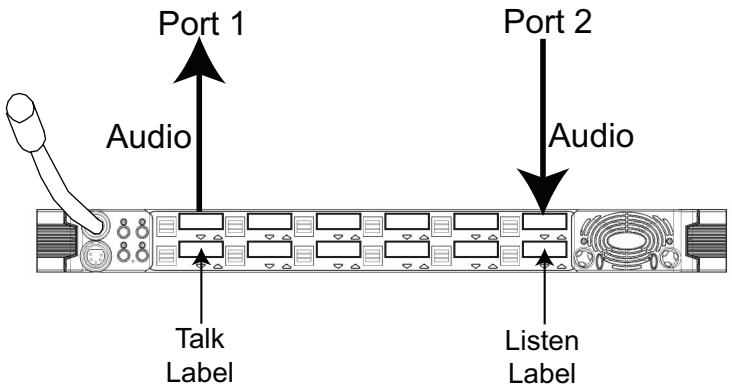

Figure 1-4: Matrix Port Functions

Labels can be up to five characters in length (limited by the panel display) but in the case of V-Series panels the labels are extended to ten character labels by concatenating the Talk and Listen labels.

Assigning Names to Individual Panels

At individual panels and interfaces port “labels” are assigned to specific keys or buttons. If an operator communicates frequently with a source or destination in the matrix system a key or button may be assigned on a panel for either talking or listening directly to that source or destination.

These individual buttons or keys are similar to “speed dials” on a traditional telephone. Each key can be set up so that when it is pressed, it makes an audio route. For example a key on a panel attached to port 1 may be programmed to send audio to port 28. When that key is pressed, an audio route is activated from the originating panel to the device connected to port 28. When the key is released, the route is de-activated (these audio routes are also called “crosspoints”).

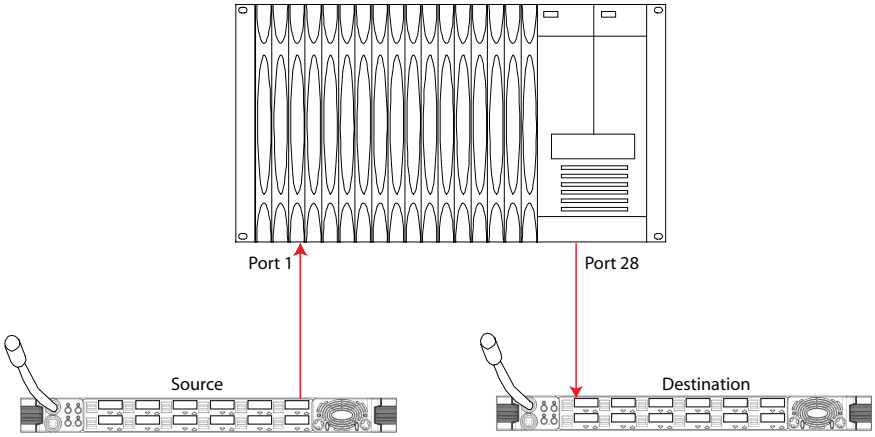

Figure 1-5: Key Assignment

THE MATRIX CONFIGURATION MAP

Full system configurations are created using ECS including port functions, talk-and-listen audio routes, control functions and other functions. The configurations are then compiled to create maps and the maps are downloaded from the PC to the matrix, where they reside in operational memory. At the push of a button on the front panel of the matrix, the entire map goes into effect in the matrix system. The matrix holds up to four maps in its operational memory. An unlimited number of configurations may be stored on the ECS PC or on a server.

These system configurations are called by various names such as “projects”, “configurations” or “maps”. In this manual, they are called “projects” or “configurations”. The following sections describe some of

the types of communications routes that can be created with ECS. Subsequent chapters in this manual describe these topics in detail.

Groups—Party Line and Fixed

Group communication may be configured in several ways. In a “fixed group” configuration an operator speaks to all members of the group at once. However, if a group member responds by calling the operator back with their answer-back key the audio path goes to operator panel only.

Alternatively, all members of a group can speak with all other members of the group at the same time. This is commonly called a “conference” or “party line”. It is similar to a telephone conference call with its two-way, full-duplex communication. Members of a party line can join and leave in real time, making the membership dynamic in the sense that it is always changing.

Controls—DTMF Sequences, Relays, Routes

An intercom panel can be used to perform a variety of other functions besides sending audio. It can activate a DTMF sequence to call out on a telephone line, activate an electronic relay to turn on a light or lock a door, or activate audio from an external router like a mixer desk. These types of function are called “controls”.

Call Signals

A “call signal” is an audible or visual signal or ”Tally” sent on an intercom channel, with or without accompanying audio. These signals have a variety of purposes from alerting an operator who has taken off their headset, to activating control sequences.

Interruptible Foldback (IFB)

An audio source such as “on-the-air” or “program” audio can be routed through the matrix to a presenters ear pieces. In a typical broadcast application, program audio is routed to the “talent”– a collective term for any person in front of the camera broadcasting directly to an audience. A director or other audio person can then interrupt or dim the program audio to the “talent” for announcements (commands) or cuing by using the “interruptible foldback” or IFB feature.

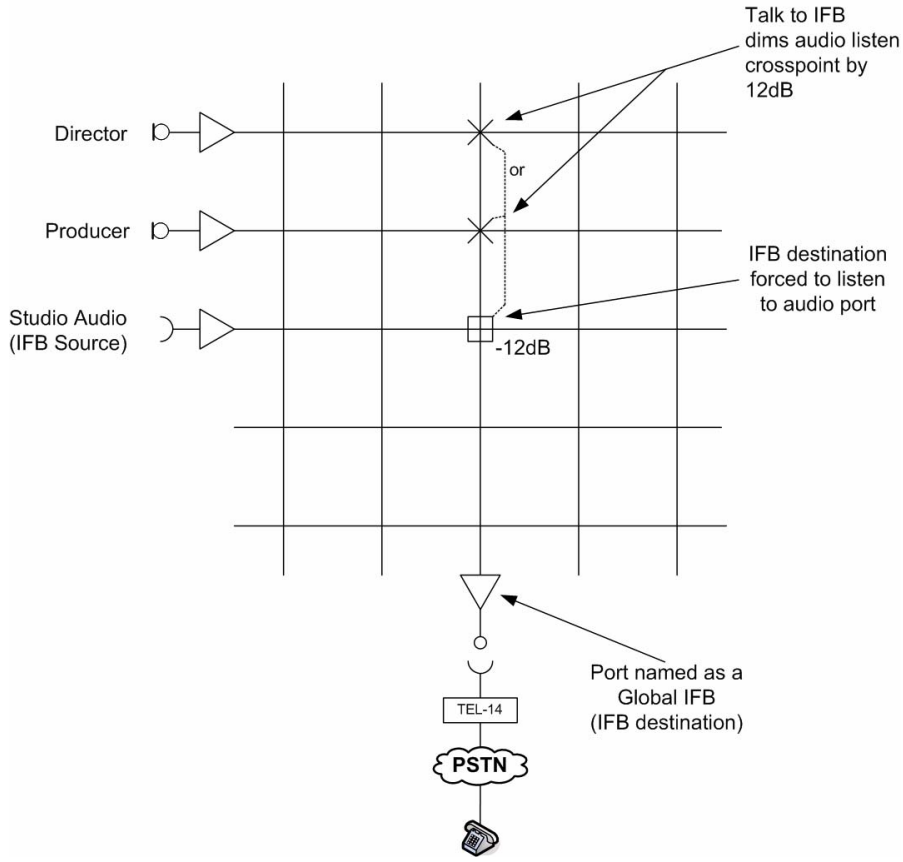

Figure 1-6: IFB Operation

2 GETTING STARTED: INSTALLING, STARTING, AND EXITING ECS

This manual provides a comprehensive guide to the Eclipse Configuration Software.

This manual provides a comprehensive guide to the Eclipse Configuration Software (ECS). ECS controls all system variables, operating parameters, and operating configurations for Eclipse matrices.

SYSTEM REQUIREMENTS

ECS requires the following system configuration:

- Microsoft Windows XP Professional SP3 or Windows Server 2003 SP1 (SP2 recommended) or Windows Vista SP1 or Windows 7 operating system.
- Appropriate language support if non-latin fonts are to be used (see chapter 5 ‘Setup Eclipse’).
- Microsoft SQL Server Express 2005 service pack 3 (supplied with ECS Server, not required for ECS client).
- Microsoft Internet Explorer 6 or better.
- Microsoft .NET Framework 3.5 SP1 (supplied with ECS server, not required for ECS client).
- Personal computer with Microsoft Windows Experience Index base score of 3.0 or higher when running Windows Vista or equivalent if running Windows XP, Windows Server 2003 or Windows 7.
- 1GB RAM or better recommended depending on operating system.
- 10GB of free hard disk space.
- Combo DVD drive.
- SVGA display resolution.
- Mouse or other pointing device.
- Appropriate keyboard if non-latin fonts are to be used.
- One serial port or USB port and USB to serial adaptor (this may not be suitable for all applications).
- IEEE 802.3 Ethernet card.

INSTALLING ECS

Note: The instructions in this manual are based on Windows XP as the operating system on the computer.
Clear-Com supports the use of the Eclipse Configuration Software (ECS) V5.2 on Microsoft's Vista and Windows 7 operating systems.

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Before Installing ECS

If ECS is being installed as an update to an existing ECS installation it is recommended that all the system configurations are backed up by exporting them to Clear-Com Configuration files (.ccn). These should be placed in a directory outside the directory tree used by the currently installed ECS. They can also be backed up to external media such as CD or DVD.

Ensure that the required Windows service packs are installed before installing ECS V5.2 (see "System Requirements" on page 2-1). Windows XP Service Pack 3, Windows Server 2003 Service Pack 2 and Windows Vista Service Pack 1 are supplied on the system software DVD and should be installed as required before installing ECS.

To export the system configuration or project it should be opened and then exported by opening the 'File' menu and selecting the 'Export Project' option. The directory and filename can then be selected.

In a networked system all the matrices must be upgraded to V5.2 as matrices running V5.2 cannot be networked with matrices running earlier versions of software such as V5.1, V5.0 or V4.2.

Updating an Existing ECS Installation

If the ECS install is to update an existing ECS installation the user should read the chapter ''Eclipse System Software Upgrades' before commencing the installation.

To install ECS

Ensure that the installer has full Administrator rights as these are required in order to install ECS.

1. Insert the installation DVD into the computer's DVD drive.
2. The ECS installation media should autostart and display the installation instructions on a browser page.
   If the installation page is not displayed locate the "autorun.exe" file

on the distribution media and double-click it to display the installation instructions.

3. Click on the “Eclipse Configuration System” link to start the ECS install.
4. Follow the instructions on the screen to install the program.
5. When the installation is complete, a message appears on the screen to verify that the program has been successfully installed on the computer. Click on the ‘Finish’ button.

The Eclipse Configuration Software is now installed on the computer.

Note: If Windows XP Service Pack 3 is the installed on the computer, ECS automatically configures the firewall settings. If Windows XP Service Pack 3 is not installed on the computer the installer will stop and display a message indicating that the user must install Service Pack 3 before rerunning the ECS installer.

If the computer is running Windows Server 2003 then Server 2003 Service Pack 1 must be installed prior to installing ECS (Service Pack 2 is recommended). If Windows Server 2003 Service Pack 1 is not installed on the computer the installer will stop and display a message indicating that the user must install Service Pack 1 or 2 before rerunning the ECS installer.

If the computer is running Windows Vista then Vista Service Pack 1 must be installed prior to installing ECS. If Windows Vista Service Pack 1 is not installed on the computer the installer will stop and display a message indicating that the user must install Service Pack 1 before rerunning the ECS installer.

In some cases the ‘Add ECS to Firewall’ dialog box may be displayed with one of the following messages:

- If the firewall configuration is successful, “Updated XP Firewall” appears in the dialog box when running Windows XP.
- If the firewall configuration is not successful a message will be displayed in the dialog box referring the user to more information.
- The Windows operating system may show a Firewall dialogue box asking whether to Block or Unblock ECS. Select Unblock ECS.

RUNNING ECS

LOGGING IN TO ECS

To start the program, click ‘Start’, then ‘Programs’, then ‘Clear-Com’, then ‘Eclipse Configuration Software 5.2’ and then ‘Eclipse Configuration Software 5.2’.

Alternatively, click the Clear-Com ECS V5.2 shortcut on the desktop and the ECS user login screen will be displayed. If ECS is to be used in Local mode (running entirely on the local PC) the user can log in immediately. If ECS is to be used in Client Server mode (see chapter 10) the options button should be selected to allow the remote server to be selected (see “Client Server Login” below).

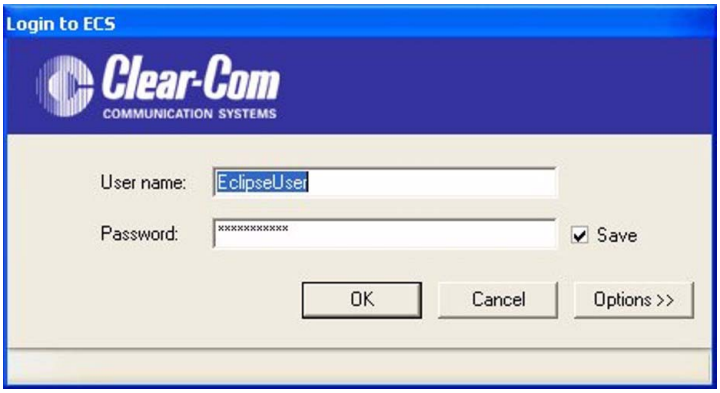


Figure 2-1: ECS Login Screen

The “Username” and “Password” fields are already populated with the default entries:

- The default Username is: EclipseUser
- The default Password is: EclipseUser

Note: The fields are not case sensitive.

If required enter a different ECS username and password and click on ‘OK’ to log in. If the username or password is invalid an error message will be displayed. If ECS is being used for the first time only the default username and password will be valid.

Once logged in to ECS the User Management facility can be used to change the password for the default user and add further users. This is described in chapter 3 of this manual.

Note: The default user has ECS administrator privilege.

Once logged in ECS will display an empty screen until the user selects and loads a configuration or creates a new configuration.

Client Server Login

When running in a client/server environment (see chapter 11 for details) the user should not log in using the default localhost server (http://localhost/EclipseServer/) but log in to the required server PC. To do this click on the 'Options' button to display the name of the ECS server.

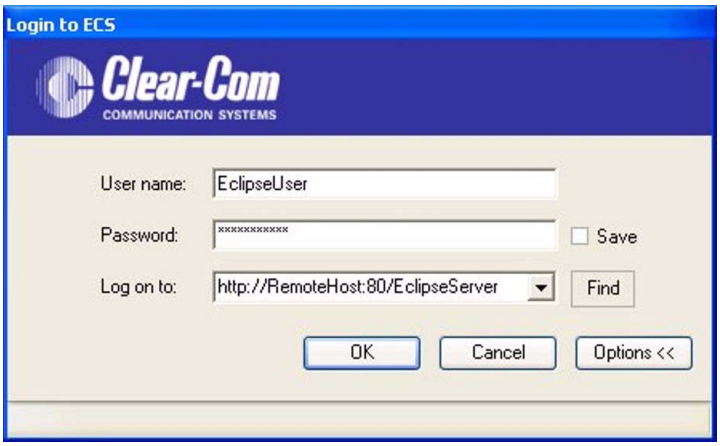


Figure 2-2: ECS Logon Server Option

If ECS is to be run in client/server mode a license key is required to enable this facility. The user should contact the equipment distributor for further information.

If running in client/server mode edit the 'Log on to' box to the name of the server or use the drop-down list to select a server then log in as normal e.g. http://myserver/Eclipseserver/. If the client/server license key has not already been input the license key will be requested.

Figure 2-3: Client/Server License Key Request

Enter the license key as supplied and click on the 'OK' button. The client/server facility will then be enabled. ECS login will not request the license key again once it has been successfully entered.

If a valid license key has not be input an error message will be displayed and the user will not be able to login in client/server mode.

Figure 2-4: License Error Display

If the client and server ECS versions are different an error message is display indicating that incompatible versions of ECS are in use.

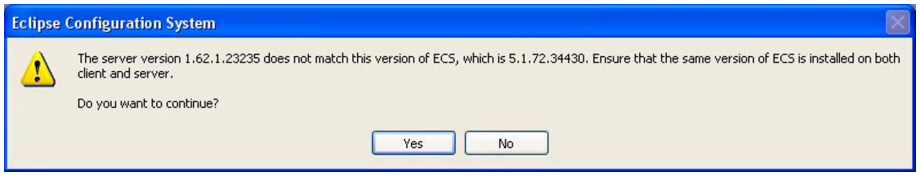


Figure 2-5: Incompatible Client/Server Software Error

If this error is displayed the user should select 'No' and not try to log in to the server until the problem has been resolved. The 'Yes' option is only provided for use by system engineers. The system administrator should ensure ECS on the server and all the clients have been updated to the same version.

After logging in either locally or to a server the ECS initial screen is displayed.

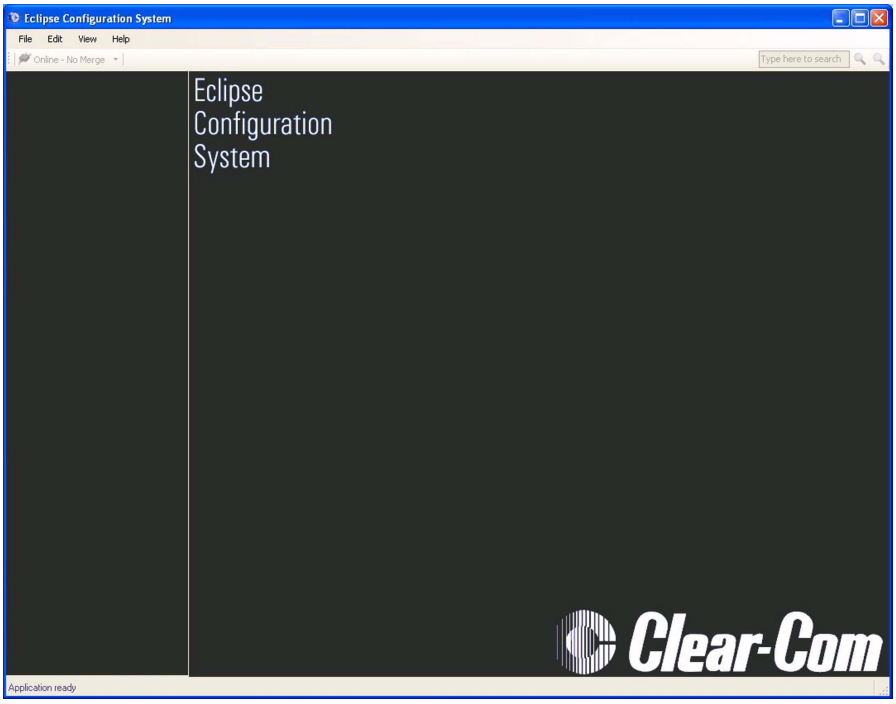


Figure 2-6: ECS Initial Screen

ABOUT ECS

The version of ECS can be displayed by opening the Help menu on the Windows toolbar and selecting ‘About’.

Figure 2-7: ECS About Screen

The version of ECS is displayed along with version information relating to matrix programming (Logic Maestro and Macro Editor) and client-server functionality.

Logic Maestro

The Logic Maestro is a built-in ECS function that allows the matrix functions to be programmed via a visual logic design interface. This visual interface allows the required logical operations to be created by dragging and dropping symbols for various logical operations and connecting them together to create the required functions. This interface creates the underlying control macros that are used to program the matrix. This facility is described in the Logic Maestro manual (part 810414Z). The Logic Maestro option requires an additional license.

Macro Editor

The Macro Editor is a built-in ECS function that allows the matrix functions to be programmed directly via a macro language. This facility is described in the Logic Maestro manual (part 810414Z). Macro Editor is included with the Logic Maestro license.

Single DB mode

This may be set to True or False, depending on whether ECS is operating in Local mode or Client Server mode and reflects whether ECS is using a single local database (Local mode) or a remote database and a local database (Client Server mode).

- True - ECS is operating in Local mode and only using a single local database. When a configuration is opened the configuration data is copied from the local database to a temporary file for editing. It is copied back to the database when the configuration is closed if the user selects ‘Yes’ to the ”Save Changes” dialogue.
- False - ECS is operating in Client Server mode using a local and remote database. When a configuration is opened the data is copied from the remote database to the local database for editing. It is copied back to the remote database when the configuration is closed if the user selects ‘Yes’ to the ”Save Changes” dialogue or does a map download.

Localhost mode

This may be set to True or False depending on whether ECS is running entirely on the local PC or over a network with the software on a remote PC being accessed via web services and SOAP (Service Oriented Architecture Protocol). Normally this mode implies Client Server operation and that the user has logged in to ECS specifying a different PC using the server option. It is possible to treat the local PC

as both the client and the server by specifying the local PC as the server but this is not recommended use.

- True - ECS is running only the local PC with the user having logged in as a local user.
- False - ECS is running in Client Server mode and accessing the software functions over the network

ECS Help

Selecting the 'How Do I' entry (F1) on the Help menu displays basic help about ECS functions.

EXITING ECS

To exit the ECS program open the File menu (Alt-F) and select Exit. The user will be offered the option to save any configurations that are currently open.

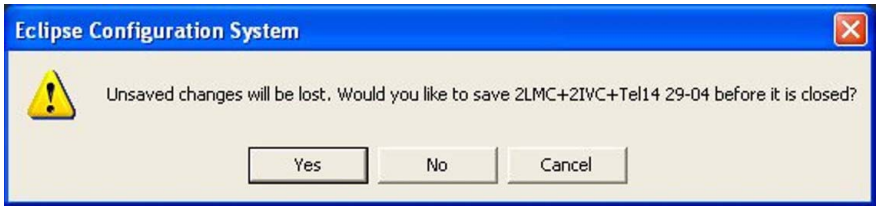


Figure 2-8: Configuration File Close

To save the configuration click on the 'Yes' button; to abandon any unsaved changes click on the 'No' button.

If any changes have been made to the configuration that should be applied to the system click on the 'Apply changes to Frame' command on the command line before closing the configuration file.

See the chapter 11 in this manual on Eclipse Downloads for more information.

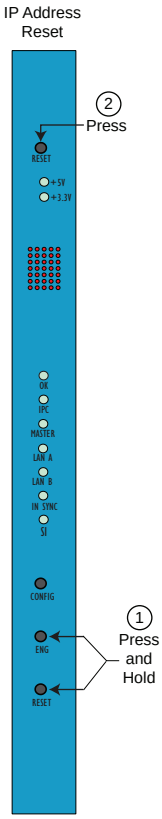
When the configuration is closed the user menus will also be closed.

To log out of ECS open the File menu and select the 'Log Out' command. All the menus will be closed and the ECS command line greyed out.

To log back in open the File menu and click on 'Log In' to display the login dialogue as described previously.

3 SETTING UP A SYSTEM

INTRODUCTION



The following steps will need to be completed to set up a new Omega or Median matrix. For information on setting the default IP address on Eclipse-32 and Eclipse Pico matrices please refer to the respective hardware manuals.

- Reset the matrix to the factory default IP address (169.254.0.100). This is a link local IP address which means that a PC connected directly to the matrix using an ethernet cable, but in DHCP mode, will be able to the communicate with the rack. When the rack's IP configuration is defaulted back to the above link local address it also defaults to DHCP enabled.
- The reset sequence for Omega and Median matrices is:
  - Remove the slave CPU card (if present).
  - Press and hold the ‘ENG’ and ‘FULL RESET’ front panel buttons simultaneously then press the ‘RESET’ button (see illustration) on the master CPU card.
  - Replace the slave CPU card if there is one otherwise the procedure is complete.
  - Remove the master CPU card
  - Press and hold the ‘ENG’ and ‘FULL RESET’ front panel buttons simultaneously then press the ‘RESET’ button (see illustration) on the slave CPU card.
  - Replace the master CPU card
- Ensure that the matrix and the ECS PC are connected using ethernet, either directly or via a network (direct connection from PC to Matrix will require a crossover ethernet cable).
- Configure ethernet on the ECS PC.
- Create a configuration with the factory default IP address.
- Download the complete configuration map to the matrix via ethernet using the factory default IP address.

A more detailed sequence of actions for the initial configuration are given in the section “Initial Configuration Sequence” on page 3-7.

MATRIX ETHERNET OPERATION

The Omega and Median CPU card ethernet ports are normally connected to a LAN and used to communicate with clients such as ECS and Production Maestro. The ethernet port functionality depends on the IP address setup.

If an IP address of 0.0.0.0 is configured on the second ethernet port, it will not be used for Tx or Rx. This is the default setup if the default IP address is set as described above.

All matrix to matrix traffic is sent out on both ethernet ports. This applies to both directed and broadcast packets. All matrix to matrix traffic is also received on both ethernet ports. If the traffic is transaction related, the second (duplicate) message received is not consumed, but simply dropped.

The matrices listen for client connections on both ethernet ports. Once the connection is made it is added to the list of connections to service. Broadcast type Tx data is duplicated out on each connection e.g. HCI connection to the matrix from 3rd party applications.

The ECS Server makes a connection on either the main or backup ethernet port of each system in the linked set. If both are up, this will default to the primary port. In the event that connection is lost to the currently active port on a matrix the ECS server will swap over to using the other ethernet port. If this connection is lost only on one matrix in a linked set, the others will not be affected.

Configuration Restrictions

The network ID on the first ethernet port must be different to that of the second port. The network ID is defined by the IP address and the network mask for the port. For example a network address of 172.16.2.1 and a mask of 255.255.0.0 gives a network ID of 172.16. Therefore in this scheme the second port could not have an IP address starting with 172.16. If the network mask is extended to 255.255.255.0 the network ID becomes 172.16.2 so the second port could have an address of 172.16.3.1 and a mask of 255.255.255.0 giving a network ID of 172.16.3 for the second port.

If both ethernet ports are set up with the same network ID this condition results in data loss on one or both of the ethernet ports.

Ethernet redundancy and the use of a default gateway is not recommended. An IP address and gateway combination on an ethernet port means that all Tx traffic to any address is possible on the port. Traffic that actually matches the other ethernet port can therefore be sent out on the wrong port.

SELECTING SERIAL OR ETHERNET CONNECTION

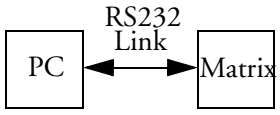
ECS can communicate with a matrix using one of the following two methods:

- Ethernet connection
- Serial connection if the ECS PC is connected directly to the matrix via an RS-232 cable.

Ethernet is the preferred connection type for all applications.

Note: The factory ships an Eclipse matrix without an assigned IP address. Therefore in order to use Ethernet the IP address must be reset to the default. The system can then be configured for an Ethernet connection.
It is not possible to change the IP address via a map download; it must be done from the System screen or the Matrix Event Log (see the chapter on Diagnostic Tools for details on the Matrix Event Log).

SERIAL CONNECTION



Make a small configuration map with the required IP address and download it using the serial link then switch to ethernet mode to complete the configuration

To establish a serial connection between the ECS PC and the matrix the hardware must be connected first and then the software configured.

- To establish the hardware connection, connect a serial (RS-232) cable between the computer's serial port and the connector labelled "RS-232" on the rear of the Eclipse frame.
- To configure the ECS software for serial communication, follow the procedure below.

To set up a serial connection between ECS and the Eclipse frame:

1. From the ECS command line open the ‘File’ menu and select ‘Matrix Connection’.
   The ‘Connection Settings’ dialog box appears. Because ethernet connection is the default, it is already selected.
2. From the drop-down menu select the PC’s COM port the serial cable is connected to.
   Clicking on ‘Only Show Available Ports’ causes the drop-down box to only display the available COM ports on the computer.

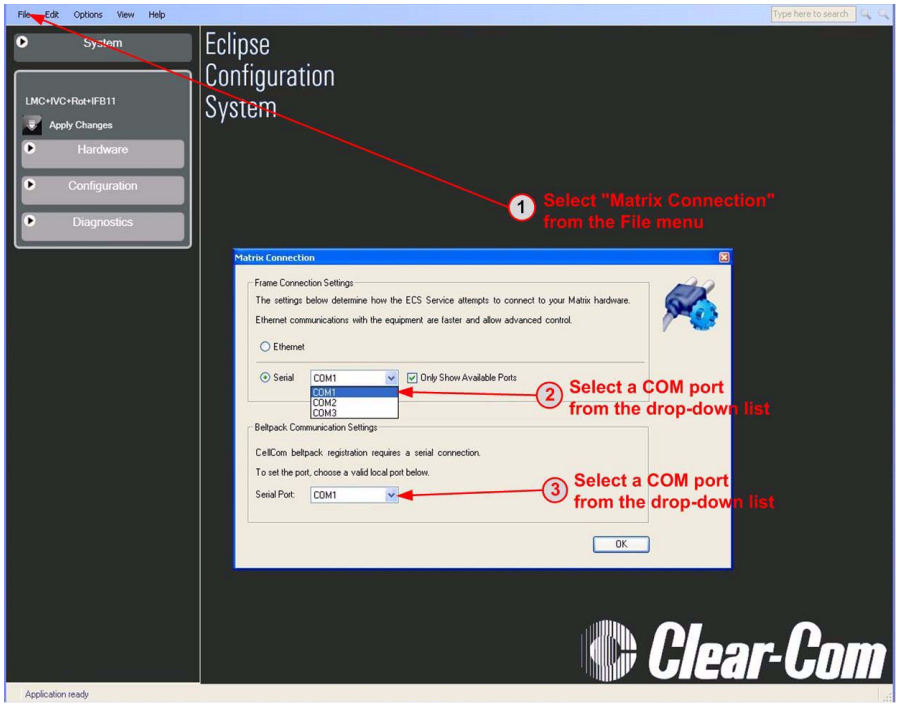
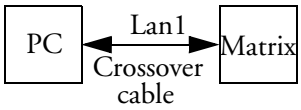
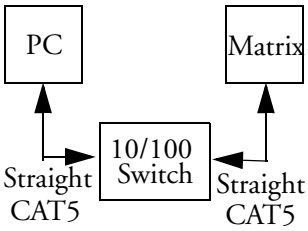


Figure 3-1: Selecting a Serial or Ethernet Connection

Note: If the matrix connection type is changed between ethernet and serial whilst a user is logged in (ECS in client/server mode) the user will be logged out. The user will need to log back in via the File menu to resume ECS operations.

ETHERNET CONNECTION





Ethernet mode to complete the configuration.

To establish the hardware connection on a network, an Ethernet crossover cable should be connected from the LAN connection on the PC to the LAN1 connector on the rear of the Eclipse frame. Otherwise straight-through CAT5 cables can be used via a Switch.

Note: Where a linked set of matrices has been configured ethernet switches rather than hubs should be used to connect system components.

To establish communication between the PC and the Eclipse frame, the PC and the frame must be on the same subnet. Therefore the PC Administrator must set the IP address of the computer to the same subnet as the Eclipse matrix. Windows provides many different methods of reconfiguring network settings. The following is one method:

1. From the Windows ‘Start’ menu, select ‘My Network Places’.
2. From the ‘Network’ task pane, click ‘View Network Connections’. The ‘Network Connections’ dialog box appears.

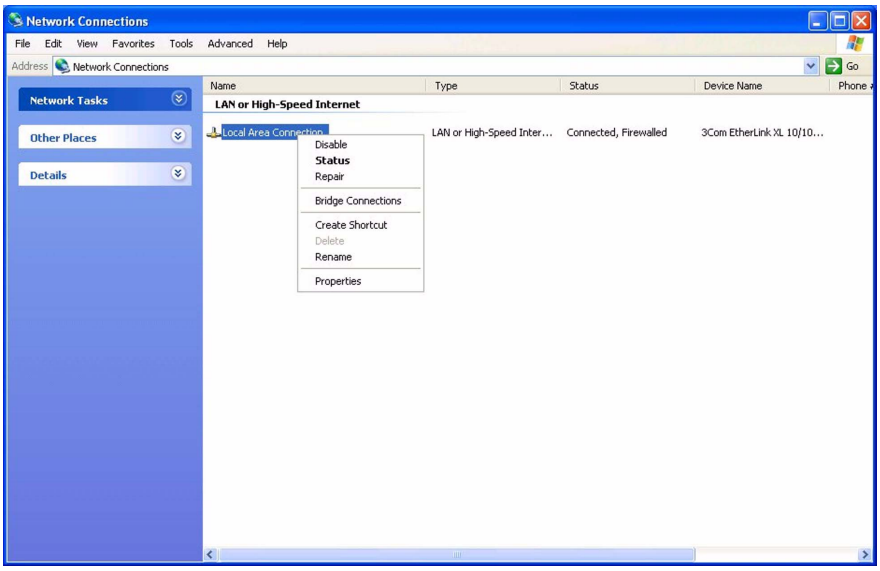


Figure 3-2: The Network Connections Dialog Box

3. Click on the 'Local Area Connection' icon once to highlight it, then right-click the icon for a shortcut menu.
4. From the shortcut menu, select 'Properties'.

   The 'Local Area Connection Properties' dialog box appears.

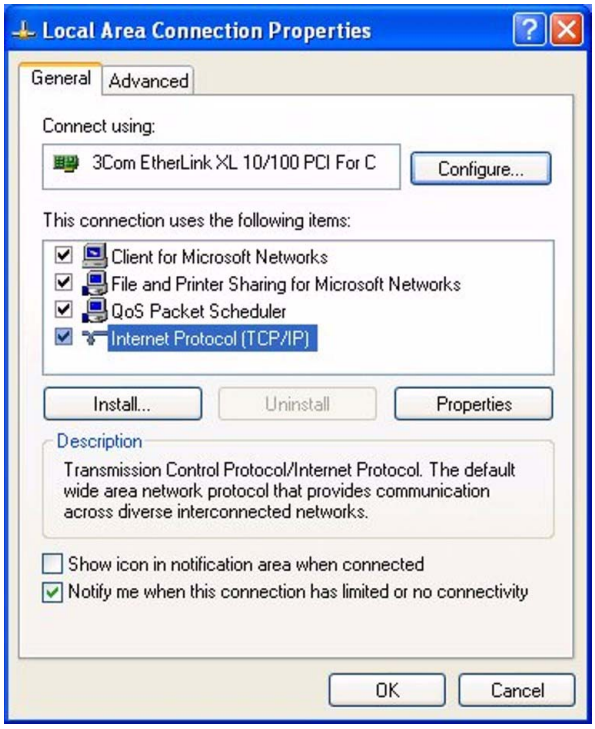


Figure 3-3: Local Area Connection Properties Dialog Box

5. Click the ‘Internet Protocol (TCP/IP)’ icon to highlight it, then click the ‘Properties’ button.

   The ‘Internet Protocol (TCP/IP) Properties’ dialog box appears, as shown in Figure 3-4 .

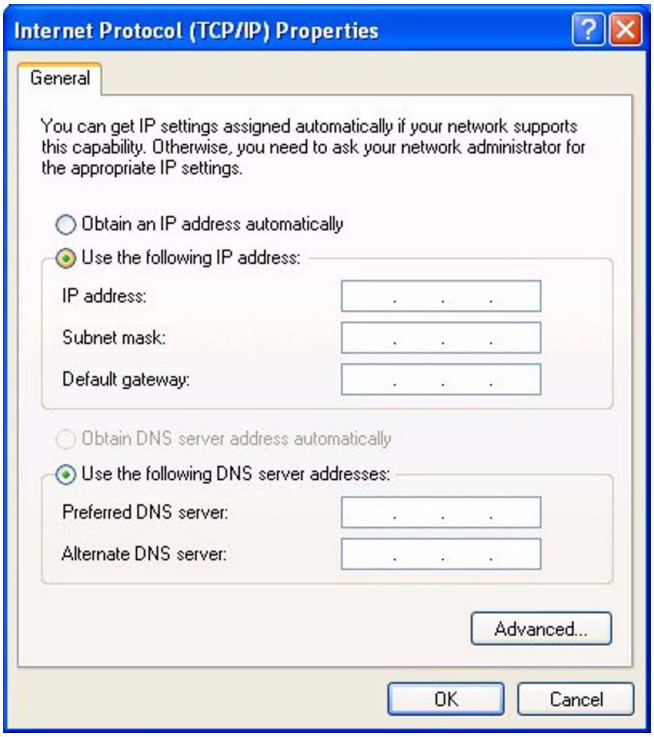


Figure 3-4: Internet Protocol Properties Dialog Box

6. Click Use the ‘Following IP Address’, then enter an IP address of 169.254.0.10. The subnet mask should be 255.255.0.0. Ensure that all other settings are blank. Select OK, then OK again.

The IP address of the computer is now set to the same subnet as the Eclipse matrix.

Checking Connections with the Windows Ping Utility

If there is a problem connecting to the Eclipse matrix a Windows utility called “Ping” can be used to verify that the cabling and IP settings are correct.

To use the Windows “Ping” utility

1. From the Windows ‘Start’ menu, select ‘Run’.

   The ‘Run’ dialog box appears.

2. Type “cmd” in the **Open** field and click OK.

   A command window opens.

3. Type ‘ping *xxx.xxx.xx.xxx’* where the x’s form the IP address of the Eclipse matrix.

4. Press ‘Enter’.

If the ping was successful a reply will be received. If the ping was not successful check the cabling and IP settings.

Note: Ensure that Network Bridging and any firewalls are disabled.

INITIAL CONFIGURATION SEQUENCE

The initial configuration sequence for a matrix that has no map loaded is described in the following section. Later sections provide more details of the required operations.

1. Reset the matrix to the factory default IP address (169.254.0.100). The reset sequence is:
   - Remove the slave CPU card
   - Press and hold the 'ENG' and 'FULL RESET' front panel buttons simultaneously then press the 'RESET' button on the master CPU card.
   - Replace the slave CPU card
   - Remove the master CPU card
   - Press and hold the 'ENG' and 'FULL RESET' front panel buttons simultaneously then press the 'RESET' button on the slave CPU card.
   - Replace the master CPU card
2. Log in to ECS using an account with Admin rights.
3. Open the 'File' menu and click on 'Matrix Connection' to display the matrix connection setup.
4. Set the matrix connection to Ethernet (click on the 'Ethernet' radio button and then click on the 'OK' button).
5. Create a new configuration file for the matrix using the 'File' and then 'New Project'.
6. Enter the configuration name and description.
7. The IP address of the new configuration will be set to the factory default (169.254.0.100) initially.
8. Select 'System' from the ECS menu.
9. Ensure the hardware type is set correctly then right click on the matrix icon to open the matrix options. Select 'Configuration' and then 'Create Configuration Discover Hardware'.
10. ECS will then communicate with the matrix to obtain a list of all the hardware connected to the matrix.
11. Complete the matrix configuration (see the chapter "Setup Eclipse").
12. Download the completed configuration to the matrix by clicking on "Apply Changes" link on the matrix options and selecting the required options from the dialogue (see the chapter on "Eclipse Downloads").

Details of some of the operations are given in the following sections.

CREATING A CONFIGURATION FILE

The first step in setting up a system is to create a configuration file. At first this file will not have any content. Eventually the configuration will be populated with all of the details of the system, including the panels, interfaces, and control devices assigned to ports on the matrix, and the alphanumeric names, or "labels", assigned to each device.

To create a configuration file:

Open the File menu and select ‘New Project’ (Ctrl-N).

Note: The Alt-F, N and Ctrl-N commands can be used when in any ECS mode to start a new configuration map.

The ‘Create a New Configuration’ dialog box appears, as shown below.

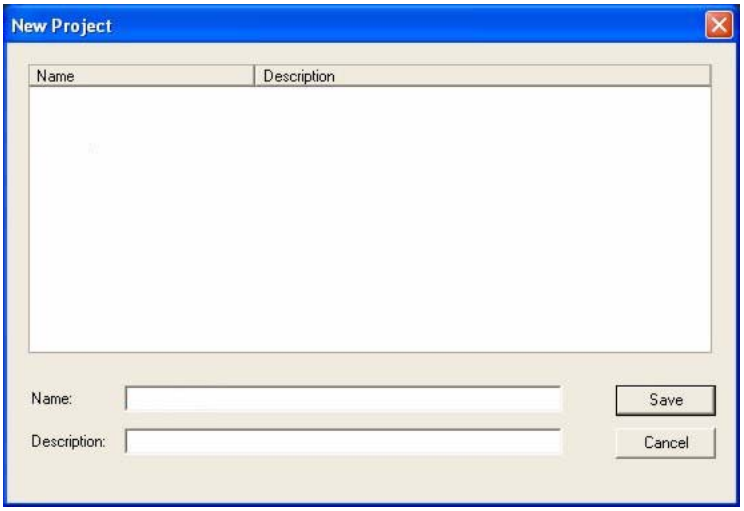


Figure 3-5: Create a New Configuration Dialog Box

Note: If a configuration has already been populated or downloaded select Open and select the already existing configuration file from the dialog box (see chapter 5).

Type a name and description for the configuration and click ‘Save’.

The name of the configuration appears on the status line at the bottom of the screen. Note that the name of the matrix frame does not yet appear.

SETTING UP A NEW MATRIX

Once a new project has been created matrices can be added to the project in two ways; either by adding matrices that have been discovered by ECS or by creating new matrices.

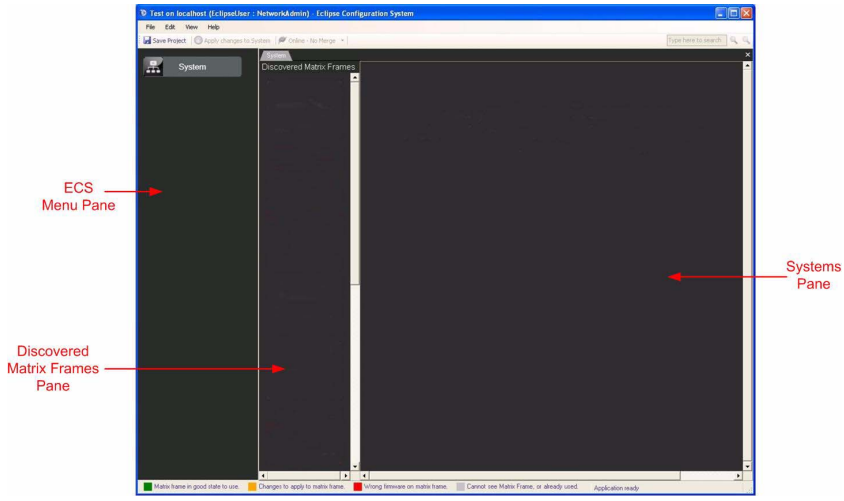


Figure 3-6: Blank Matrix Screen

Click on the Matrix IP Address box to edit the default address displayed then click on the ‘Configuration Manager’ button to open the project configuration setup.

ADDING A DISCOVERED MATRIX

This approach assumes that the matrix or matrices has an ethernet address set up that is accessible to the ECS PC (see “Ethernet Connection” on page 3-4).

1. Open the ‘System’ menu.

   The systems screen is displayed. If there are active matrices on the network ECS will discover them and display a list of these matrices in the centre of the screen.

The first step in setting up a system is to create or select a configuration file.

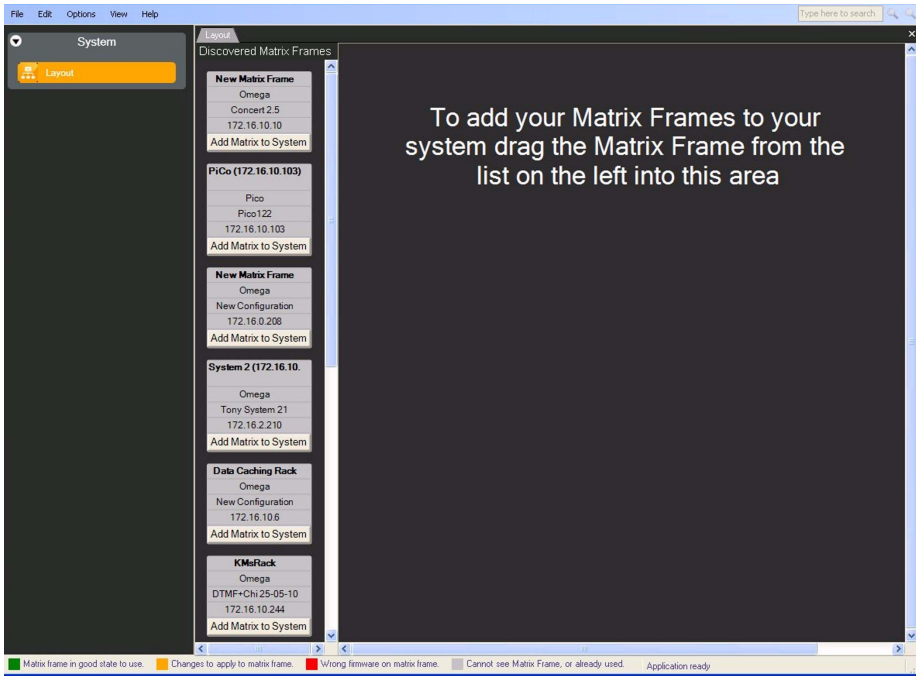


Figure 3-7: System Screen

2. Click on ‘Add Matrix to System’ on one of the matrices displayed to add it to the new project. An options screen will be display allowing the user to discover the matrix and panels, create a blank configuration or upload a configuration.

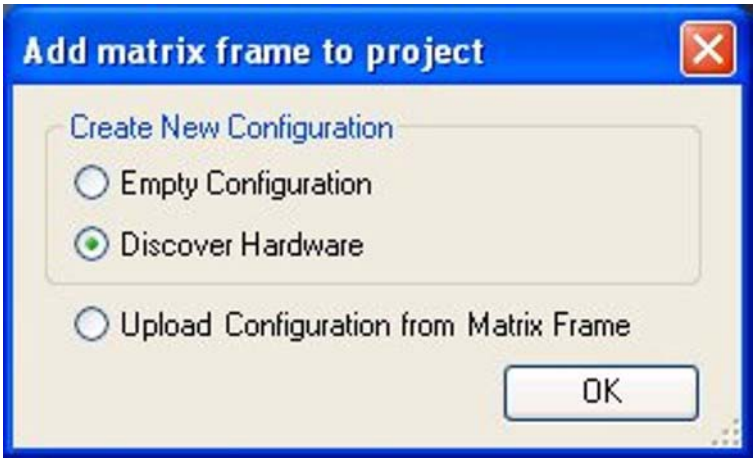


Figure 3-8: Add New Frame Dialog

Discover Hardware and Panels

This option is the simplest means of adding a new matrix to a system as it will fully populate the project with the cards and panels without the user having to add them all manually.

Click on the radio button and then select “OK” to discover the hardware. A progress bar will be displayed while ECS communicates with the matrix.

Figure 3-9: Matrix Hardware Detect

Once the hardware has been detected the matrix will be added to the project in the system pane and the Hardware, Configuration and Diagnostic menu links will be displayed in the menu pane.

The matrix IP address and system preferences can then be set up as described below.

Create Blank Configuration

If this option is selected the frame is added and the Hardware, Configuration and Diagnostic menu links are displayed in the menu pane. However no cards or panels are configured and the Hardware link will be flash orange to indicate there is no hardware configuration.

The matrix IP address and system preferences are set up as described below, after which the Hardware should be configured manually.

Upload Configuration from Frame

The option requires that the matrix to be added to the new project already has a configuration loaded. If this is the case it is the quickest way to set up a frame as the configuration would include the system and panel setups as well as cards and panels present.

Select the option to upload the configuration and click on the “OK” button. The IP address of the discovered frame will be displayed and confirmation of the upload requested.

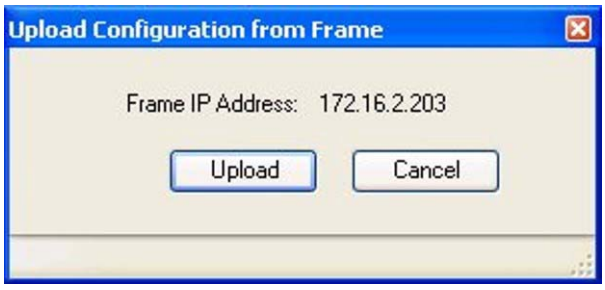


Figure 3-10: Upload Confirmation

To continue click on ‘Upload’ and ECS will upload the current configuration.

Once the configuration has been loaded the Hardware, Configuration and Diagnostics menu links will be displayed and the configuration can be edited.

Creating a New Matrix

As well as adding a discovered matrix to the project it is also possible to add a new matrix directly.

Position the mouse pointer over the system pane and right-click to open a menu.

Right click in the systems pane to open the ‘Add Matrix Frame’ prompt and click on it.

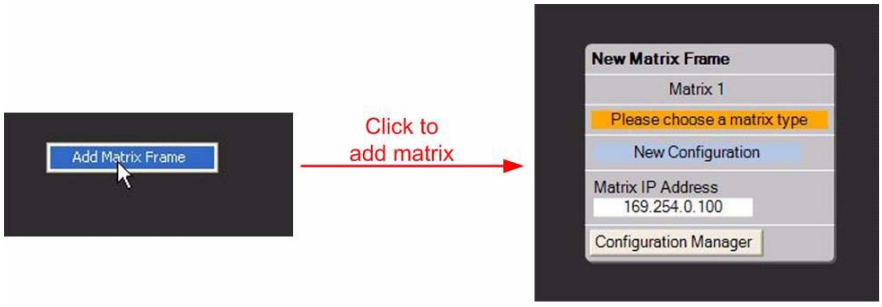


Figure 3-11: Creating a New Matrix

Once the new matrix has been added it should be configured as described in “Configuring a New Matrix” below.

Configuring a New Matrix

After a new matrix has been added to the system pane it will need to be configured before cards and panels can be added.

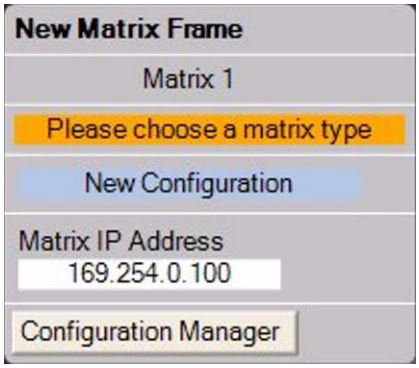


Figure 3-12: New Matrix Icon

The first step is to define the matrix type. Click on the 'Please choose a matrix type' link on the new matrix symbol to open a list of available matrix types and select the required matrix.

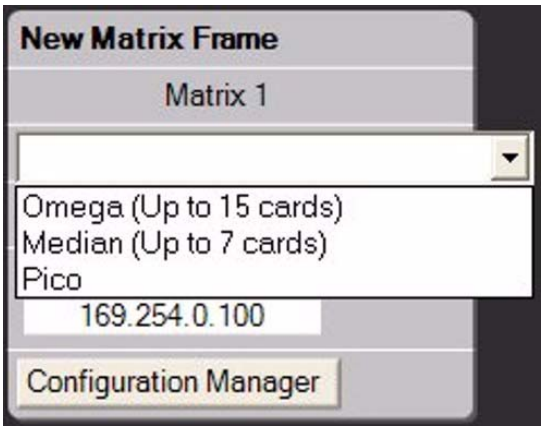


Figure 3-13: Select Matrix Type

Click on the required matrix type and the menu will close. The selected matrix type will be added to the configuration.

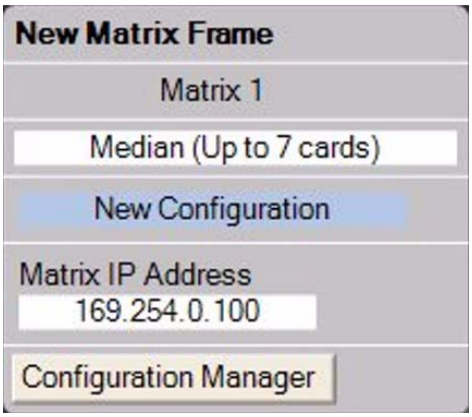


Figure 3-14: Matrix Type Configured

The next step is to click on 'New Configuration' to open the matrix configuration menu.

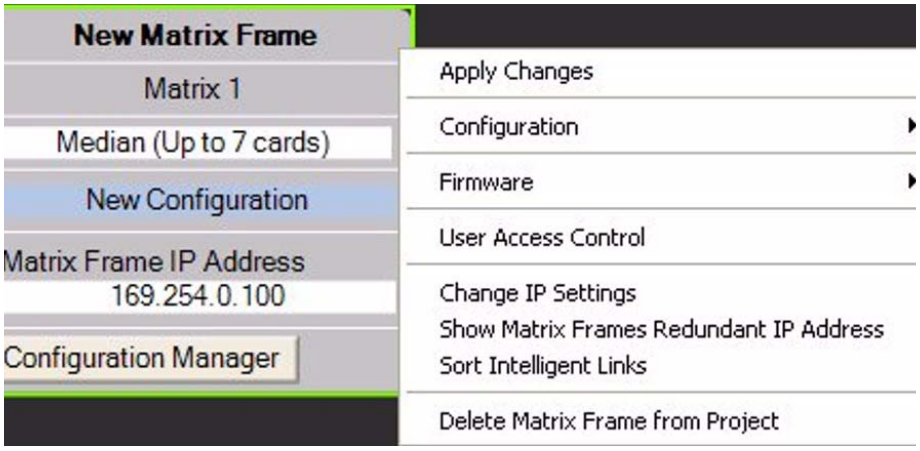


Figure 3-15: Select IP Settings

Click on 'Change IP Settings' to enter or amend the IP address for the frame.
An IP address uniquely identifies each computer or device on a network that uses TCP/IP protocols. Note that in ECS an IP address is required for all matrix map configurations, regardless of whether the computer on which ECS is installed is connected to a Ethernet network or is connected serially.

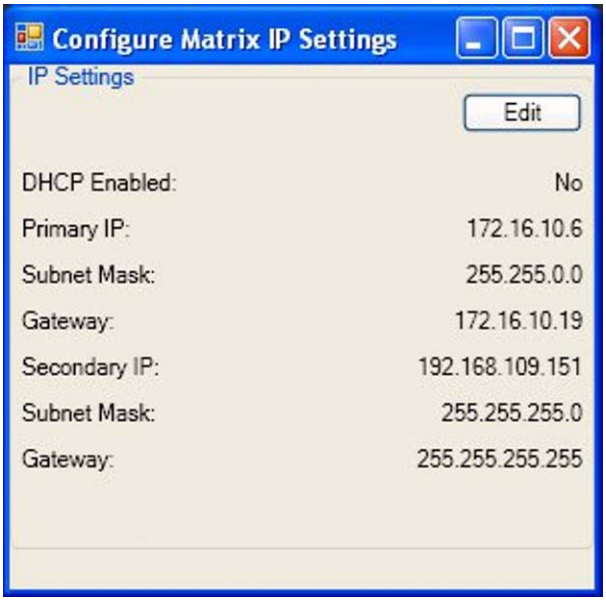


Figure 3-16: Matrix IP Settings

To enable changes to the IP settings click on the 'Edit' button.

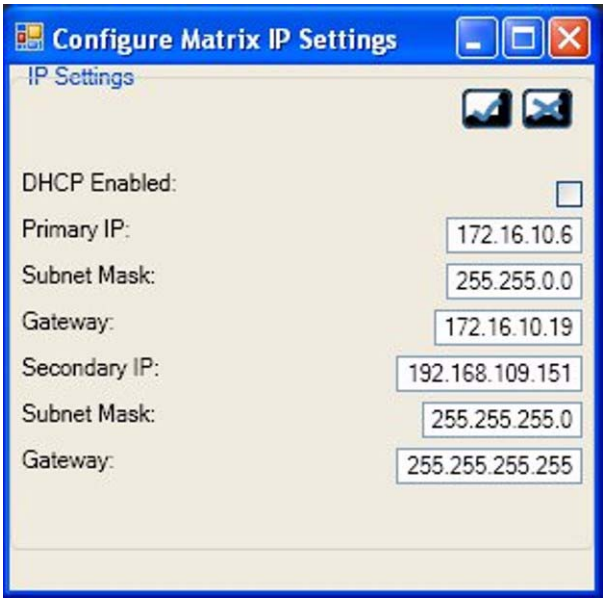


Figure 3-17: Edit IP Settings

If a DHCP server is to be used click on the 'DHCP Enabled' checkbox to obtain all IP settings automatically. The other boxes will be greyed to indicate that they cannot be altered.

If DHCP is not to be used edit the parameters in the boxes as required.

Click on the tick button to save the amended settings. A warning message will be displayed. Click on the 'OK' button to confirm the changes.

MATRIX FRAME PREFERENCES

The ‘Preferences’ link in the Configuration menu allows global system functions to be configured. These functions are grouped under a series of tabs as shown in Figure 3-18 .

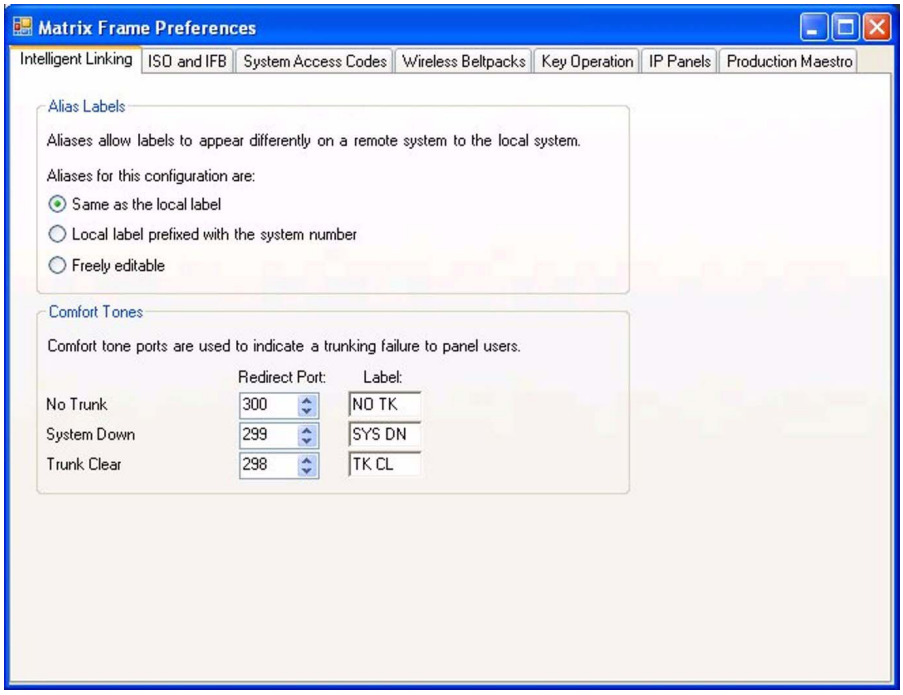


Figure 3-18: Matrix Frame Preferences

Intelligent Linking Setup

The Intelligent Linking options allow the format of labels on remote systems to be specified and ports for ‘Comfort Tones’ to be defined as shown in Figure 3-19 below.

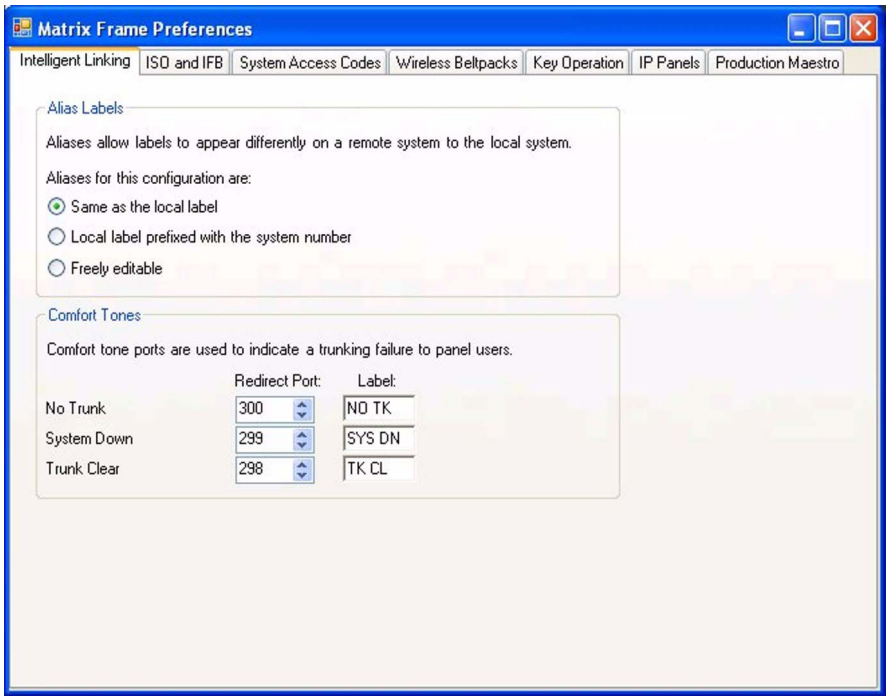


Figure 3-19: Intelligent Linking Tab

Alias labels

The Alias Labels section of intelligent linking controls how labels for panel functions are presented in linked systems. This is used where panels on linked systems may have labels referring to a single action on one system such as a control or a talk path to a panel. The options for labels are:

Same as the local label

Labels appear the same on local and remote systems. If this option is selected the label will be the same regardless of whether it is on a local system or on a remote system.

Local label prefixed with the system number

Local labels are prefixed with the system number. This will automatically indicate whether a label on a panel operates on the local system or on a remote system and the identity of the remote system.

Freely editable

Freely editable labels. The labels may be set up with any system of identification the user requires.

Comfort Tones

Also included is a header “Comfort Tones” where external tone sources are configured to indicate various network system states. These tones are supplied from an external source to a port. The port

that the source is connected to is specified in the ‘Redirect Port’ box and a label associated with it that will be displayed.

Network Comfort Tones are used to indicate the status of the trunk lines between matrices.

The system states are:

- No Trunk (a requested trunk line is unavailable)
- System Down (requested destination system is unavailable)
- Trunk Clear (requested trunk line is available)

Whenever one of these conditions occurs as a result of a request from a panel the appropriate tone will be routed from the specified port to the requesting panel and the label displayed on the reply key or answer back key.

ISO and IFB Setup

The ISO and IFB settings define how these operations are impleted on the system.

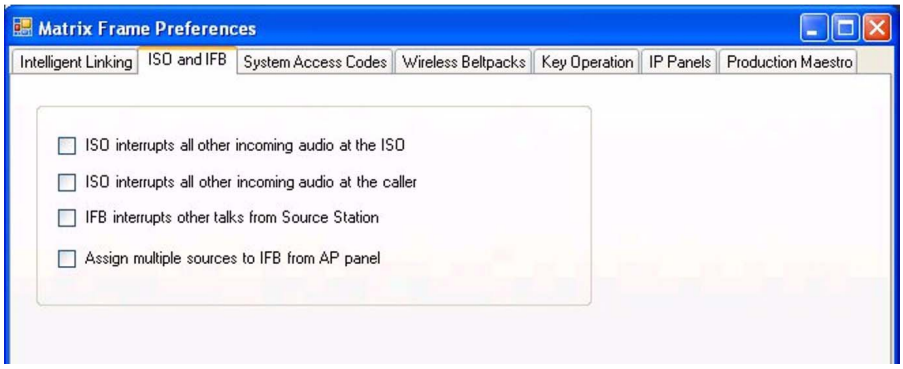


Figure 3-20: ISO and IFB Tab

In the default operation with the box not checked, when a path between the source panel and an ISO destination is activated any other listen paths at the ISO destination will remain active, enabling the ISO destination to hear both the caller and the other listens during the ISO conversation. This is shown in Figure 3-21 with the Source panel calling CAM-3.

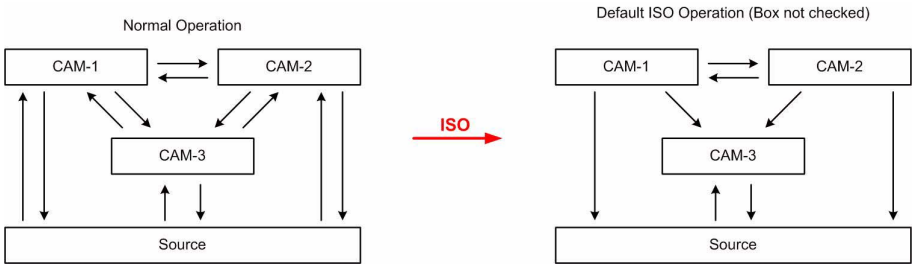


Figure 3-21: ISO Default Operation

ISO Interrupts all other incoming audio at the ISO

If this box is checked, the ISO destination can only talk and listen to the calling source; the previous listen paths will be interrupted (turned off) for the duration of the ISO conversation. The calling panel will continue to hear the other listens but talk paths will be turned off for the duration of the ISO conversation. This is shown in Figure 3-22 with the Source panel calling CAM-3.

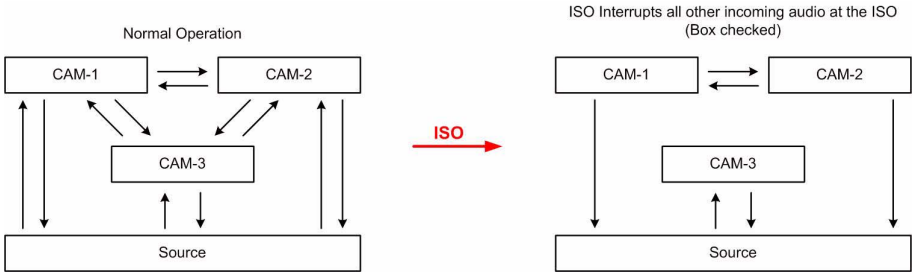


Figure 3-22: ISO Interrupts at ISO (modified operation)

ISO interrupts all other incoming audio at the caller

If this box is checked, the ISO source can only talk and listen to the ISO destination; the previous listen paths will be interrupted (turned off) for the duration of the ISO conversation. All listen paths to the ISO source will also be turned off so that the ISO source can only talk and listen to the ISO destination. This is shown in Figure 3-23 with the Source panel calling CAM-3.

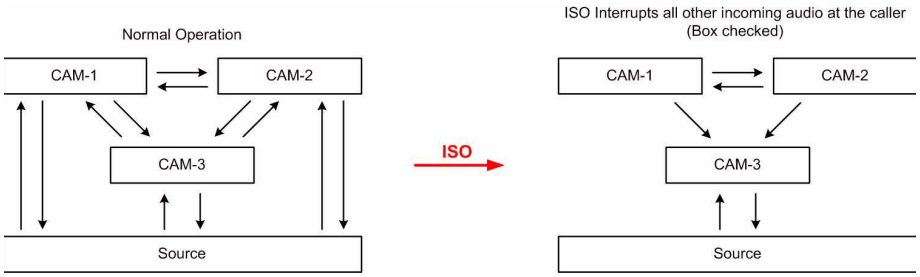


Figure 3-23: ISO Interrupts at Caller (modified operation)

IFB Interrupts other talks from Source Station

Under the default setting (box not checked), an activated IFB path from a panel (the IFB source) to a destination port does not deactivate any other talk paths activated from that panel. The communication path to the IFB destination will also be carried by the other active talk paths. If this box is checked, however, all the other talk paths from the panel will be interrupted (turned off) for the duration of the IFB talk. This enables a. private call to a remote dialled-in IFB destination.

Assign multiple sources to IFB from AP panel

When this box is checked it will allow an AP panel e.g. AP-22 to assign multiple sources to an IFB. In this case the IFB will hear all the talk from the selected sources.

System Access Codes Setup

Aspects of system functionality can be protected by access codes. Use this tab to enter codes to unlock features.

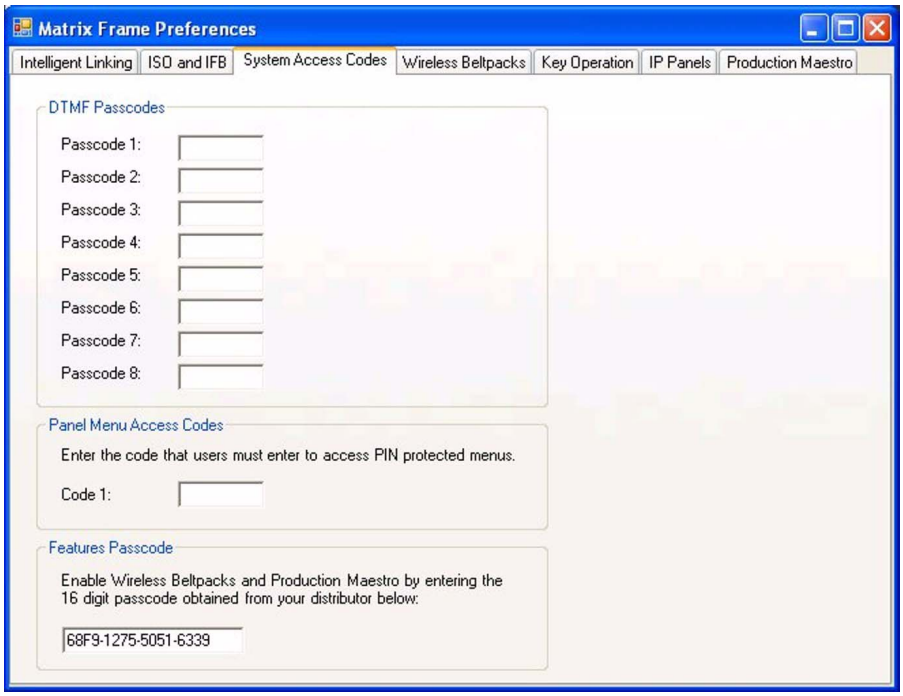


Figure 3-24: DTMF Settings Tab

DTMF Passcodes

The DTMF Setting function sets the global access codes within the Eclipse System. Those codes cover the eight available DTMF codes that will access the Eclipse System from a remote location using DTMF Inward Access.

There are eight DTMF access codes. If a value is assigned to any of them, it will be available for recognition by any MVX-16A port in the Eclipse System. The local configuration of each TEL-14 that is connected to a MVX-16A port will include setting that port to recognize any, all, or none of these DTMF access codes. If any MVX-16A port has been configured to recognize one or more of these DTMF access codes, that port will allow system access to any caller who correctly enters any one of the recognized access codes.

Access codes can be only numeric characters and must be four digits long—no more and no less. ECS will not allow a password field containing fewer than four characters, and will only accept numerals.

Note: For DTMF decoding to operate DTMF Daughter boards are required on each MVX Card. Since v1.2 this is a standard fit. Contact a sales representative if the MVX cards do not have the DTMF daughter boards fitted.

Note: For Eclipse Pico only ports 17-32 are fitted with DTMF cards.

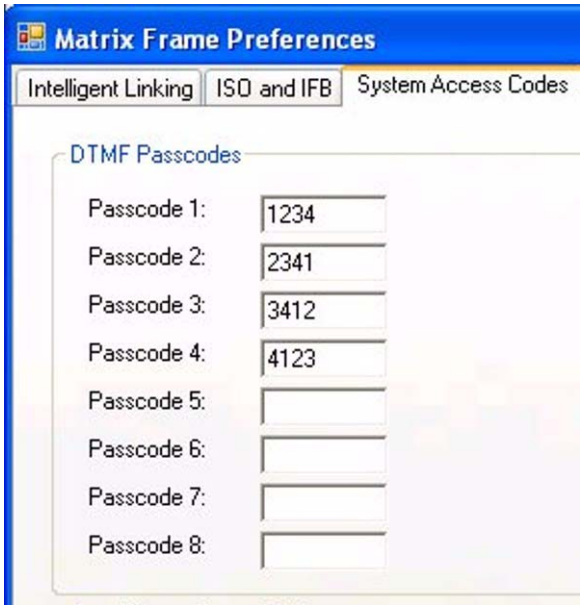


Figure 3-25: System Passcodes

Panel Menu Access Code

The menus on V-Series main panels and ICS-2003 panels can be PIN-code protected. Enter the PIN code here. When users attempt to access PIN-protected menus they will have to enter this code.

The PIN protected menus on V-Series main panels are:

- Sys Config Access
- Local Pref Menu access

- Diagnostic Menu Access

The PIN protected menus on ICS-2003 are:

- Local Configuration
- System Configuration
- Maintenance

Features Passcode

Allows a 16 digit passcode to be entered which allows the licensable options of Wireless Beltpacks and Production Maestro to be enabled. Passcodes to enable licensable options are obtained from Clear-Com. Please contact Clear-Com sales or your distributor for further information.

If the passcode is changed an apply and red reset is required to implement the change.

Wireless Beltpacks Setup

The wireless beltpacks tab allows the system identifier to be set up and the DECT parameters for the beltpacks to be configured.

Note that in order to access the DECT configuration facility a password is required. This is available from your Clear-Com supplier. Ask for ECS-CEL.

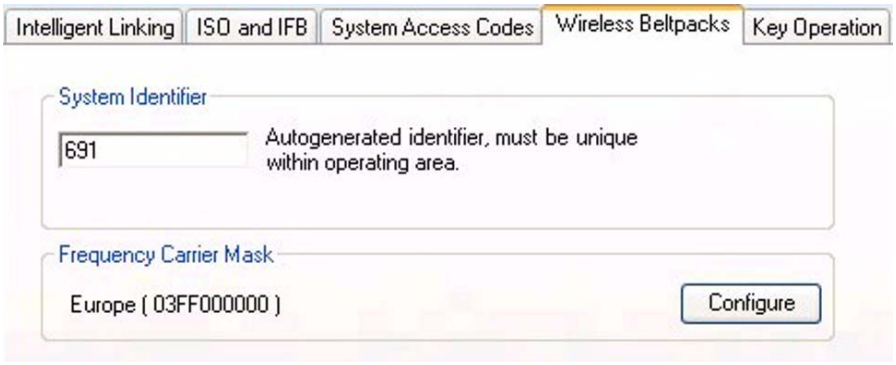


Figure 3-26: Wireless Beltpacks Tab

To configure the DECT frequency click on the ‘Configure’ button. The password input screen will be displayed.

Figure 3-27: DECT Configuration Password Screen

Enter the DECT configuration password to display the DECT configuration screen.

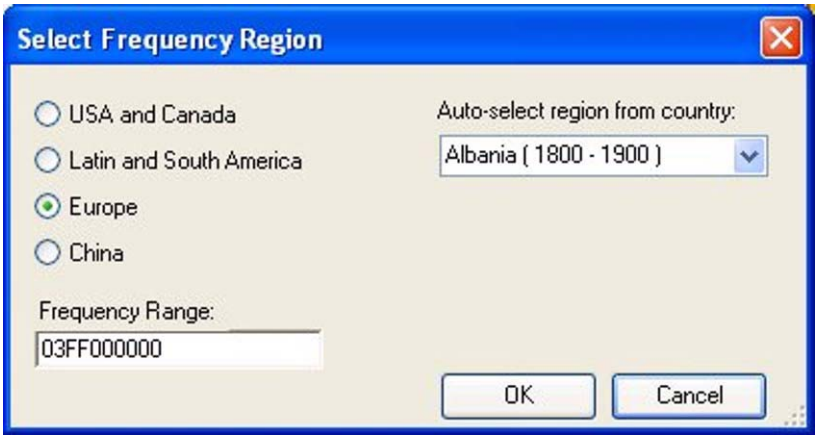


Figure 3-28: Frequency Region Select

The frequency range used by the wireless beltpacks can be set directly by entering the required value into the box . Alternatively it can be set by selecting the region with the radio buttons or the country the wireless system is to be used in from the list. This will automatically insert the correct frequency range value.

Click on the 'OK' button to confirm the frequency range to be used by the wireless beltpacks.

Key Operation Setup

This tab controls the incoming audio signalization (tally) key color of keys and rotary encoders on panels connected to Eclipse matrices.

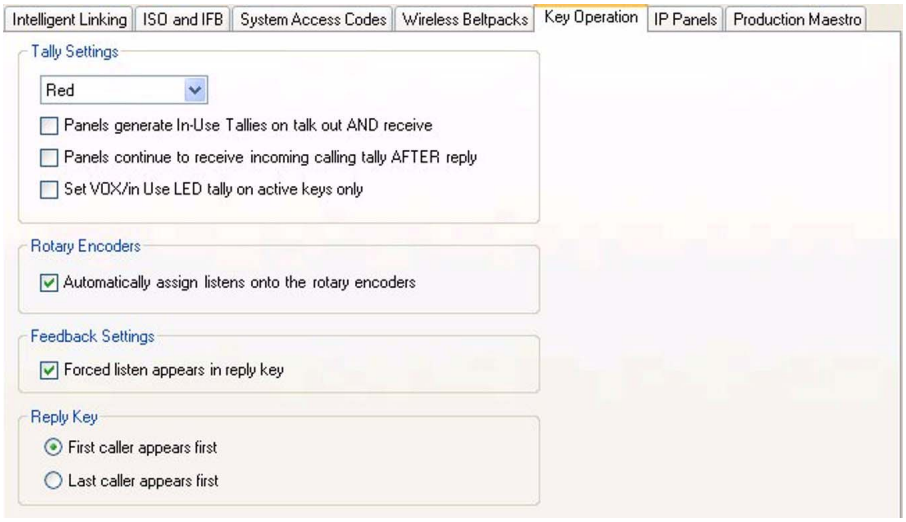


Figure 3-29: Key Operation Tab

Tally Settings

Enable the incoming Tally flash color to be changed (default is Red). Settings are:

Red

Tally flash color is Red.

Green

Tally flash color is Green (only for 4000 Series II Panels, ICS 1008/1016 panels and I-stations).

Panels generate In-Use Tallies on talk out AND receive

The called panel will generate an In-Use tally signal which will be displayed on all other panels which have a label to the called panel.

The default for the option is unchecked.

Panels continue to receive incoming calling tally AFTER reply

The receiving panel will continue to receive and display the incoming call tally after the incoming call has been answered using the Reply key. The following key signalizations are only displayed by i-Station and V-Series panels.

If Tally Settings is set to Red then i-Station and V-Series panels flash dim red at 4 Hz after reply and then release of the talk key if this option is checked.

If Tally Settings is set to Green then the i-Station panels flash dim green at 4 Hz after reply and then release of the talk key if the option is checked. V-Series panels show bright green solid after reply and then release of the talk key.if this option is checked.

The default is for the option to be unchecked.

Rotary Encoders

This option applies to PD4222/4212 panels. If this option is checked, when a user assigns a key onto a panel that has rotary encoders (i.e. PD4212, PD4222), the rotary encoder associated with that key is automatically populated with a listen to the newly assigned key destination. Note that rotary encoder listens are not maintained when moving keys with attached encoders but are deleted when the keys are moved.

Note: This is different to ECS V4.0 where the assignment was done at map build time, and the user could not see what was happening.

Feedback Settings

If this option is enabled (box checked) the label of any Forced Listen port will appear in the answerback stack of a panel that is listening.

The option is unchecked by default.

Reply Key

The Reply Key radio buttons select in which order incoming calls to a panel are stacked on the Reply Key.

- If the ‘First caller’ option is selected then the calls are ordered on the basis of “first in first out” so the reply key answers the calls in the order they are received. I
- f the ‘Last caller’ option in selected the calls are ordered on the basis of “last in first out” so the reply key answers the calls starting with the most recent.

The default is the first call is answered first.

IP Panels Setup

This tab determines the default Codec and IP port to be used by the IVC-32 card when communicating with panels over IP.

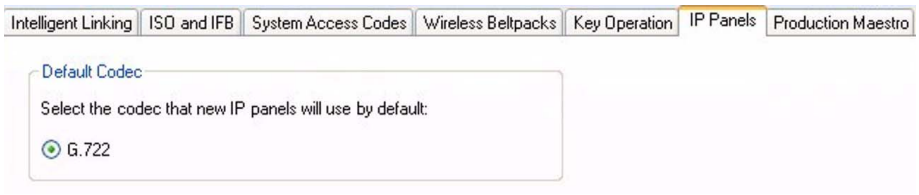


Figure 3-30: IP Tab

The Codec option specifies the algorithm used to compress the audio in digital form for transmission over IP. Currently the default is G.722 which is enabled by default. It cannot be disabled.

The remaining IVC-32 card parameters such as IP address and port are set up when the card is configured in 'Cards and Ports' (see chapter 5 for further information).

Production Maestro Setup

The Production Maestro tab allows the user to select the type of audio level metering to be used by the system.

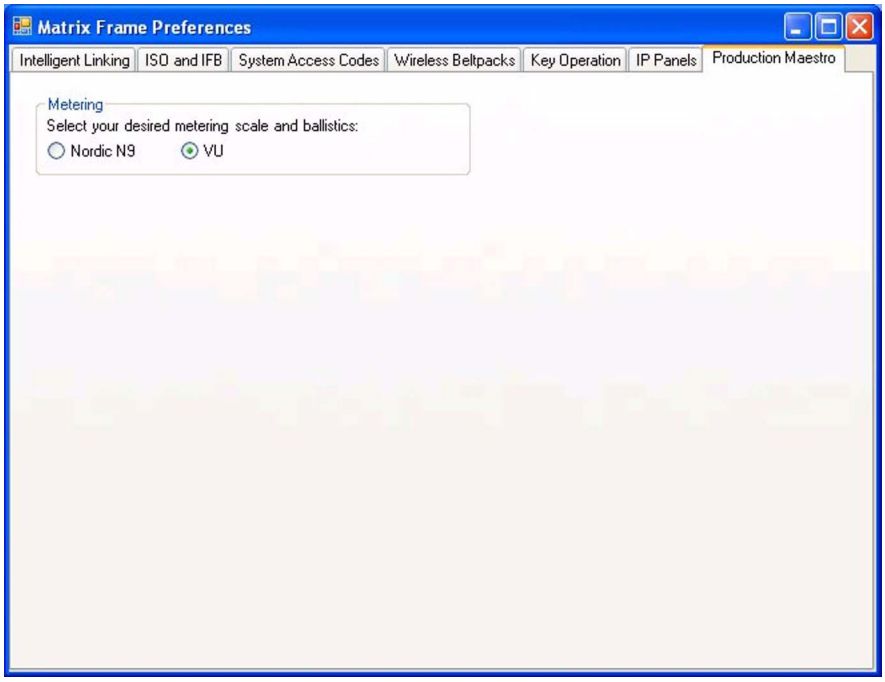


Figure 3-31: Production Maestro Options

Metering Scale and Ballistics

The metering scale and ballistics options specify how the audio levels are scaled and displayed.

Nordic N9

The Nordic N9 option displays the audio level as a peak programme meter (PPM) and gives a better level reading. The scale is of the type used in Scandinavia.

VU

The VU option displays the audio level as a Volume Unit (VU) meter and uses Root Mean Square voltage to display the audio level. This is a commonly used type of audio metering but does not always give the most accurate reading. The VU meter scale has zero point at +4dBu with a decibel scale ranging non-linearly from 20dB below this point to 3dB above.

CONFIGURATION OPTIONS

The ‘Configuration’ option in the menu allows the user to save, clear, upload and create configurations, and to back up and restore key status.

Configuration Manager

The ‘Configuration Manager’ option opens the configuration manager allowing configurations to be saved, loaded, imported and exported. Configurations can also be password protected using the configuration manager.

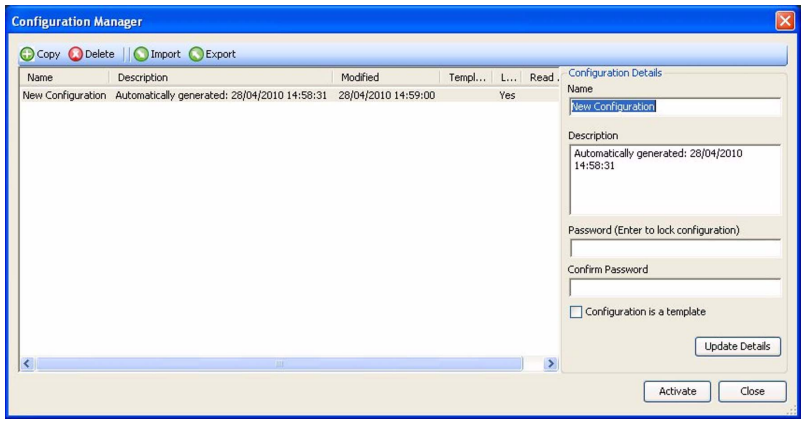


Figure 3-32: Configuration Manager Screen

Enter the name of the new matrix and click on the ‘Update Details’ button. Optionally a description and a configuration password can be entered as well.

The template checkbox indicates that this project is to be fixed as read-only. It can be used as a basis for creating new projects, by opening the configuration and saving it as a new project.

Click on the 'Update Details' button to update the project without closing the Configuration Manager screen.

Creating a New Configuration

It is possible to create new configuration which may be empty or containing only the hardware discovered from the matrix.

1. In 'System' right-click the display for the target matrix in the main section of the display. An options menu is displayed.
2. Select 'Configuration' and then 'Create New Configuration' and then either 'Discover Hardware' or 'Empty'.

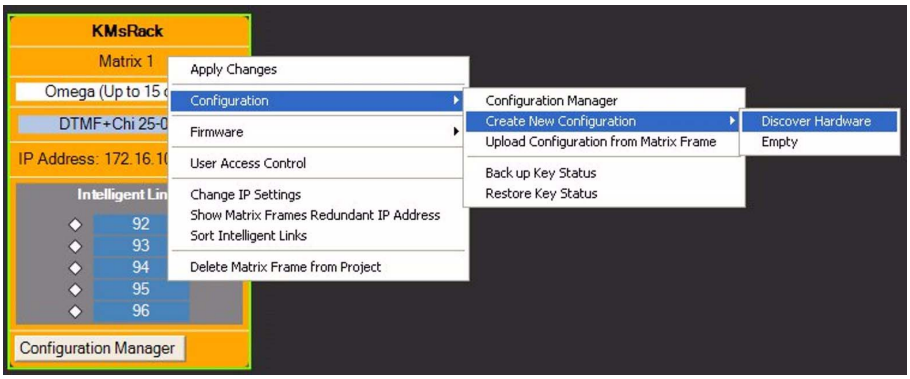


Figure 3-33: Creating a New Configuration

3. If 'Discover Hardware' is selected a warning message will be displayed before the current hardware configuration is replaced.

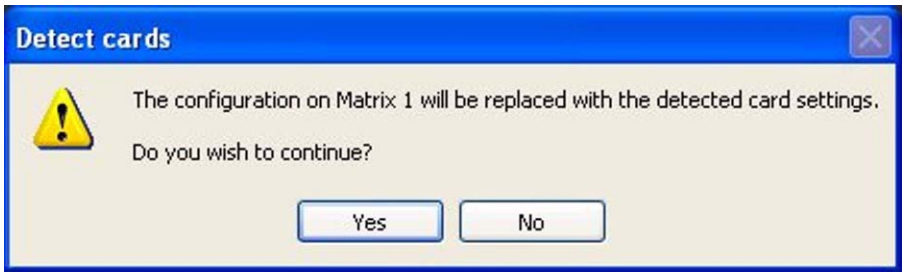


Figure 3-34: Discover Hardware Confirmation

4. Click on the 'Yes' button to confirm the operation. ECS will then interrogate the matrix to obtain the current hardware configuration.
5. If 'Empty' is selected the configuration is created with no hardware or configured devices. The matrix IP address will default to 169.254.0.100.

Upload Configuration from Matrix Frame

It is possible to upload the current map configuration, including labels, from the matrix if it already has a configuration loaded.

1. In ‘System’ right-click the display for the target matrix in the main section of the display. An options menu is displayed.
2. Select ‘Configuration’ and then ‘Upload Active Configuration from Live Matrix Frame’.

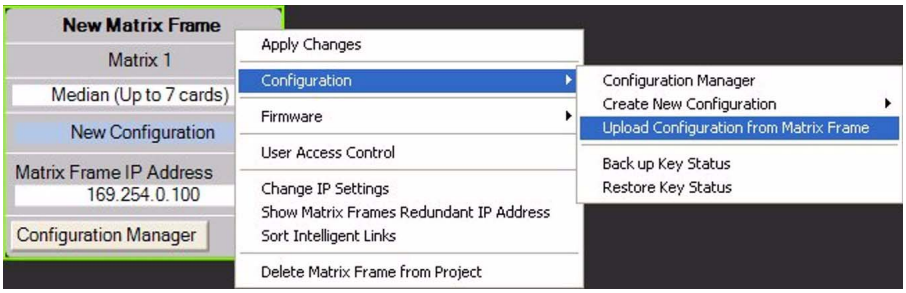


Figure 3-35: Uploading a Configuration

3. Select ‘Configuration’ and then ‘Upload Active Configuration from Live Matrix Frame’. The ‘Upload Configuration’ dialog box will be displayed.

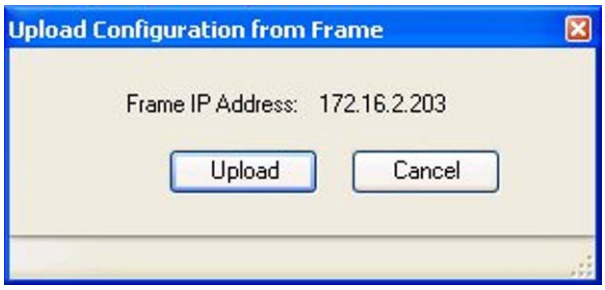


Figure 3-36: Upload Confirmation

4. Verify the frame IP address and click Upload. The active configuration at the matrix uploads to ECS.

Back up Key Status

The ‘Back up Key Status’ option allows the ECS user to upload and store a record of all the talk and listen keys active at the time on the ECS server. This function also saves the states of the panel microphones, panel headsets and panel loudspeakers. This facility could be used for example to record the state of talk and listen keys prior to a Black reset of the matrix.

This function is used in conjunction with the ‘Restore Key Status’ function.

Restore Key Status

The ‘Restore Key Status’ option allows the ECS user to download a previously saved record of the state of talk and listen keys to the matrix to restore the talk and listen keys to their previous states. This function also restores the states of the panel microphones, panel headsets and panel loudspeakers. This could be done for example after a Black reset of the matrix.

This function is used in conjunction with the ‘Back up Key Status’ function.

Firmware Options

The ‘Firmware’ option in the menu allows the user to update firmware or request the details of all the firmware versions on the matrix cards and attached panels which support the function. Updating the firmware is covered in the chapter on software installation together with upgrading CPU firmware.

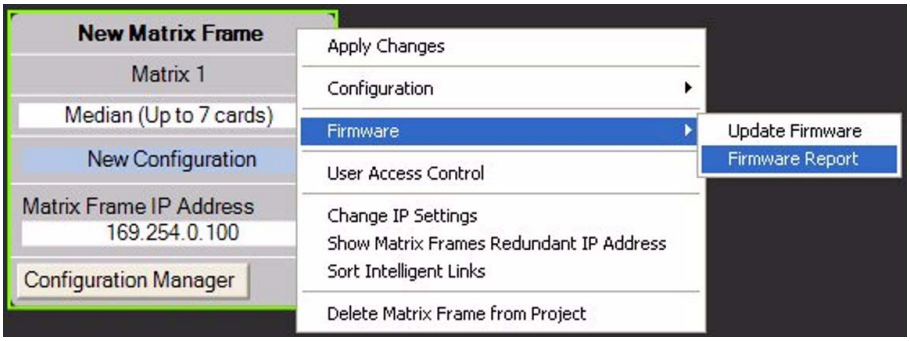


Figure 3-37: Firmware Report Request

The firmware versions are listed in a text window and can be exported to a .csv file. This file is a text file and can be opened by text editors such as Wordpad. An example of a firmware report is shown in Figure 3-38 .

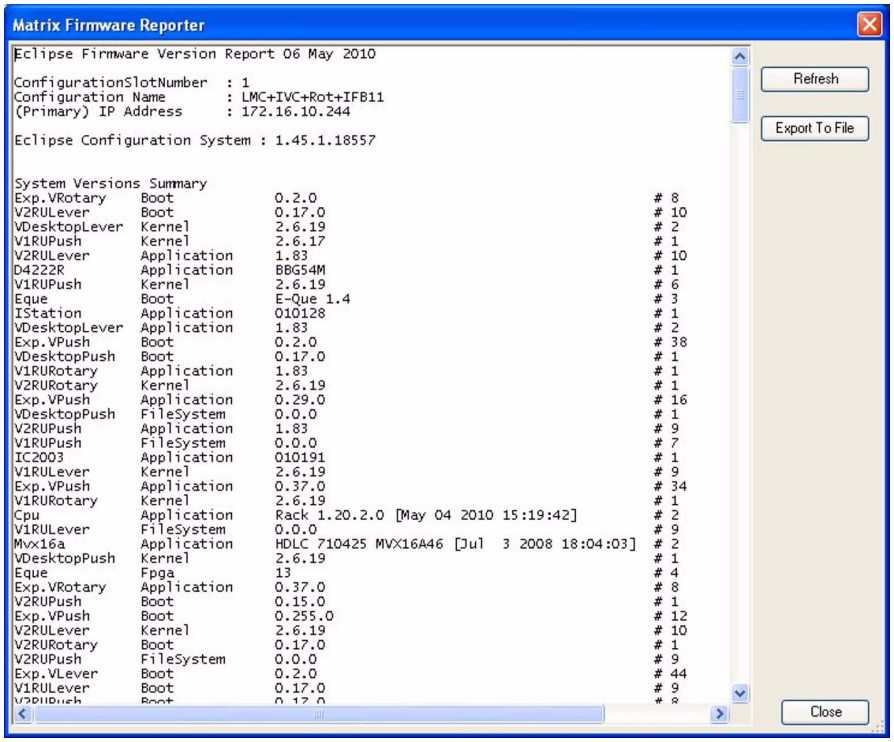


Figure 3-38: Firmware Report Display

The report will provide a summary of the firmware versions followed by a detailed list for all devices that provide this information.

CPU Cards

Cpu cards will list the boot PROM version and the application version.

MVX-A16 Cards

MVX-A16 cards will list the application version and HDLC version.

Fiber Cards

Fiber cards will list the FPGA version.

E-Que Cards

E-Que cards will list the boot code version, the FPGA version and the application version.

IVC-32 Cards

IVC-32 cards will list the boot code version, the FPGA version and the application version.

LMC-64 Cards

LMC-64 cards will list the boot code version, the FPGA version and the application version.

V-Series Panels

V-Series main panels will list the boot code version, the application version, panel kernel version and the filesystem version. V-Series expansion panels will only list boot and application versions.

I-Station

I-stations will report the application version.

ICS-2003 Panel

ICS-2003 panels will report the application version.

ICS-52/92 Panel

ICS-52 and ICS-92 panels will report the application version.

ICS-62/102 Panel

ICS-62 and ICS-102 panels will report the application version.

Sort Intelligent Links

Selecting this option will sort any links that exist between matrices in a linked set. No dialog is displayed.

Delete Matrix Frame from Project

Selecting this option will remove the matrix and all configuration information from the current project.

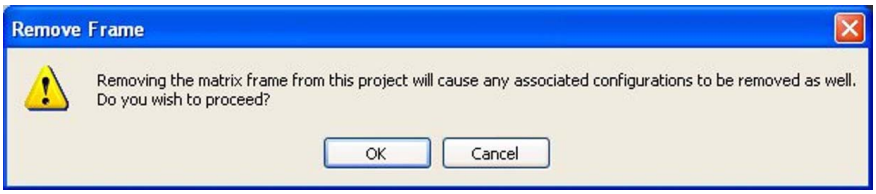


Figure 3-39: Matrix Delete Confirmation

Click on 'OK' to confirm the deletion. When the operation is complete the matrix icon will be deleted from the system display.

OTHER SYSTEM FUNCTIONS

The system screen enables access to a number of other matrix configuration functions by right-clicking the matrix icons and selecting the required function.

Apply Changes

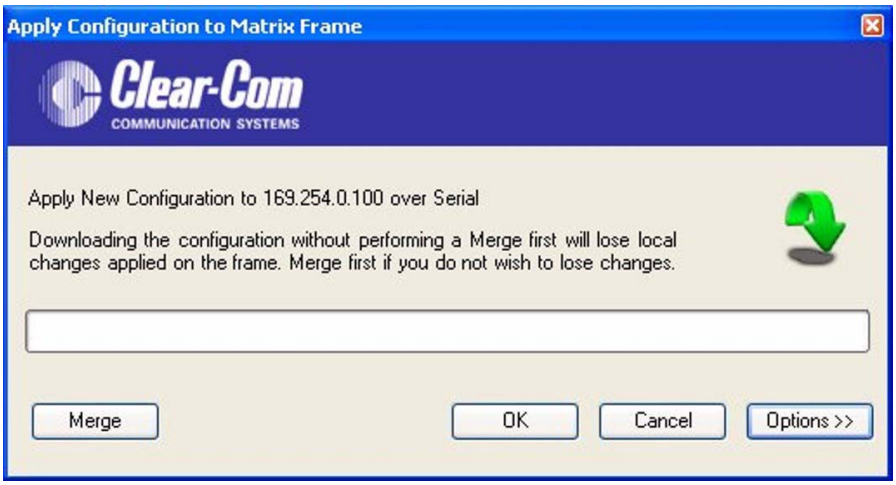


Figure 3-40: Download Dialogue

The “Merge” button allows the current ECS configuration to be merged with the rack configuration before download. This facility should be used if the rack configuration has been changed as a result of making changes in ECS Online mode or from assignment panels. In both cases these changes will not be reflected in the current ECS configuration and would be lost if a download was performed without

first merging the configurations. The merge button has the same effect as performing a merge in Online mode and will display the same informatory messages.

To continue with the download to the frame click on the ‘OK’ button; to cancel the download click on ‘Cancel’

The options button displays a further dialogue allowing the user to set up actions after the download.

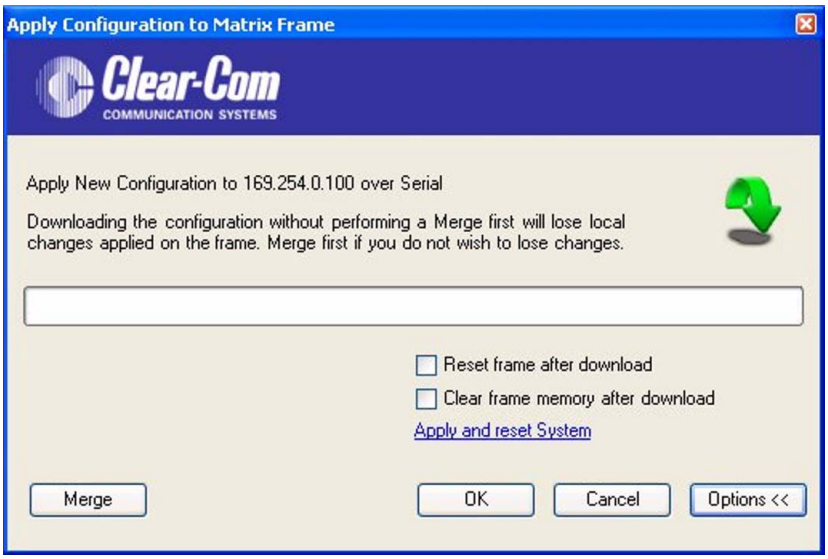


Figure 3-41: New Configuration Download Options

Click on the checkboxes for the required option or options and then 'OK' to continue with the download. A new configuration will be built and downloaded to the frame.

RED RESET (RESET FRAME AFTER DOWNLOAD)

If the 'Clear all talk paths and listen levels during reset' box is not checked the download will reset the matrix and any crosspoints. Talk/Listen paths will be remade.

This type of reset is required for:

- Downloading completely new configurations
- Hardware changes (not mandatory)
- Any locally assigned keys will be cleared.

BLACK RESET (CLEAR FRAME MEMORY AFTER DOWNLOAD)

If the 'Clear all talk paths and listen levels during reset' box is checked the download will clear down any active routes and reset the matrix to the ECS default map. Any local changes to groups, party lines or IFBs made via ICS2003 and i-stations are reset to the ECS map default .

This type of reset is used for:

- Correcting erroneous or spurious crosspoints.
- Any locally assigned keys will also be lost.
- Crosspoints - all active keys are reset to off.

- Crosspoint levels - all panel listen levels are rest to normal.
- Locally assigned keys - any locally assigned keys are deleted.
- Local panel microphone settings - all panel microphone settings are set to the ECS downloaded value.
- Local panel microphone gains- all panel microphone settings are set to the ECS downloaded value.
- Key status - all keys are unmade.
- Any local changes to groups, party lines and IFBs made via ICS2003 and i-stations are reset to the ECS map default.
- Locally assigned fixed groups - all groups are reset to the ECS default.
- Locally assigned party lines -all party lines are reset to the ECS default.
- Locally assigned IFBs -all IFBs are reset to the ECS default.
- Locally assigned forced listens-all Forced listens are reset to the ECS default.
- Input levels - Matrix input levels are reset to the ECS download value.
- Output levels - Matrix output levels are reset to the ECS download value.

APPLY AND RESET ALL FRAMES IN SET

This option should be selected when any of the following are true:

- The ECS operator is making the first download of a new linked set.
- The ECS operator has added or removed a Shared Port.
- The ECS operator has added a remote member to a party line.
- The ECS operator has added a remote key to a party line.
- The ECS operator has change the Port Count for a fiber card.

PRESERVING LOCALLY ASSIGNED KEYS

When a download is performed all the locally assigned keys (keys assigned from a panel rather than ECS) will be lost unless a merge operation is performed before the download. If the user wishes to retain these keys in the new configuration map the user should go into Online mode and merge the locally assigned keys with the new configuration before downloading and then save the modified project.

The configuration can then be downloaded with the locally assigned keys preserved in the new configuration map.

4 SYSTEM CONFIGURATION

System configurations or projects may be Created, Opened, Saved and Deleted via the File menu.

Projects are system configurations that are stored in the database (local or remote). Projects may also be exported as .ccn files and imported later.

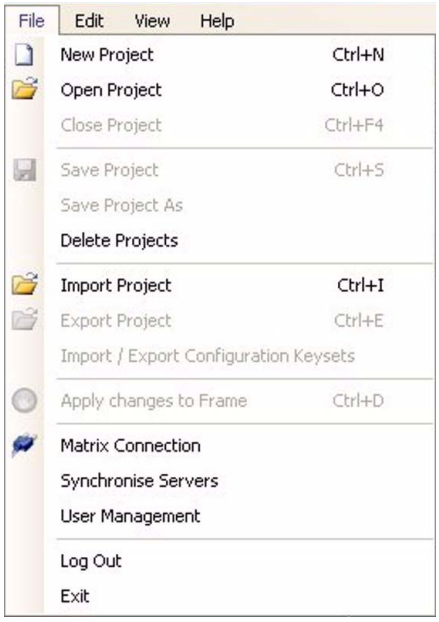


Figure 4-1: File Open Menu

NEW PROJECT

To create a new project open the File menu (Alt-F) and click on the 'New Project' entry (CTRL-N) to open the new project dialog.

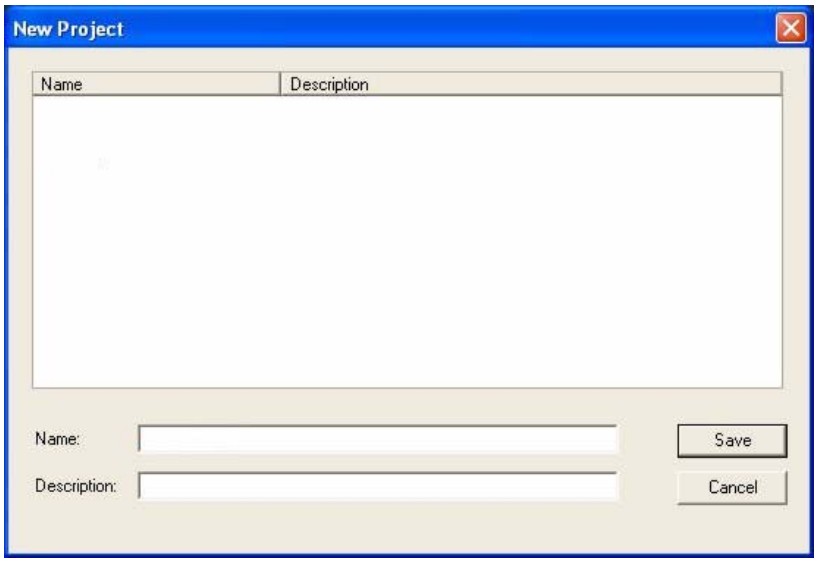


Figure 4-2: New Project Screen

After selecting ‘New Project’ to open the dialog box shown in Figure 4-2, enter a relevant name for the project in the ‘Name’ field. Then provide a detailed description that best describes the reason for the project. Click on the ‘Save’ button to create the new project.

OPENING A PROJECT

To open a project (previously known as a configuration) click on the ‘File’ command on the Windows toolbar and select open or click on the ‘Open’ command on the ECS toolbar (CTRL-O). These commands can also be accessed as Alt-F, O. All available projects appear within the dialog box.

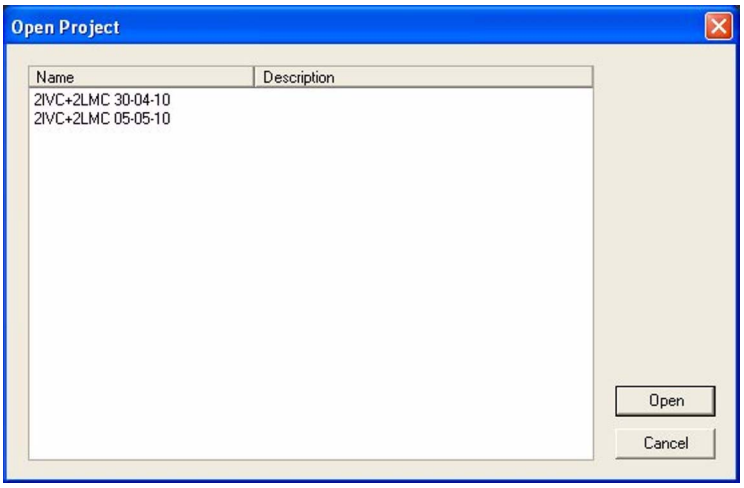


Figure 4-3: Project List

Identify the required project, highlight the project by selecting the whole row from the left of the row and then click on the ‘Open’ button.

If a project is already open ECS will ask if the current project should be saved before opening the new project.

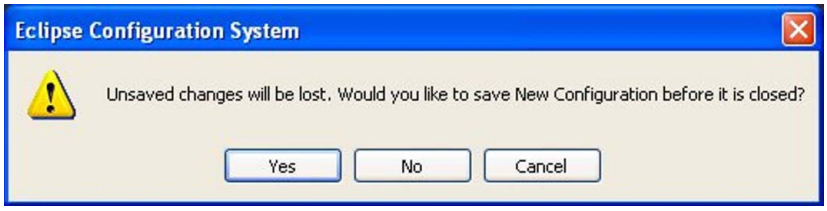


Figure 4-4: Save Old Project Confirm Dialog

ECS users with Admin rights can always open a configuration regardless of whether a password has been set in the configuration manager and reset the password if required. If an ECS user without Admin rights opens a password protected configuration they will be asked for the password.

Figure 4-5: Configuration Password Entry

The correct password must be entered to open the configuration. Once the configuration has been opened by an ECS user with User rights that user may then change or remove the password using the configuration manager.

When the project open function has been selected a list of available projects will be displayed.

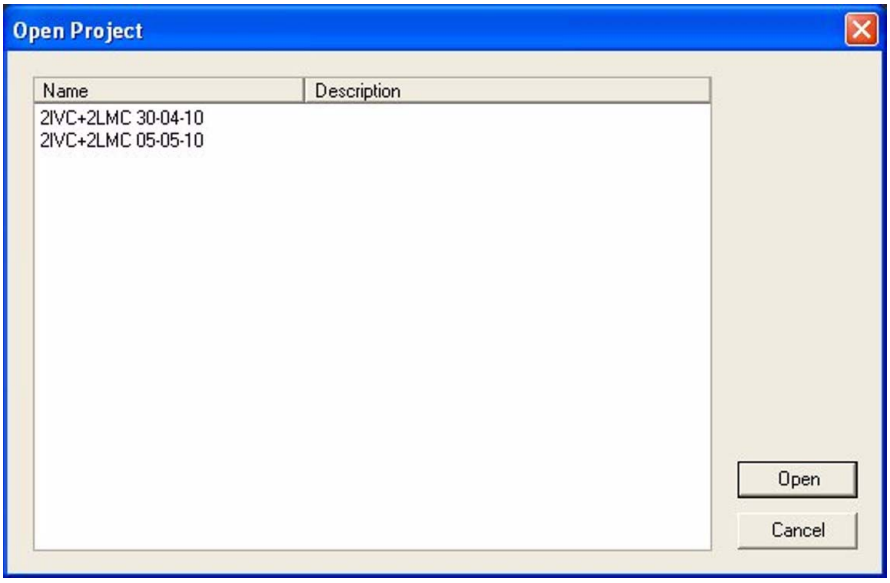


Figure 4-6: Configuration File Open Screen

Select the required project by clicking on the name and the project will be highlighted. Click on the 'Open' button to load the project. Click on the 'Cancel' button to cancel the project selection.

To close a project click on 'File' and select 'Close'. ECS will prompt to save the project before closing.

A project may also be imported from a project (.ccn) file by selecting 'Import Project' from the File menu. A list of project files will be displayed.

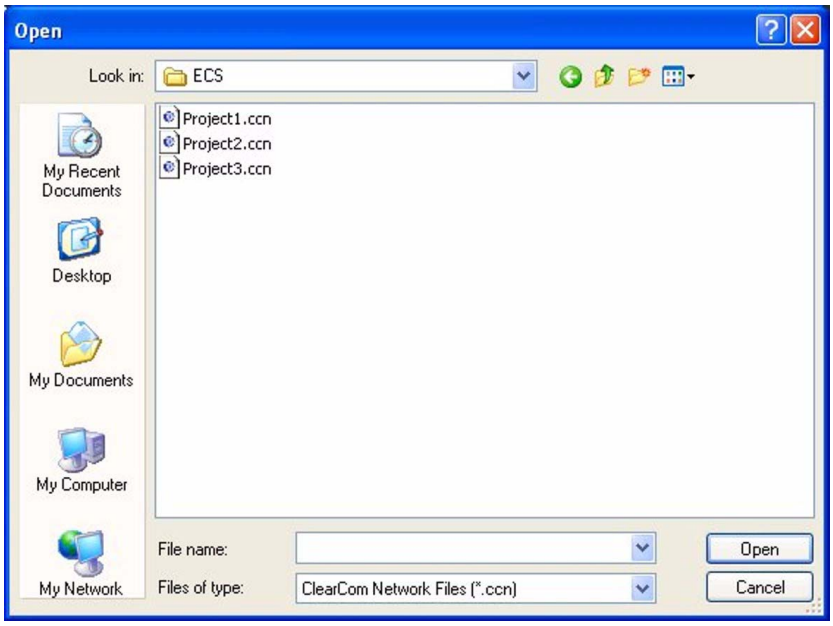


Figure 4-7: Clear-Com Configuration File Import

Select the project file to import and click on the 'Open' button. The project will be displayed in the normal project selection screen and the required project can be selected and loaded as described previously.

Note: After a project file is imported from a previous version of ECS it is advisable to go to 'System' and ensure that the matrix type is set correctly.

Note: If the configuration map currently on the matrix is imported in this way by ECS without changing the name of the configuration map it should be downloaded to the matrix before entering Online mode.

The File menu also allows projects to be deleted. To delete a project select 'Delete Project' from the File menu to open the delete project screen. Select the project to be deleted and click on the 'Delete' button. A confirmation dialogue will be displayed asking for confirmation of the delete command.

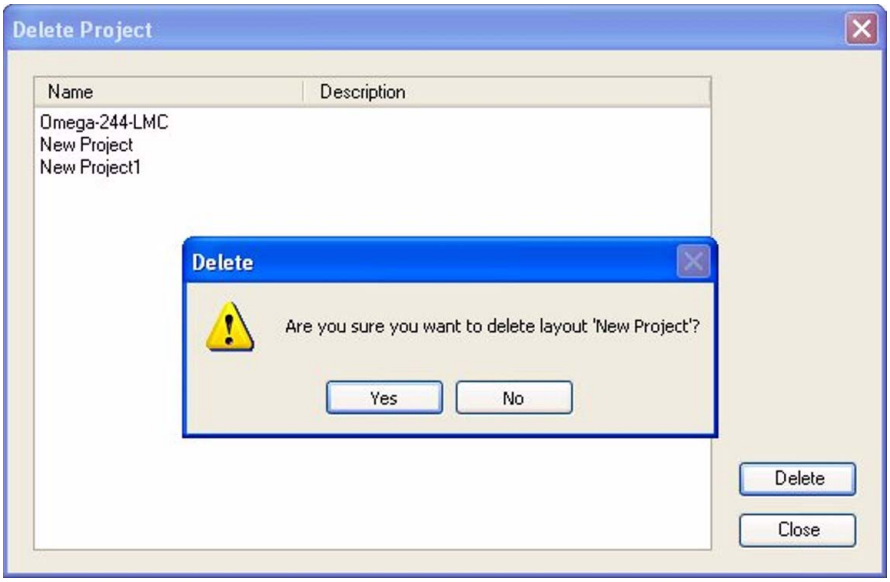


Figure 4-8: Configuration Delete Screen

Click on the ‘Yes’ button to delete the configuration or ‘No’ to abandon the action.

When a project is loaded the ECS menus are displayed on the left hand side of the screen and the ‘Apply changes to system’ and ‘Online’ links in the System menu are enabled.

The Diagnostics menu will only be displayed if a valid system configuration is present. This can be checked by selecting the ‘System’ menu entry and ensuring that a valid configuration is online.

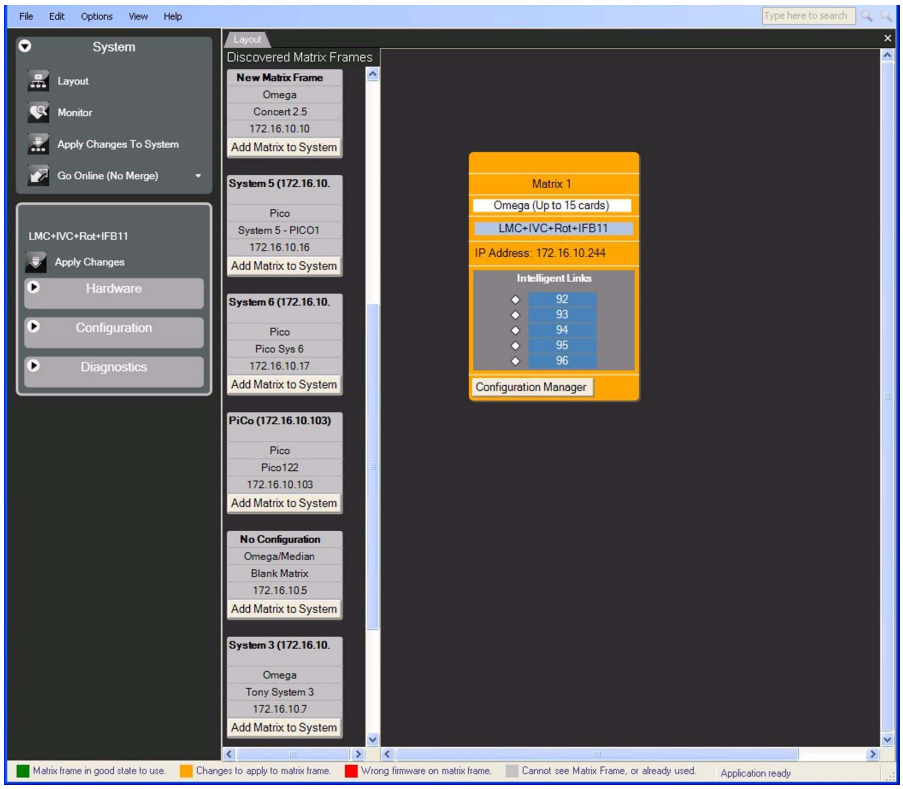


Figure 4-9: Menu Display with Configuration Loaded

A configuration may be saved during editing by clicking on the ‘Save Project’ button or Ctrl-S.

The ‘Online’ button causes ECS to enter Online mode allowing some matrix configuration items highlighted in green to be modified interactively without needing to download a new map.

SAVE PROJECT

A configuration can be saved by opening the ‘File’ menu and selecting the ‘Save Project’ option (Ctrl-S).

SAVE PROJECT AS

To change the name or details of a configuration to create a new configuration open the File menu and select the ‘Save Project As’ option. This will open the new project dialog.

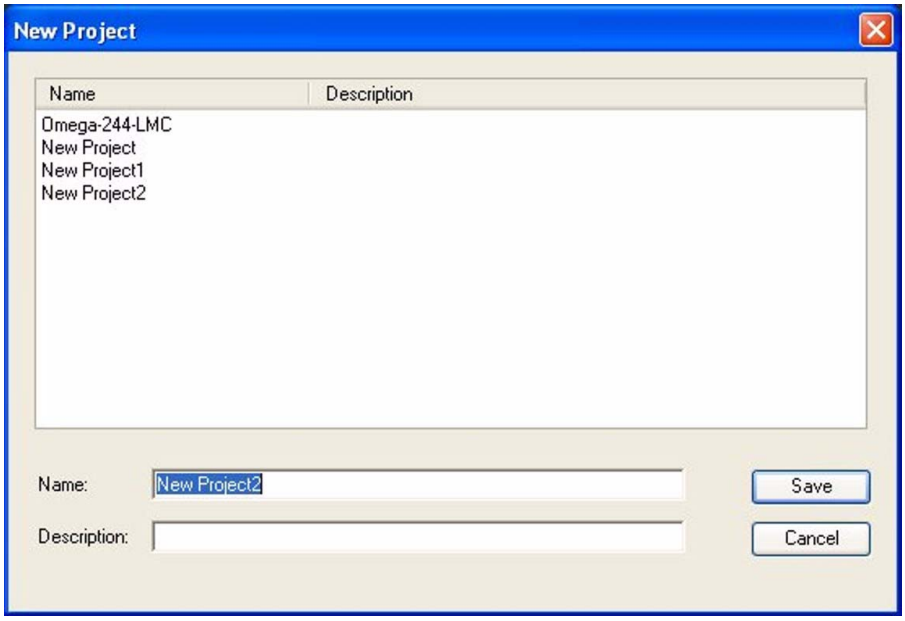


Figure 4-10: Save Project Screen

To save the current project without changing the name or description click on the ‘Save’ button. The ‘Save’ button only saves changes to the ECS database and does not download directly to the Eclipse matrix.

IMPORT PROJECT

The import function allows a project that has been saved as a Clear-Com configuration file (.ccn) to be imported into ECS.

Place an external configuration file (.ccn extension) into an accessible folder. Select ‘Import Project’ from the File menu, navigate to the folder where the external file was placed and select the file then click on the ‘Open’ button.

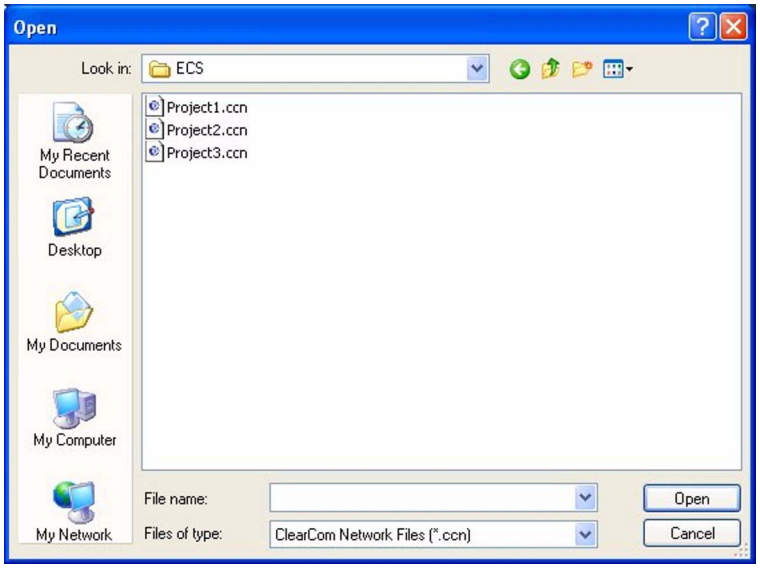


Figure 4-11: Import Project Screen

EXPORT PROJECT

The export function allows a project to be saved as a Clear-Com configuration file (.ccn) that can be stored as a back-up or transported to another PC ready to be imported into ECS at a later date.

Open the File menu and select 'Export Project' to save the project to an external file.

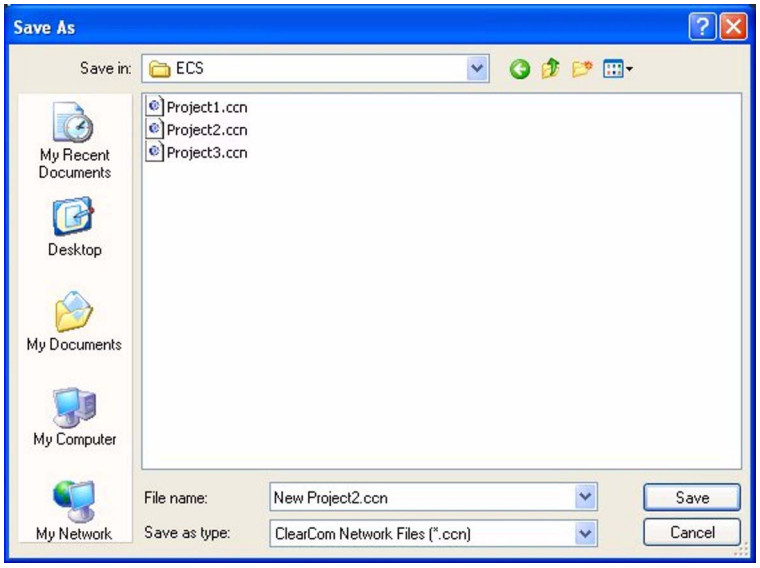


Figure 4-12: Export Project Screen

Navigate to the required folder location and enter file name and click on the 'Save' button. The file will then be saved to the location. The

configuration names will remain the same when exported regardless of the file name.

Note: It is recommended that export project files use the default Clear-Com Configuration (.ccn) file extension for easy identification.

DELETE PROJECT

To delete a project open the File menu and select 'Delete Projects'. The project delete screen will be displayed with a list of known projects in the database.

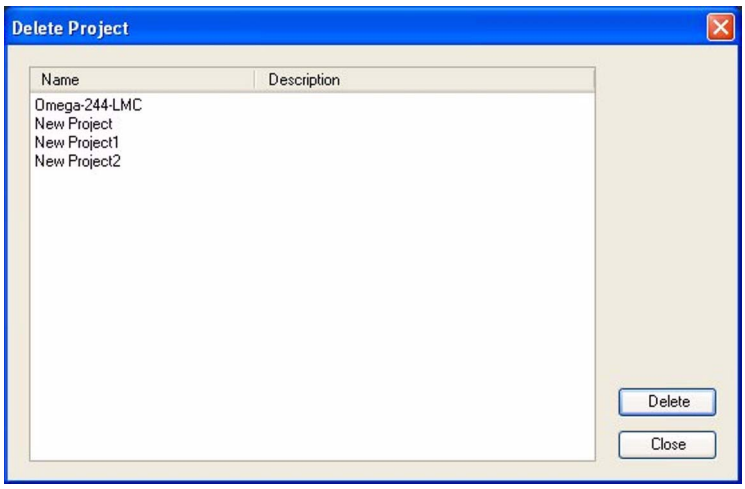


Figure 4-13: Delete Project Screen

To delete a project select the project to be deleted to highlight it and click on the 'Delete' button. The delete confirmation dialog will be displayed.

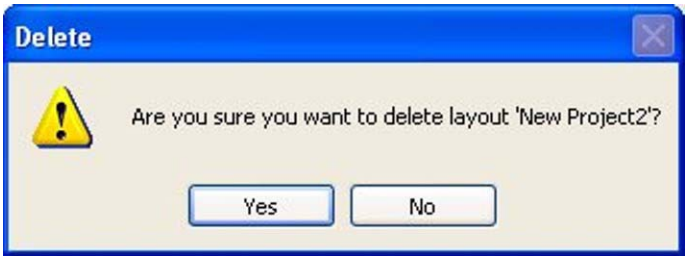


Figure 4-14: Delete Confirmation

The delete confirmation dialog will be displayed; to confirm deletion select the 'Yes' button. Pressing the 'No' button returns the user to the 'Delete Project' dialog.

CLOSE PROJECT

A currently open project can be closed by opening the File menu and selecting the 'Close Project' option (Ctrl-F4). If only one project is open this project will be closed. If any changes have been made a dialog box will be displayed offering the options to save the changes before closing the project.

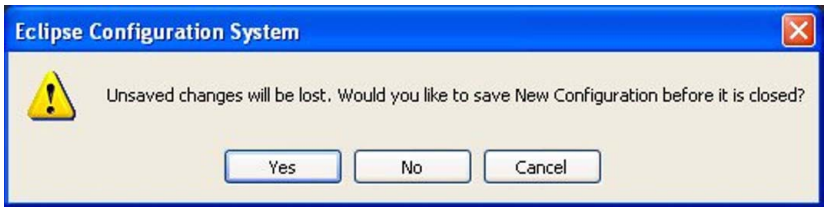


Figure 4-15: Save Confirm Dialog

Click on the 'Yes' button to save the project before closing it or the 'No' button to close the project without saving any changes. Clicking on the 'Cancel' button abandons the project close operation.

IMPORT/EXPORT CONFIGURATION KEY-SETS

This function allows all the keysets in the current configuration to be exported to an external file or imported from an external file and applied to the current configuration. Saved configuration keysets can be imported into other configurations avoiding the need to manually recreate panel setups.

Selecting this option from the File menu opens the Import/Export Configuration Keysets wizard.

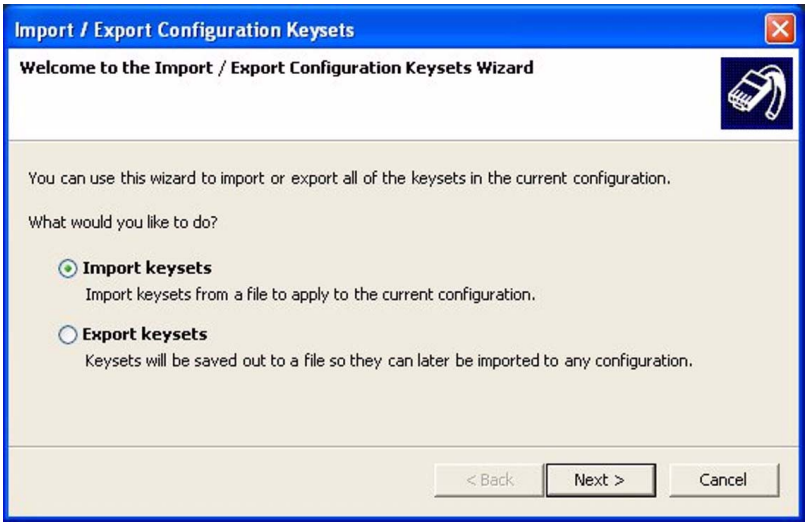


Figure 4-16: Import and Export Configuration Keysets Dialog

Select the required function using the radio buttons and click on the ‘Next’ button to proceed to the file dialog.

IMPORTING CONFIGURATION KEYSETS

The first stage of the configuration keyset import displays the file select dialog. The default file extension for the keyset files is “.KEYSET” and it is recommended that this extension is used.

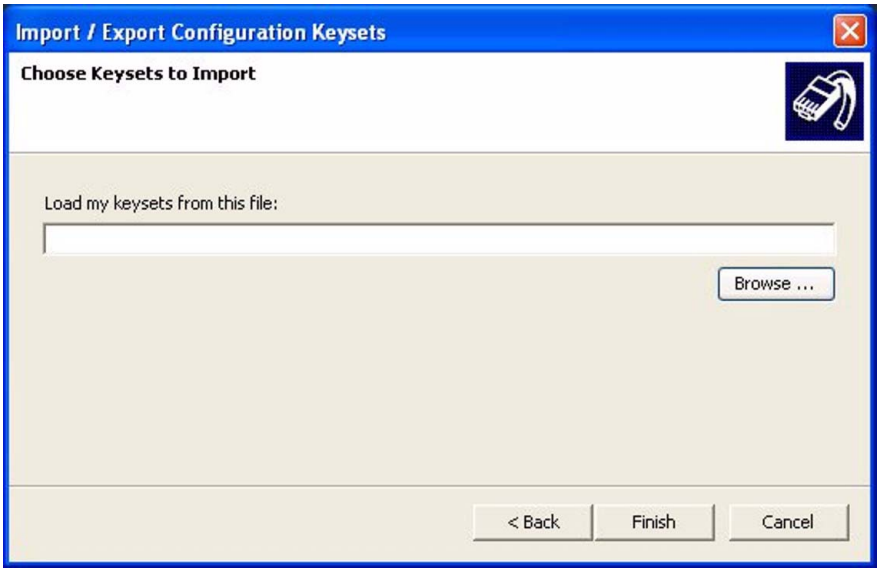


Figure 4-17: Import Keyset File Dialog

Click on the browse button to open the file dialog and browse to the appropriate folder.

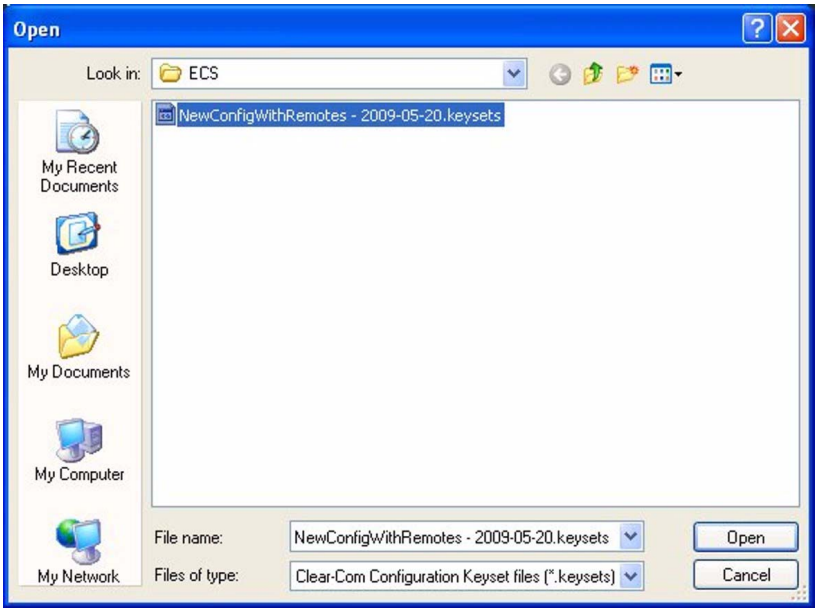


Figure 4-18: Import Keyset File Select

Select the required file and click on ‘Open’ to load the filename into the import dialog.

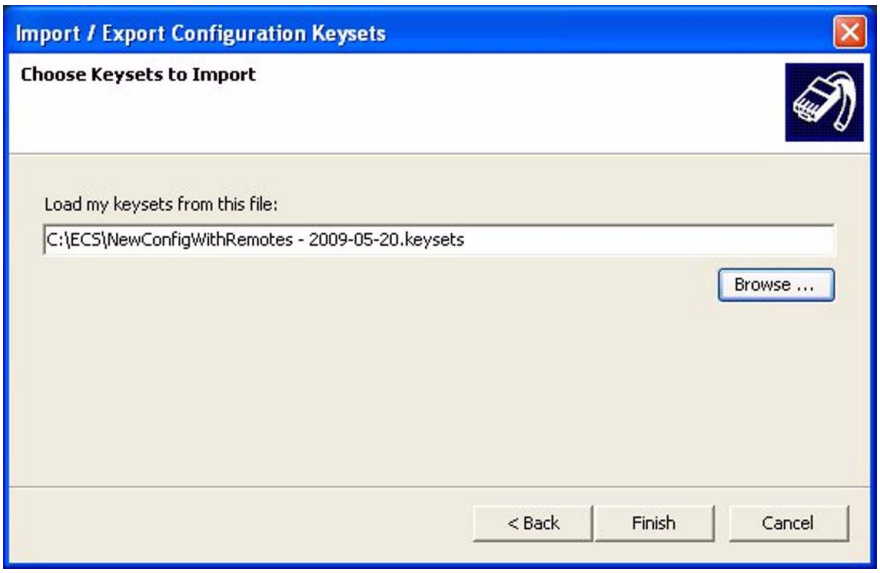


Figure 4-19: Keyset Import Filename

Click on the ‘Finish’ button to import the keysets into the current configuration.

EXPORTING CONFIGURATION KEYSETS

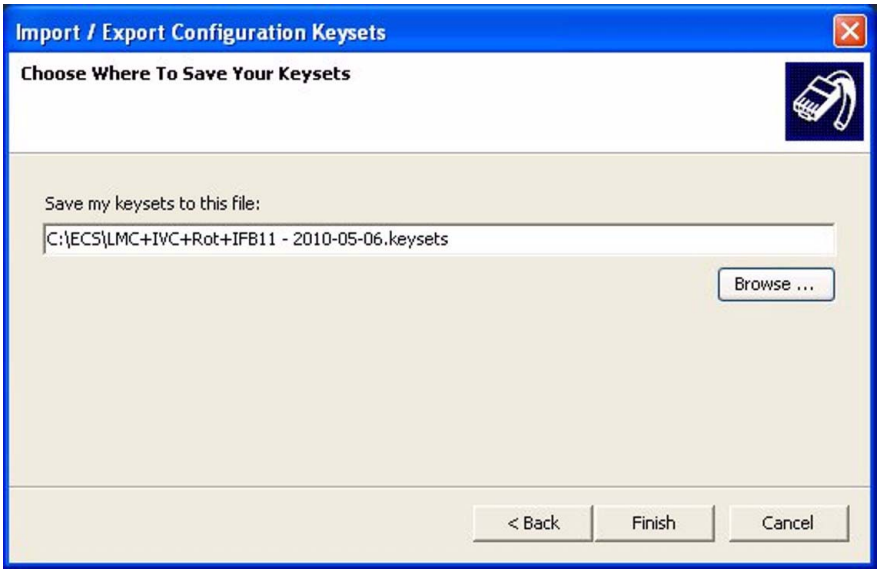


Figure 4-20: Exporting Configuration Keysets

Click on the ‘Browse’ button to select an alternate folder to save the file to and enter the required filename. Click on the ‘Finish’ button to export the keyset configurations.

LINKED SETS

If the configuration opened for editing is part of a linked set of configurations (a layout containing linked matrices) then ECS creates a local copy of the other configurations in the linked set for reference purposes when the target configuration is opened. These copies are not refreshed when other users edit those configurations. The only way to update the copies of the other configurations to close and reopen the configuration being edited locally. This will force ECS to reload copies of the other configurations.

USER MANAGEMENT

The user management facility provides the tools necessary to administer ECS users and control the level of system access. It is possible to add or delete users, change passwords and assign access levels or roles. Currently ECS has four access levels; Network-Admin, Local-Admin, User and Guest.

Only ECS users with network administrator rights (Network-Admin) can access the user management facility.

ECS remembers the last used login. If it is not required to save the login uncheck the Save option in the dialog box. ECS will display the name and role of the current user on the title bar of the ECS window.

To access user management open the File menu and select ‘User Management’ to open the user management dialog.

NETWORK-ADMIN LEVEL

The network administrator role provides unrestricted access to all of the configuration settings on all the systems in a linked set. Network administrator rights include:

- Configuration Management
- Configuration Allocation
- All configuration editing
- Digital Wireless setup
- IP Addressing
- Trunk Allocation
- User Management
- Online configuration
- Monitoring
- Live status under System
- Firmware update

LOCAL-ADMIN LEVEL

The local administrator level provides unrestricted access to all of the configuration settings on all the local system the user is logged in to. The local administrator has no access to user management and cannot change the configuration settings on other systems in a linked set via the ‘System’ screen but can view a linked set configuration. The local administrator can also view the live status of system components using ‘System’. Local administrator rights include:

- Configuration Management

• Configuration Allocation

• All configuration editing

• Digital Wireless setup

• IP Addressing

• Online configuration

• Monitoring

• Live status under System

• Firmware update

USER LEVEL

The user level provides access to all configuration editing and downloading capability.

• Configuration Management

• Configuration Allocation

• All configuration editing

• Digital Wireless setup

• IP Addressing

• Online configuration

The user level has no access to user management or the ‘System’ screen and its associated functions.

GUEST LEVEL

The guest level provides a minimum level login and is the default role if the user is removed from all other groups. Normally the guest role is not shown in the list of available groups.

The guest role only allows access to panel programming on the current system configuration. The user can open more than one system configuration in a linked set but cannot modify any system parameters. The guest role does not allow access to user management.

USER MANAGEMENT

In order to access the User Management functions the ECS user must log into ECS as a user with Network Administrator privilege. To access the User Management functions open the File menu on the ECS control bar and select the ‘User Management’ entry.

If the current user does not have network administrator privilege the ‘User Management’ entry is not shown on the File menu.

When ECS is initially installed a single network administrator account is preconfigured with the username ‘EclipseUser’ and the password

'eclipseuser'. This account can then be used to set up other accounts as required.

When user management mode is entered a complete list is shown of all the registered users. Users can be added, deleted and edited from this screen.

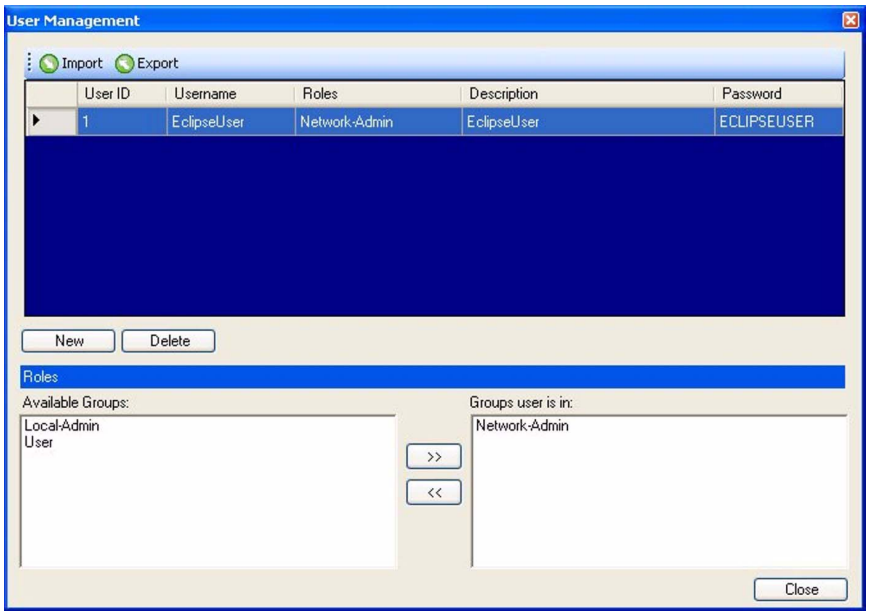


Figure 4-21: User List

If the user is removed from all other groups the user becomes a Guest user by default.

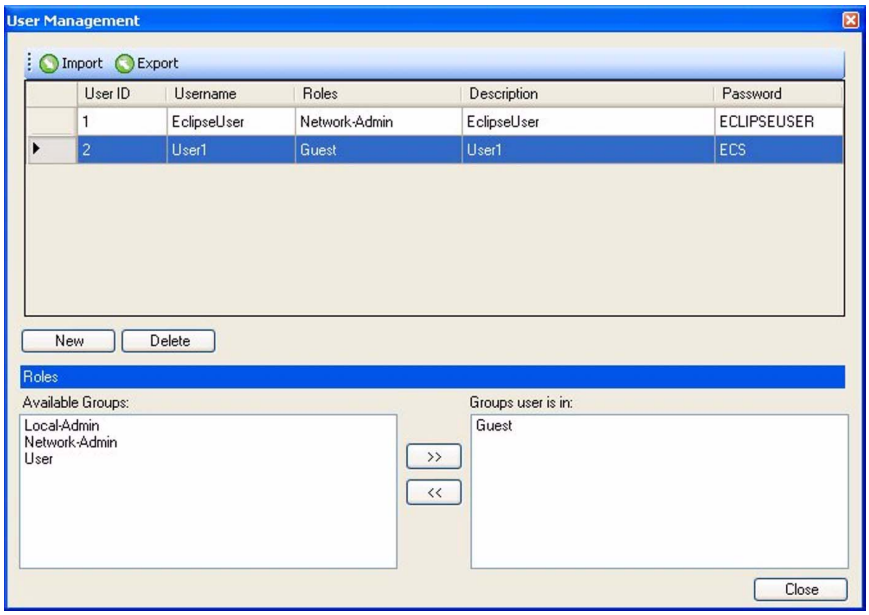


Figure 4-22: User Defaulted to Guest

ADDING A NEW ECS LOGIN

Click on the ‘New’ button to add a new User ID. A new user entry will be added with default values being used initially and the role being set to Network-Admin.

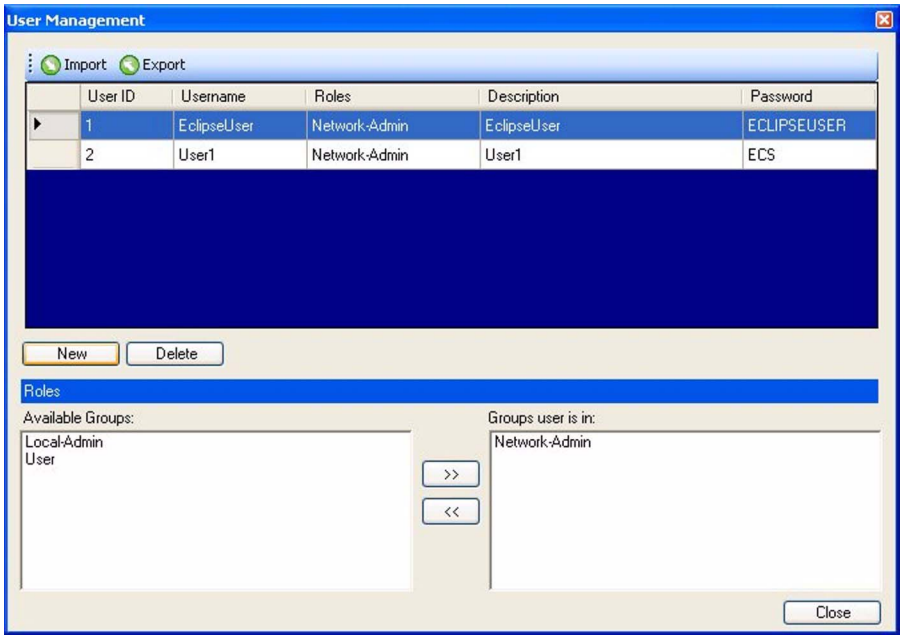


Figure 4-23: Creating a New User

The Username, Description, and Password fields may then be edited by positioning the cursor in the required field and double clicking the mouse button so the entry is highlighted, then using the ‘Delete’ key to delete the default entry and type in the new entry.

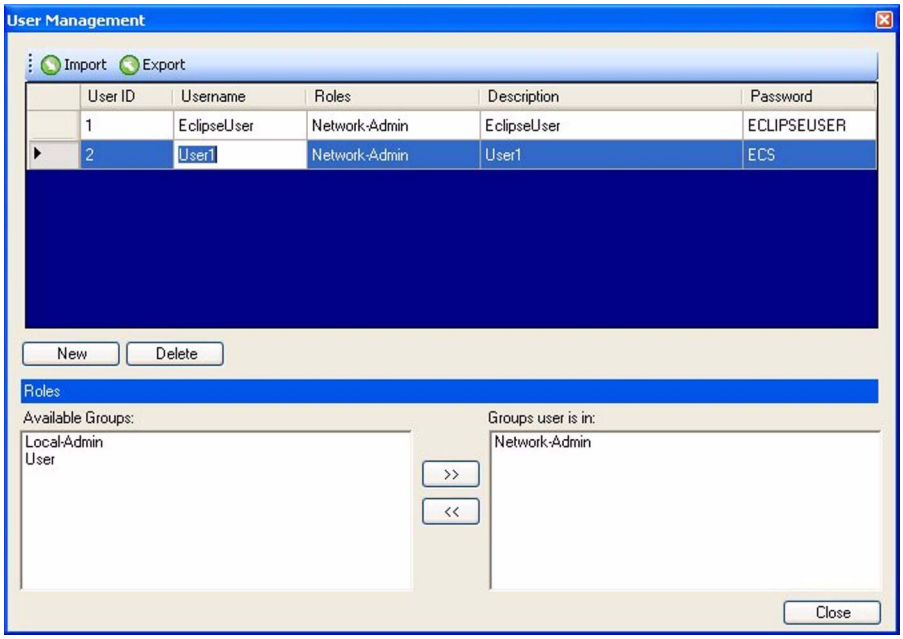


Figure 4-24: Editing a New User

From the ‘Available Groups’ pane select ‘Local-Admin’ or ‘User’ and using the right arrow transfer ‘Local-Admin’ or ’User’ into the ‘Groups user is in’ pane. A user can be a member of more than one group and where this is the case the login role will be that of the highest level role. The user can be removed from groups by selecting the group in the ‘Groups user is in’ pane and then clicking on the ‘<<‘ symbol to transfer it back to the ‘Available Groups’ pane. To save the new user setup click on the ‘Save’ button to save the new user details.

EDITING A USER

To edit a user, ensure that a network administrator is logged into ECS to access user management.

As before highlight the user name to be edited then position the cursor in the field to be edited and double click on the mouse button to highlight the field for editing. The ‘Delete’ key can be used to delete the entire entry or by clicking the mouse button again the cursor can be positioned to edit the entry directly.

When the changes to the users are complete click on the ‘Close’ button to save the changes and exit.

DELETING A USER

To delete a user, ensure that a network administrator is logged into ECS to access user management.

Highlight the user name to be deleted, then select the ‘Delete’ button. A prompt will be displayed requesting confirmation of the delete

command. Click on the ‘Yes’ button to remove the user or ‘No’ to cancel the action.

Note: Always ensure that at least one valid network administrator account is available to allow login to ECS and access to user management. Normally ECS will prevent the deletion of the account currently logged in and being used to access User Management and as this must be a network administrator account it would not be possible to delete all network administrator accounts.

REMOVING GROUP MEMBERSHIP

To remove a group membership, ensure that a network administrator is logged in to ECS to access user management.

1. Select the required User and then select Edit.
2. From the Groups this user belongs to, highlight the group and using the left arrow transfer the level back into the ‘Available Groups’ box.
3. Select ‘Save’.
4. The updated user profile will be saved.

EXITING USER MANAGEMENT

To exit user management click on the ‘Close’ button at the bottom right corner of the user management screen. The user management dialog will be closed.

5 ECLIPSE SETUP

The ECS menus in the left hand pane are used to configure the Matrix Hardware ports, IP interfaces, Panels, Conferences, Local Advanced, Controls, Sort Groups, Routes, Speed Dials, Attachments, Key Groups, Beltpacks and Beltpack Roles. Also configuring GPI and Relay modules in the Hardware is covered in this section.

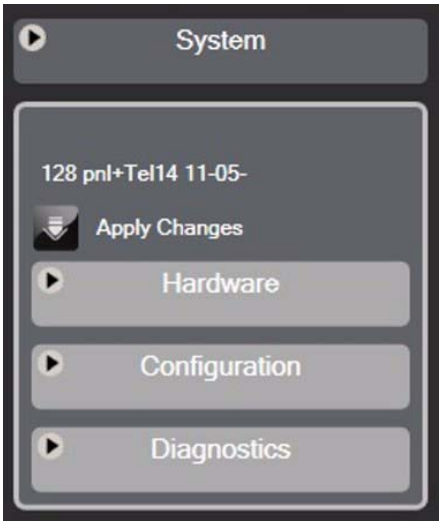


Figure 5-1: Eclipse Main Menu

Various menu items may be highlighted in amber to indicate possible configuration problems.

The ‘System’ menu may be highlighted if:

- There is an open project, but not an open configuration.
- There is an open configuration but the matrix type is not set.
- There are multiple frames in the system but the fibre ring is judged to be incorrect.

The ‘Cards and Ports’ link may be highlighted if:

- There are no ports configured for a particular frame

The ‘IP Devices’ link may be highlighted if:

- There are IP cards which do not have ports

The ‘Beltpacks’ link may be highlighted if:

- There are antennas but no beltpacks

The ‘Panels’ link may be highlighted if:

- There are key groups which do not have memberse
- There are panels configured but no keys

The ‘Controls’ link may be highlighted if:

- There are speed dials but no controls.

MATRIX HARDWARE

The ‘Hardware’ link in the main menu is utilized to build up the configuration of the Eclipse system. The Eclipse system is usually a mixture of hardware items and port functions. Hardware items can consist of configuration cards, interface cards, ports (panels or Interfaces) and RLY-6/GPI-6 modules. Port functions also use this link and provides access to the advanced settings for ports and also where local preferences are configured.

Note: In order for ECS to build a map at least one MVX-A16 or IVC-32 card must be configured in an Omega or Median matrix. If no cards are fitted the first available slot should be configured in ECS as if an MVX-A16 card was present in order for the map to build.

FONTS

A number of fonts are supported by Eclipse systems allowing suitable panels to display labels in Latin and certain non-Latin scripts. The fonts supported by Eclipse systems are described below with the panel support.

Eclipse V5 release onwards has additional font support for the V-Series panels. The details of the fonts supported and any limitations are described below.

1. Basic Latin. The backslash is a Yen character. This is a size-maximized font (no descenders, lower-case characters are not relative in size to upper-case characters). This covers Unicode 32 to 127 (decimal), 0x20 to 0x7F (hex). The V-Series panel display will support ten characters.
2. Cyrillic. This is a normal, relatively-sized font. The V-Series panel display will support ten characters. Covers Unicode 1024 to 1279 (decimal), 0x400 to 0x4FF (hex) with some missing characters.
3. Hiragana. The V-Series panel display will support five characters. This covers the codepoint range 12352 to 12447 (decimal), 0x3040 to 0x309F (hex).
4. Full-width Katakana. The V-Series panel display will support five characters as this is a normal wide font. This covers the codepoint range 12448 to 12543 (decimal), 0x30A0 to 0x30FF (hex) with some missing characters.
5. Kanji. There are about 17,000 out of the 21,000 characters. The V-Series panel display will support five characters. This covers the codepoint range 19968 to 40895 (decimal), 0x4E00 to 0x9FBF (hex).

6. Hangul. The V-Series panel display will support five characters, codepoint range is 44032 to 55215 (decimal), 0xAC00 to 0xD7AF (hex).
7. Half-width katakana. The V-Series panel will support ten characters. The codepoint range is 65376 to 65440 (decimal), 0xFF60 to 0xFFA0 (hex).

Basic Latin

Basic latin labels can be displayed on all the panels with a display capability. The maximum number of characters displayed will depend on the type of panel.

Cyrillic

Cyrillic labels requires Russian language support to be installed in Windows and either an ASCII keyboard with Russian character support or a Cyrillic keyboard. Cyrillic is only supported on V-Series panels.

Hangul

Hangul labels require Korean language support to be installed in Windows and either an ACSCII keyboard with Korean language support or a Korean language keyboard. Hangul is only supported on V-Series panels.

Hiragana, Katakana and Kanji

Hiragana, Katakana and Kanji labels require Japanese language support to be installed in Windows and either an ASCII keyboard with Japanese character support or a Japanese language keyboard.

Hiragana, Katakana, half-width Katakana and Kanji labels can be displayed on V-Series panel only while some other panel types can support half-width Katakana. If an attempt is made to place a Hiragana, Katakana or Kanji label onto a panel with a display that is not compatible the label will either fail to display correctly (may display question marks) or not display at all.

Half-Width Katakana Compatible Panels

The following panels can display half-width Katakana labels.

- ICS-2003E
- ICS-92E
- ICS-52
- AP-22
- XPL-22
- PD4224E

- V12LD
- V24LD
- V12LDD
- V12PD
- V24PD
- V12PDD
- V12RD
- V24RD
- V12RDD
- V12LDE
- V12PDE
- V12RDE

Panels that do not have a display e.g. ICS-102 can also have Katakana or Kanji labels assigned to keys and will function normally.

Katakana and Kanji labels may be entered in exactly the same way as normal labels provided the prerequisite software and hardware is present.

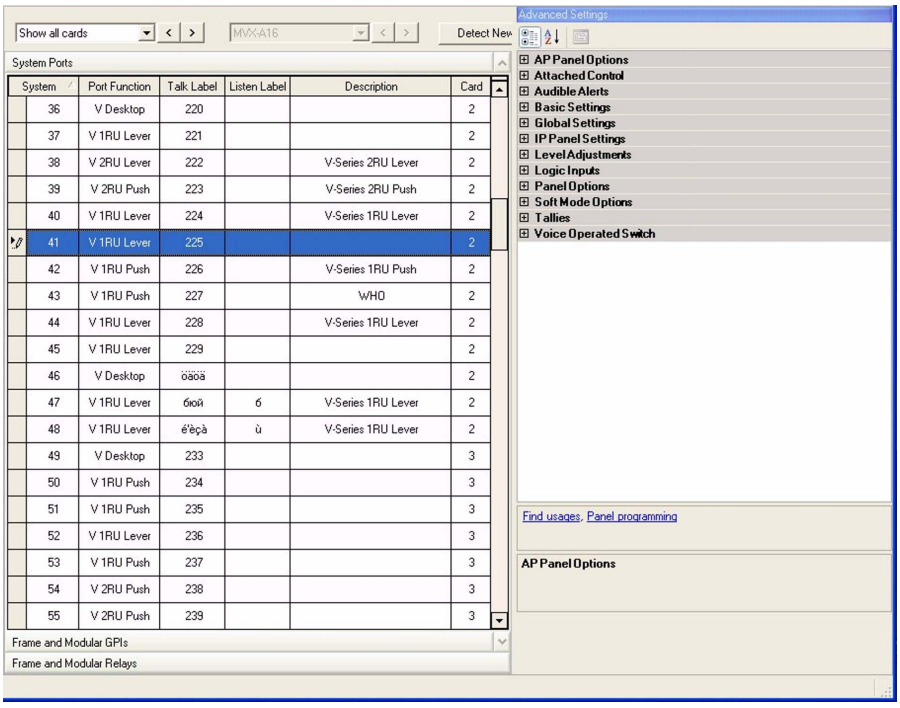


Figure 5-2: Panel Configuration

SYSTEM CONFIGURATION LIMITS

The Eclipse matrix system places certain limits on the numbers of non-hardware configuration items such as fixed groups, stacked keys, party lines and controls. These limits are:

- The maximum number of party lines that can be configured is 198 with a maximum of 99 members in each.
- The maximum number of fixed groups that can be configured is 100.
- The maximum number of stacked keys that can be allocated is 1024 less the number of fixed groups. For example if 100 fixed groups have been allocated in ECS up to 924 stacked keys an be configured (1024 - 100).
- The maximum number of controls and routes combined is 437. For example if 50 routes are configured the maximum number of controls that can be created will be 387 (437 - 50).
- The maximum number of speed dials is 100.
- The maximum number of sort groups is 64.

ONLINE CONFIGURATION

Online configuration allows the ECS user to directly recover configuration information from the matrix and update the matrix configuration used by ECS. All the Online Configuration facilities require an ethernet connection to the matrix.

Online mode is described in more detail in chapter 9 of this manual.

MATRIX HARDWARE SETUP

To begin configuring the matrix hardware open the ‘Hardware’ menu and select the ‘Cards and Ports’ link to open the hardware configuration screen.

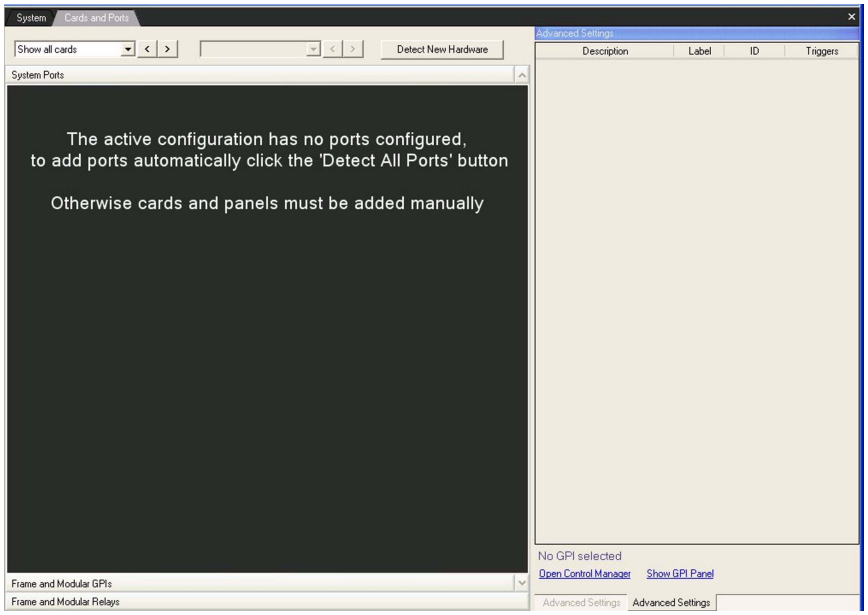


Figure 5-3: Initial Matrix Hardware Screen

If the matrix is available on the network (correct firmware loaded and IP address set up) the hardware can be auto-detected by clicking on the ‘Detect New Hardware’ button at the top of the screen.

ADDING AN MVX-A16 CARD

The MVX-A16 is a 16 port matrix card designed to connect 16 intercom panels, interfaces or external 4-wire devices to the Eclipse System (Omega and Median only). MVX-A16 cards can be added, removed and viewed in the matrix hardware screen.

Select the down arrow next to the ‘Show all cards’ field. A list is displayed, showing the P1 & P2 main and backup processor cards, then the ‘Not Configured’ slots where MVX Cards can be configured (15 for the Eclipse Omega, 7 for the Eclipse Median).

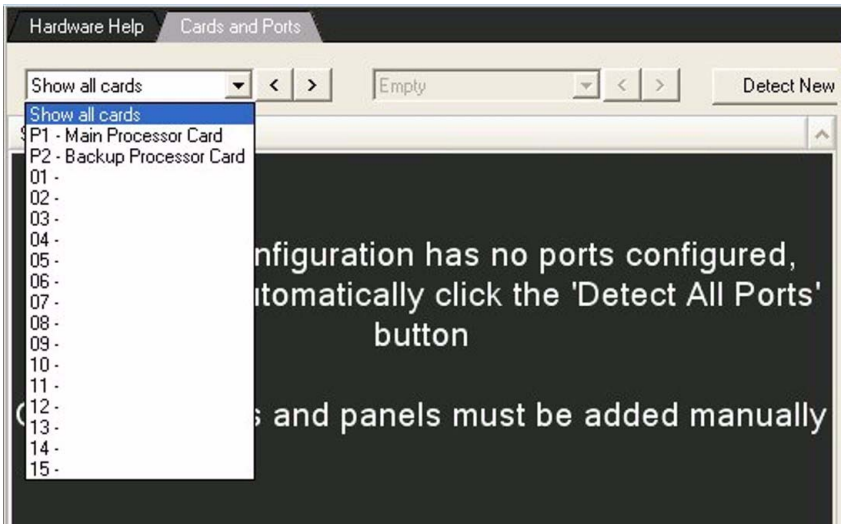


Figure 5-4: Eclipse Empty Slots

Using the mouse, navigate to a required slot number then left click the mouse button to select this slot. This action brings into focus the 'Empty' drop down list. From this list, select the down arrow, and then select 'MVX-A16' by left clicking the mouse button over the text. This action automatically adds 16 Ports ready to be configured. Repeat this step for the number of required MVX cards.

Note: MVX cards must be fitted into the Eclipse Frame with no empty slots left between the cards.

REMOVING AN MVX-A16 CARD

To remove an MVX-A16 card from the configuration, select the Matrix Hardware link from the Eclipse menu. Select the 'Show all cards' down arrow ('Show all cards' may not be the current selection as another slot may be selected) by left clicking the mouse button. Move the mouse up or down the list to the slot number of the MVX-16A card required to be deleted. Select the MVX-16A card by left clicking the mouse button. The MVX-A16 drop down list should now come into focus. Select the drop down arrow then select Empty using the left mouse button. A warning dialogue box appears. Select 'Yes' using the left mouse button to confirm the deletion.

SCROLLING THROUGH SLOT POSITIONS

The left and right arrow boxes may be used to quickly scroll through the complete list of slot positions.

SYSTEM PORT MENU

Select an MVX-16A card from the drop-down hardware list to display the system ports list for the card. Click the right mouse button over the 'System Ports' list to display the context menu box.

Show All Ports

Left click the mouse button to toggle between show all ports (checked) or show configured ports (unchecked). This option toggles between displaying all the ports on an MVX-16A card or only displaying currently configured ports.

Update

Click on 'Update' to save the current configuration of the MVX-16A card to the configuration database.

Set Port Type

Selecting one or more ports and then clicking on 'Set Port Type' allows the port type for all the selected ports to be set in a single operation.

Standard Windows shift and highlight can be used to select multiple ports.

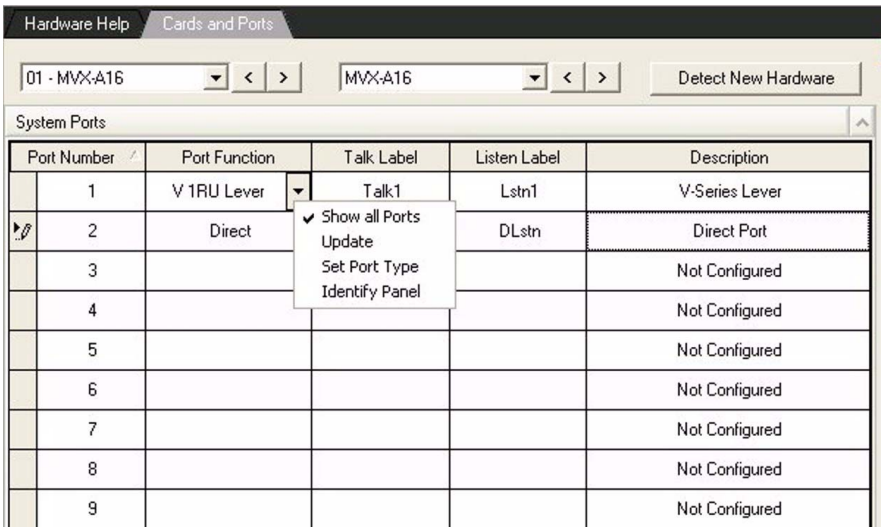


Figure 5-5: Ports on MVX-16 Card

The following sections describe each column shown in the 'System Ports' table.

PORT NUMBER

The Port Number field of 'Show all Cards' is a non-editable field that shows a running port number assigned to each port.

On individual MVX-16A cards the Port Number field shows the number assigned to the Port in the range 1 – 16.

PORT FUNCTION

Each port in a system must be assigned a port function which specifies the port's intended use, including what type of device is connected to the port. The port's intended use is important as the system will treat a port differently if it is connected to an intercom panel rather than a telephone interface for example. The Port Function column displays each port's functions according to the current configuration. Each line in this column features a drop-down menu listing every possible option for that particular port.

To open the drop-down menu within the Matrix Hardware screen:

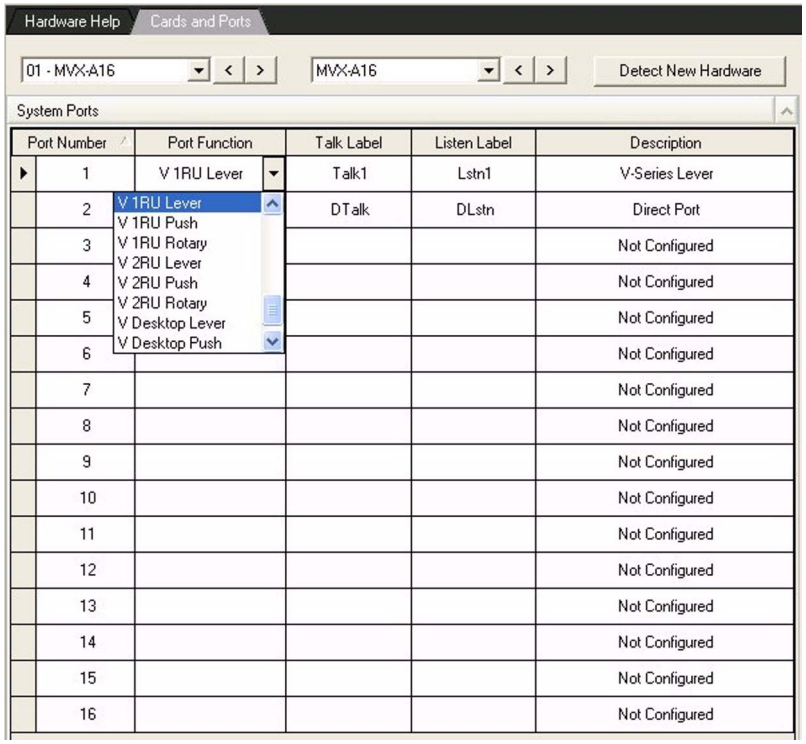


Figure 5-6: Port List

1. Left click the mouse button on the desired line by clicking the grey box next to the Port Number. This highlights the entire row.
2. Click the left mouse button in the Port Function field to show the drop-down menu.
3. From the drop-down list left click the desired device (panels and interfaces that may be connected to the port).

Each device type is listed below, with further explanation as required. This list is in the order that panels and interfaces are listed on the drop-down menu.

Supported Devices

The following devices may be selected directly in matrix hardware configuration.

Summary of Main Panels

- PD4212E Panel
- PD4215E Panel
- PD4222E Panel
- PD4224E Panel
- PD4226E Panel
- AES Mono
- Panel Aux
- CCI-22
- Direct (4 wire external)
- E1 Direct (E-Que port using E1 protocol)
- FOR-22
- i-Station
- ICS-1008 Panel
- ICS-1016 Panel
- ICS-102 Panel
- ICS-2003 Panel
- ICS-52 Panel
- ICS-62 Panel
- ICS-92 Panel
- Panel Aux
- Telephone (TEL-14)
- Trunk (matrix to matrix network trunk line)
- V12LD Panel
- V12PD Panel
- V12RD Panel
- V24LD Panel
- V24PD Panel
- V24RD Panel
- V12LDD Panel
- V12PDD Panel

• V12RDD Panel

The following panels are also have limited support but are not listed in the hardware configuration list.

• PD4294E (limited support as PD4224E)

• ICS-21 Panel (limited support as ICS 1008)

• ICS-22 Panel (limited support as ICS 1008)

• ICS-24 Panel (limited support as ICS 1008)

• Danner Cassette (supported as PD4224E)

Device Details

• PD4212E - The port is configured to drive a 4000 Series II PD4212E panel with two pages of 12 LCD pushbuttons allowing up to 24 connections including reply.

• PD4215E - The port is configured to drive a 4000 Series PD 4215E panel with 16 pushbuttons allowing up to 16 connections including reply.

• PD4222E - The port is configured to drive a 4000 Series II PD4222E panel with two pages of 24 LCD pushbuttons allowing up to 48 connections including reply.

• PD4224E - The port is configured to drive a 4000 Series II PD4224E panel with two pages of 32 pushbuttons allowing up to 64 connections including reply. Also used to configure PD4294 panels.

• PD4226E - The port is configured to drive a 4000 Series II PD4226 panel with 32 pushbuttons allowing up to 32 connections including reply.

• AES Mono - The port is configured for an AES-6-RJ interface providing a monaural connection to third party equipment.

• CCI-22—The CCI-22 port function is commonly used when a port is configured as a 2-Wire Party Line. Call signals are sent to and received from an external Clear-Com party line in the same way that they are sent between panels within the Eclipse System.

• Direct— Commonly used when the port is wired directly to an external 4 wire device.

• FOR-22— The FOR-22 has a number of different functions, however the Port type is set as a FOR-22 but in the Advanced Settings for that port the function allocated to the FOR-22 is set in the Application field. The commonly used applications are as the following:

  • Two-Way Radio—When the 2-Way Radio port function is selected, the port is configured to operate a push-to-talk two-way radio system. The call signal output activates a relay to key the radio's transmitter.

Note that if the FOR-22 is to be used as a 2-Way Radio from remote systems, the FOR-22 relay should be added as a secondary action in Advanced Settings.

When the FOR-22 is in 2-Way Radio mode the rack has control of the relay and will automatically fire it.

- 4-Wire —When the port is wired directly to an external device. Normally 4-wire functions are only audio connections and do not use call signals. By default, when a 4-wire port is connected to an FOR-22 4-Wire Audio Interface, a call signal sent to the port from the Eclipse System activates the FOR-22 channel's relay. Alternatively, this relay can be activated by attaching the relay name to a control label configured in the Control Manager.

  When the FOR-22 is in 4-Wire mode the relay will not automatically fire. To make the relay fire when a talk path to the FOR-22 is created a control must be created and added as a secondary action in the Advanced Settings for the FOR-22. When enabled in Party Line mode the FOR-22 allows panels to listen to all commands to/from the interface.

- i-Station - The port is configured to drive a i-Station with 30 pushbuttons.
- ICS-1008 - The port is configured to drive an ICS-1008 panel with 16 pushbuttons.
- ICS-1016 - The port is configured to drive an ICS-1016 panel with 32 pushbuttons.
- ICS-102 - The port is configured to drive an ICS-102 panel with 10 selectors allowing up to 10 connections.
- ICS-2003 - The port is configured to drive an ICS-2003 panel with two pages of 12 selectors allowing up to 24 connections.
- ICS-52 - The port is configured to drive an ICS-52 panel with 5 selectors allowing up to 5 connections.
- ICS-62 - The port is configured to drive an ICS-62 panel with 6 selectors allowing up to 6 connections.
- ICS-92 - The port is configured to drive an ICS-92 panel with 9 selectors allowing up to 9 connections.
- Panel Aux - The port is configured for an AES-6-CX interface providing a binaural connection to a panel supporting split-ear operation. Currently only the following panels are supported for this mode or operation: PD4224E, PD4215E, PD4226E, PD4294E, PD4212E and PD4222E. This type of port must be configured as part of a pair of ports to provide a binaural connection to the panel. The first or master port of the pair is configured for the attached panel in the normal way and the Aux Port is the second port configured under Basic Settings.

- Telephone (TEL-14)—When the {Telephone} port function is selected, the port is configured to operate a TEL-14 Telephone Interface. The call signal output is used as a request from the Eclipse System for the interface to go off-hook. A call signal sent from the TEL-14 interface to the Eclipse indicates that the line is ringing or that the line is off-hook.
- Trunk - An MVX-16A port is configured to function as a trunk line to a remote matrix. The connection must be configured in the 'System' screen and cannot be configured from the Matrix Hardware setup. The 'Linking Options' shown under the 'Advanced Settings' menu is for information only.
- V12LD - The port is configured to drive a V-Series panel with nine pages of 12 lever keys allowing up to 108 connections including reply.
- V12PD - the port is configured to drive a V-Series panel with nine pages of 12 pushbuttons allowing up to 108 connections including reply.
- V12RD - the port is configured to drive a V-Series panel with nine pages of 12 rotary encoders allowing up to 108 connections including reply.
- V24LD - the port is configured to drive a V-Series panel with nine pages of 24 lever keys allowing up to 216 connections including reply.
- V24PD - The port is configured to drive a V-Series panel with nine pages of 24 pushbuttons allowing up to 216 connections including reply.
- V24RD - The port is configured to drive a V-Series panel with nine pages of 24 rotary encoders allowing up to 216 connections including reply.
- V12LDD - the port is configured to drive a V-Series lever key desktop panel with nine pages of 12 lever keys allowing up to 108 connections including reply.
- V12PDD - the port is configured to drive a V-Series pushbutton desktop panel with nine pages of 12 pushbutton keys allowing up to 108 connections including reply.
- V12RDD - the port is configured to drive a V-Series rotary desktop panel with nine pages of 12 rotary encoder keys allowing up to 108 connections including reply.

Additional panels with limited support:

- PD4294E - The Eclipse Configuration Software (ECS) software does not directly support the PD4294E panel. In order to configure an PD4294E panel the port is configured to drive a 4000 Series II PD4224E panel with only the rightmost 16 pushbuttons being used.

- ICS-21 - The Eclipse Configuration Software (ECS) software does not directly support the ICS-21 speaker panel. In order to configure an ICS-21 panel the port is configured to drive an ICS-1008 panel with 14 keys (7 pairs of buttons). The ICS-21 channel is mapped onto the ICS-1008 keys starting from the left. Only the leftmost pair of keys on the ICS-1008 can be used to program the ICS-21; any other keys on the ICS-1008 will have no effect. There must be a corresponding listen key on the top row to the talk key on the bottom row of the ICS-1008 configuration for the ICS-21 panel to work correctly. If a talk key only is configured on the ICS-1008 in ECS the Talk key on the ICS-21 will not latch. Please refer to notes on ICS-21/22/24 support at the end of this section.
- ICS-22 - The Eclipse Configuration Software (ECS) software does not directly support the ICS-22 speaker panel. In order to configure an ICS-22 panel the port is configured to drive an ICS-1008 panel with 14 keys (7 pairs of buttons). The two ICS-22 selectors are mapped onto the ICS-1008 keys starting from the left. Only the leftmost two pairs of keys on the ICS-1008 can be used to program the ICS-22; any other keys on the ICS-1008 will have no effect. There must be a corresponding listen key on the top row to the talk key on the bottom row of the ICS-1008 configuration for the ICS-22 panel to work correctly. If a talk key only is configured on the ICS-1008 in ECS the Talk key on the ICS-22 will not latch. Please refer to notes on ICS-21/22/24 support at the end of this section.
- ICS-24 - The Eclipse Configuration Software (ECS) software does not directly support the ICS-24 headset panel. In order to configure an ICS-24 panel the port is configured to drive an ICS-1008 panel with 14 keys (7 pairs of buttons). The ICS-24 channels are mapped onto the ICS-1008 keys starting from the left. Only the leftmost four pairs of keys on the ICS-1008 can be used to program the ICS-24; any other keys on the ICS-1008 will have no effect. There must be a corresponding listen key on the top row to the talk key on the bottom row of the ICS-1008 configuration for the ICS-24 panel to work correctly. If a talk key only is configured on the ICS-1008 in ECS the Talk key on the ICS-24 will not latch. Please refer to notes on ICS-21/22/24 support at the end of this section.
- Danner Cassette -The Eclipse Configuration Software (ECS) software does not directly support the Danner Cassette panel. In order to configure a Danner Cassette panel containing two units of 8 keys each, the port connected to the Danner Cassette is configured as a PD4224E panel in ECS.

Notes on ICS-21/22/24 Support

This section describes the difference in operation of the ICS-2x family of panels on the Matrix plus 3 system and the Eclipse system. Please refer to the ICS-2x Instruction Manual for operation with Matrix plus 3 system.

It should be noted that the panel signalling and control protocol used by the Eclipse matrix differs from the Matrix Plus 3. As a result the operation of these panels with an Eclipse matrix may be slightly different to their operation with a Matrix Plus 3.

The ICS2x family comprises the ICS-21, ICS-22 and ICS-24 analogue panels.

Note: The Eclipse matrix may require different code in the MVX-A16 cards. See the customer release note on the software CD-ROM.

Eclipse System Requirements for ICS-2x Panels

The Error tones; Call Waiting, Change and Monitoring tones, are generated on the Eclipse MVX16A card, (for details on Error tones see the manual for the ICS1008 panel on Eclipse system). The MVX16A card uses the DTMF plug in boards to do this. These tones require an MVX16A card with DTMF boards fitted in the appropriate channels, (standard from 2004).

ECS System Configuration for ICS-2x Panels

ECS panel programming does not support the ICS-21 or ICS-22 or ICS-24 panels directly. These panels must be set up and configured as an ICS-1008 panel. In the ECS Matrix Hardware Set-up, configure an ICS-1008 panel on the required port.

The Talk keys numbered 1-4 on the top row counting from the left correspond to talk/listen selectors A, B, C and D. respectively.

Only the ICS-24 has selectors A, B, C, and D.

The ICS-22 has A and B.

The ICS-21 has only selector A.

Keys that are not present on a panel are ignored. Assign Talk/listen labels to the keys as required.

Changes to Matrix+3 ICS-2x Panel operations

The Talk button Latch/Non-Latching operation cannot be defeated in ECS even for latch disabled labels.

Summary of Expansion Panels

The following devices are expansion panels and cannot be selected from the matrix hardware drop-down menu. They are only selectable from the expansion panel menu under Advanced Options. The panels/devices listed will vary depending on the type of master panel they are being configured with.

The expansion panels supported by ECS are:

- V12LDE Panel
- V12PDE Panel
- V12RDE Panel
- AP22 Panel
- XPL-12 Panel
- XPL-22 Panel
- E Station
- V Station
- EXP1016 Panel
- PD4203E Panel
- PD4206E Panel
- PD4230E Panel
- PD4230VE Panel

Details of which expansion panels are supported by the various panels are given in the section on panel options.

Deleting a Port Assignment

After a port has been configured in ECS, the port key assignments and advanced settings can be deleted by selecting the box next to the Port number, which highlights the whole row and pressing the delete key on the keyboard. This will display a delete confirmation window; to continue with the deletion click on the 'OK' button. To cancel the deletion click on the 'Cancel' button.

TALK LABEL

A talk label is used when activating a talk to a destination. Talk labels can contain as many as five characters, using numbers, capital letters, all punctuation marks and blank spaces. The '£' (pound) sign is not a valid character and will result in the configuration map being rejected by the Eclipse System. If the port is configured as a split label port the talk label background is colored red.

If the appropriate option is selected in the 'Matrix Frame Preferences' Intelligent Linking tab the local talk labels may be prefixed with the system number.

Note: If more than 5 characters are entered for a talk label the label will be automatically trimmed to 5 characters.

Note: In previous versions of ECS changing the talk label on a port would update the listen label and description. From version 4.2 of ECS onwards the description is no longer updated.

LISTEN LABEL

A listen label is used when activating a listen from a source. Listen labels can contain as many as five characters, using numbers, capital letters, all punctuation marks and blank spaces. The '£' (pound) sign is not a valid character and will result in the configuration map being rejected by the Eclipse System. If the port is configured as a split label port the listen label background is colored green.

If the appropriate option is selected in 'Matrix Frame Preferences' Intelligent Linking tab the local listen labels may be prefixed with the system number.

Note: If more than 5 characters are entered for a listen label the label will be automatically trimmed to 5 characters.

DESCRIPTION

The description field is provided for user convenience and can be used to better describe the port function than the restricted 5 character Talk/Listen labels. The description field is limited to 23 characters.

The description field is cleared when a port is newly configured and a description must be entered when the port is configured. This is a change to previous versions of ECS where an initial description was created automatically.

MVX

The MVX Column identifies the card slot number in the Eclipse System and is not modifiable.

SORT FUNCTION

Each of the columns in the System Ports screen have a sort capability. To sort on a column move the mouse cursor over the name of the required column. The Column should highlight to a light grey color, left click the mouse button to sort the column. A description of each columns sort is as follows:

- System Port – Toggles between First Port and Last Port on the screen. This action is the same for ‘Show all Cards’ and individual MVX cards.
- Port Function – Groups together Ports functions, then toggles between first and last on the screen.
- Talk Label – Sorts numerical labels, then lettered labels. Next time the sort is selected the sort toggles between first and last ports.
- Listen Label – Sorts numerical labels, then lettered labels. Next time the sort is selected the sort toggles between first and last ports.
- Description – Sorts on numerical fields then letter fields.
- MVX – Sorts on MVX Card number. This also sorts the position on the MVX card and provides a running number.

COLUMN/ROW RESIZING

Within the System Ports screen rows and columns can be re-sized by moving the mouse cursor over a row or column, the cursor should change to a double ended arrow, left click and hold the mouse button and drag to required size.

GLOBAL ADVANCED SETTINGS

For each port there is an associated Advanced Settings. The Advanced Settings enables the ECS operator to tailor the behavior of a selected port. To view the Advanced Settings for a particular port, select the required MVX Card, then select the relevant port and the Advanced Settings for that Port will be displayed. By default the advanced settings tabs will initially not be displayed in expanded form. To expand a class of advanced settings click on the ‘+’ beside the heading. The Advanced Settings available will depend on the type of device the port is configured as.

The Advanced Settings options for panels and Interfaces are described below.

ASSIGNMENT PANEL (AP) PANEL OPTIONS

If an AP panel (Assignment Panel) is connected to a host port this section allows the following options to be configured:

Fixed Group Assignment

Set to True or False (default False). Allows the panel operator to select ports to be assigned to a fixed group.

IFB Assignment

Set to True or False (default False). Allows the panel operator to select ports as sources to be assigned to an IFB.

Party Line Assignment

Set to True or False (default False). Allows the panel operator to select ports as fixed members of a party line.

Applies to:

On V-Series, ICS 2003, ICS 52, ICS 92, i-Station only.

ATTACHED CONTROL

Secondary Action

The Secondary Action allows a Control to be attached to a Port. Whenever a talk route key to the Port is pressed, the Control attachments such as Relays, Routes or Speed Dials, are activated.

Vox Action

The VOX Action allows a Control to be attached to a port. Whenever the audio level at the Port reaches the Audio Detection Threshold defined in Voice Operated Switch section of Advanced Settings the Control attachments such as Relays, Routes or Speed Dials, are activated.

Note: Not available on Concert panels.

Applies to:

On all port devices except Trunk.

AUXILIARY RELAY

Has Associated Relay

The port device controls a relay (similar to secondary action).

For example if an external device is connected to an MVX-A16 and that external device can control a relay the relay can be controlled through this setting.

Applies to:

Only on Direct

AUDIBLE ALERTS

The various configurable audible alerts on panels are as follows: Call Signal Tone, Change or Error Tones and Monitoring Tones.

Call Signal Tone

When checked the Call Signal Tone will enable an audible tone when a call signal is received by the panel. The call signal can be used to signal an event on another panel. The default setting is disabled.

Change Tones

When checked the Change Tones will announce whenever the configuration for that panel has changed or when there is an error on the panel. When unchecked the Change Tones is disabled. The default setting is disabled.

Monitoring Tones

Monitoring tones when checked enables the panel tone when another panel activates a listen to the first panel. If the box is unchecked the Monitoring tone is disabled. The default is disabled.

Applies to:

On V-Series, Concert, ICS 2003, ICS 102, i-Station, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92.

BASIC SETTINGS

Description

The Description field in the port settings table.

Engineer Comments

A scratchpad for engineers to record any relevant information about the port or device.

Listen Label

The Listen Label specified in the port settings table.

Master Port

This option defines which panel attached via an AES-6-CX interface the Aux Port is paired with. Selecting the Master Port option will display a drop-down menu of all the available panels and the user should select the panel that this port is attached to via the AES-6-CX interface.

Note: Only on Panel Aux.

Port Number

The port number the device is configured on.

Note: Not available on Concert panels.

Shared Port

Setting the port as shared reserves the port for trunked applications.

Note: Not available for Aes Mono and Panel Aux.

Split Label

If split label is set only the first five characters of a talk label and the last five characters of a listen label are shown. If split label is not set all ten characters are shown for talk and listen labels (on panels that support ten characters).

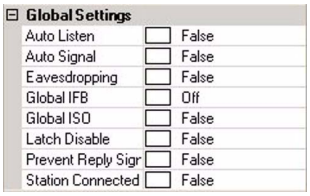
Talk Label

The Talk Label specified in the port settings table.

Applies to:

The Description, Engineer Comments, Listen Label, Port Number and Talk Label fields are available for all port devices unless noted otherwise.

GLOBAL SETTINGS



The Global settings are the Global Advanced options, where the following options are available: Auto Listen, Auto Signal, Eavesdropping, Global IFB (with IFB attenuation), Global ISO, In Use Tally, Latch Disable and Panel Connected Tally.

Auto Listen

This function enables a port for auto-listen. When a panel activates a talk to a destination that is configured for auto-listen, a listen path from that destination back to the source panel will also be activated automatically for the duration of the call. In this way, the source receives audio from the destination without the destination having to specifically activate a talk back to the source. The default setting is disabled.
Generally used on interfaces and 4-wires.

Note: For Auto Listen to work correctly on external 4-Wire ports the MVX-A16 port must have the destination Tx/Rx looped together.

Auto Signal

This function enables a panel or interface port for automatic call signalling. If a talk path is activated to a destination that has been configured for auto-call signalling, the call signal will be sent to the destination for the duration of the talk. Auto-call signals are most commonly used with external devices that require a control signal to activate them.

If a port set for auto-call signalling joins a party line, or is preset to a party line, an auto call will not be sent to the port if the talk is to the party line. The default setting is disabled.

Note: Not available for PD4212E, PD4222E, PD4224E, PD4294E and PD4226E panels.

For panels which support Auto Signal - Call Signal must be enabled.

Eavesdropping (Privacy)

This box is unchecked by default so other panels cannot eavesdrop on a panel's microphone input, unless that panel has an active talk key pressed to another port in the Eclipse System. If this box is checked, other panels can monitor a panel's microphone input, even without any activated talk keys. By default a panel's microphone output is off until a talk key is pressed. The panel's Mic ON/OFF control will always take priority over eavesdropping. The default setting is disabled.

Note: Eavesdropping must be enabled (checked) for a panel to act as an ISO destination is set so that the panel microphone can be remotely enabled by the ISO if it is not enabled at the destination.

Global IFB

To set up an IFB

Select IFB destination and set Global IFB dimming and set interrupt level

Set a Forced Listen from IFB source to the IFB destination in local advanced link.

Program global IFB port label onto a panel key.

This function enables configuring a panel or interface as a global IFB destination. Any panel activating a talk to a global IFB destination creates a one-way talk path to that panel or interface. If more than one panel at a time activates a talk to the global IFB destination, both sources can be heard by the destination. When all IFB talks to the destination are deactivated, the destinations' audio paths return to their previous states. For IFB talks to also interrupt talks at the source, select the 'IFB Interrupts All Other Talks From Source panel' button in 'Matrix Frame Preferences'. The default setting is disabled.

When Global IFB is enabled the Attenuation field is also enabled allowing the amount of attenuation or 'Cutting' for each label's IFB level. The adjustment range is from Full Cut to No Cut in 3db steps. The default setting is No Cut.

If an interface has Global IFB set and a destination position is talking to this interface then an incoming call from a local ISO source WILL NOT

cause the outgoing talk from the destination panel to be cut as this is overridden by the Global setting.

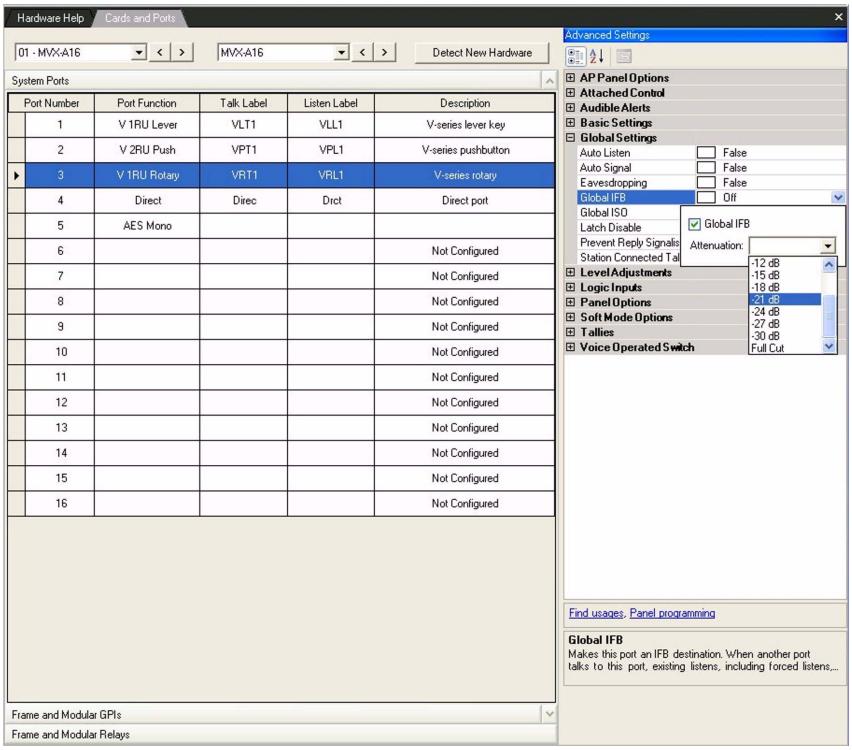


Figure 5-7: Global IFB

Global ISO

This function enables a panel or interface as a global ISO (Isolate) destination. Any panel activating a talk to a global ISO destination creates a private, two-way talk path between that panel and the destination. All other communications will be interrupted by any call from any Panel or Interface in the Eclipse System. When the source terminates the call, its audio paths return to their previous state. When all ISO paths to the destination are deactivated, the destinations' audio paths return to their previous states. For ISO talks to also interrupt listens at the source, select the ISO Interrupts All Other Listens check box in 'Matrix Frame Preferences'. The default is disabled.

Users should note that ISOs are always local to the matrix so the source and destination must be devices on the same matrix. An ISO destination cannot be set to a remote matrix.

Note: If the destination of an ISO is a panel then 'Eavesdropping' must be enabled in Global Settings (Advanced Settings section) in order to activate the panel microphone if it is not already activated. If the destination is not a panel but a device such as a 4-Wire port Eavesdropping does not need to be enabled for the destination device.

Latch Disable

This function prevents talks to the port from latching. If a latch-disabled port is assigned to a talk key, the key can only talk to the port for as long as the operator physically holds down the key. A latch-disabled port can be included in a fixed group or party line without automatically latch disabling the entire fixed group or party line.

Mute Listen With Talk

When set to true mutes listens to selected port on calling panel and panels nearby to calling panel.

Note: Panel Aux only.

Prevent Reply Signalization

Prevents key signalization for the calling panel appearing on the answerback (reply key).

Station Connected Tally

This allows the system to set a tally (flashing LED) on a panel indicating that the corresponding panel is connected to the system. The default is disabled.

This is normally used on remotely connected panels where the panel to matrix comms may suffer from an occasional loss of service.

Note: Not available for CCI-22, AES Mono, Panel Aux and Direct (no keys).

Applies to:

On V-Series, Concert, ICS 2003, ICS 102, PD4224, i-Station, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92, PD4212, PD4215, PD4226, Direct, AES Mono, Panel Aux, FOR-22 and Telephone devices.

IP PANEL SETTINGS

Audio Codec

Allows the codec to be selected for IP connections. Currently only the G.722 Codec is available. This is the default.

Network Connection

Selects the network connection type for an IP panel. Select from LAN (high speed), WAN (intermediate) or Internet (low speed) from a drop-down menu. The default ins LAN.

Password

Panel password required for the panel to log in to the system via the IVC-32 card. The password is set in ECS and also entered on the panel for the panel to log in.

UserID

Panel ID required for the panel to log in to the system via the IVC-32 card. The user ID is set in ECS and also entered on the panel for the panel to log in.

Applies to:

Only available on Concert and V-Series IP panels.

LEVEL ADJUSTMENTS

Aux Volume Off Limit

Sets the minimum limit for the auxiliary audio output so that the volume cannot be turned completely off.

Note: Only available on V-Series panels.

Gooseneck Microphone Gain

Sets the gain in dB for the gooseneck (panel) microphone in dB. The default is 0dB.

Note: Not available for ICS 102, CCI-22, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92, Concert, AES Mono, Panel Aux, Direct and FOR-22.

Headset 2 Microphone Gain

Sets the gain in dB for the panel headset 2 microphone. The default is 60dB.

Note: Not available for ICS 102, CCI-22, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92, Concert, AES Mono, Panel Aux, Direct and FOR-22.

Headset Microphone Gain

Sets the gain in dB for the panel headset microphone. The default is 60dB.

Note: Not available for ICS 102, CCI-22, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92, Concert, AES Mono, Panel Aux, Direct and FOR-22.

Input Volume

Audio level sent into the matrix (matrix input volume)

Allows the input volume level to be set. To set the input volume select the volume box to display the volume adjust slider and use the mouse to set the required volume from +15 dB to -45dB (or type in the value). The default is 0dB.

Main Volume Off Limit

Sets the minimum limit for the main audio output so that the volume cannot be turned completely off.

Note: Only available on V-Series panels.

Output Volume

Audio level sent from the matrix (matrix output volume)

Allows the output volume level to be set. To set the output volume select the volume box to display the volume adjust slider and use the mouse to set the required volume from +15 dB to -45dB (or type in the value). The default is 0dB.

Sidetone Gain

Sets the sidetone gain in dB for the panel. The default is 0dB.

Note: Not available for V-Series, ICS 102, PD4224E, CCI-22, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92E, Concert, PD4212E, PD4215E, PD4222E, PD4226E panels, AES Mono, Panel Aux, Trunk, Direct and FOR-22 interfaces.

Applies to:

i-Station.

DTMF SETTINGS

Used in conjunction with TEL-14 modules.

These settings are used to configure the TEL-14 or external telephone hybrid for incoming calls and control the access to the system by the external caller. The setups for outgoing calls are configured on the MVX-16A card which controls the outgoing DTMF on TEL-14 interfaces (except for ICS-2003 which can generate DTMF directly).

The TEL-14 has a number of user features.

DDI - incoming caller can route themselves to listen to studio output using DTMF codes.

Passcodes to stop unwanted callers.

Access Prompt

Controls whether the port sends DTMF access prompt tones and may be enabled or disabled. This allows the incoming caller to receive access prompts. The default is enabled.

Assign DTMF Codes

Assigns a DTMF selector code to a specific audio path. This allows the incoming caller to make various preselected links within the matrix by entering a specific code.

Enable Passcodes

This enables the use of passcodes that are set up using the DTMF Settings tab under 'Matrix Frame Preferences'. Up to eight DTMF passcodes can be set up for a system and each passcode can be enabled for a port via a drop-down menu.

When enabled incoming callers must enter a 4 digit passcode before being allowed access.

First Code Only

If this is enabled DTMF tone detection will be disabled after the first valid DTMF code has been received. Default is disabled.

Note: Only on TEL-14.

Multiple Codes (Accumulate)

This field controls whether only one DTMF selector code can be used (disabled) or whether multiple DTMF selector codes can be used. The default setting is disabled.

When enabled this allows the incoming caller to make multiple routes by dialling multiple codes.

One Digit Codes

If this is set enabled DTMF selector codes are limited to a single digit or the hash (#) and asterisk (*) characters. The default setting is disabled.

Applies to:

Direct, CCI-22, FOR-22 and TEL-14 interfaces.

LOGIC INPUTS

The Logic Inputs are used in relation to the Miscellaneous GPI connections on panels that are fitted with local option cards and V-Series panels.

The logic inputs are also associated with PTT function on headset 1 and headset 2 on V-Series panels where the headset is either an XLR-7 type headset connected to the front panel or a headset connected to the auxiliary audio connector. In the case of V-Series panels headset 1 PTT 1 or headset 2 PTT 1 active will have the same effect as Logic 1 active. Headset 1 PTT 2 or headset 2 PTT 2 active will have the same effect as Logic 2 active.

The PTT actions for XLR-4 and XLR-5 headsets connected to a V-Series panel are determined by the 'Headset PTT Function' setting.

The following actions are available for both Logic Input 1 and Logic Input 2:

- No Function
- Mic On/Off
- Mute Mic Output to Frame
- Mic Off (Momentary)
- Answerback Talk Clear
- Studio Announce
- Speaker Off
- PTT Activate all Talk Keys
- Activate Talk Switch 1
- Activate Talk Switch 2
- Activate Listen Labels
- PTT Activate Two Way Radio Talk Keys
- Select Route (and controls)

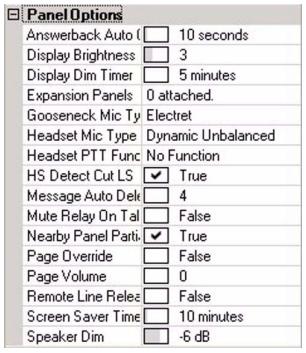
The default setting is No Function.

Applies to:

On V12LD, V24LD, V12PD, V24PD, V12RD, V24RD, V12LDD, V12PDD, R12RDD, ICS 2003, ICS 102, i-Station, ICS 52, ICS 62 and ICS 92 and 4000 Series II panels.

Note: Logic Inputs 3 and 4 are only available on V-Series panels. Logic inputs 3 is pre-assigned to Reply Key. Logic input 4 is not currently used.

PANEL OPTIONS



Answerback Auto Clear Time

The time interval for automatic answerback in seconds. To adjust the time select the answerback time to display the slider and set the time as required. The time is settable from 0 to 60 seconds. The default is 10 seconds.

Display brightness

Sets the display brightness on panels that have a suitable display. To adjust the display brightness select the brightness box to display the adjustment slider and use the mouse to drag the slider to the required setting. The brightness is adjustable from 0 to 10. The default setting is 0.

Note: Not available on Concert panel.

Display Dim Timer

Sets the time interval in minutes before the display on an inactive panel is dimmed to prevent damage to the display. To adjust the time setting select the timer box to display the adjustment slider and use the mouse to drag the slider to the required setting. The timer is adjustable from 0 minutes to 60 minutes. If the timer is set to 0 minutes the display is set to dim permanently.

If the dim timer is set to a value other than “Always Dim” the screen saver timer will only start after the screen has dimmed. For example if the dim timer is set to 1 minute and the screen saver timer is set to 1 minute the screen saver will start after 2 minutes. If the dim timer is set to “Always Dim” the screen saver inactivity timer will start immediately as the dim timer will effectively be zero.

Note: Only available V-Series panels.

Expansion Panels

Some types of panels can support expansion panels. If this option is available selecting the expansion panel number attached box will open a menu showing the type of expansion panels that can be fitted to the host panel. The types of expansion panels listed will vary according to the main panel type.

- V12LD - V12LDE may be fitted.
- V24LD - V12LDE may be fitted.
- V12PD - V12PDE may be fitted.
- V24PD - V12PDE may be fitted.
- V12RD - V12RDE may be fitted.
- V24RD - V12RDE may be fitted.
- V12LDD - no expansion panels are supported.
- V12PDD - no expansion panels are supported.
- V12RDD - no expansion panels are supported.
- ICS 2003 - AP22, XPL-12, XPL-22 may be fitted see limitation below).
- ICS 102 - AP22, XPL-12, XPL-22 may be fitted (see limitation below).
- i-Station - E Station, V Station may be fitted.
- ICS 1008 - EXP1016 may be fitted.
- ICS 1016 - EXP1016 may be fitted.
- ICS 52 - AP22, XPL-12, XPL-22 may be fitted (see limitation below).
- ICS 62 - AP22, XPL-12, XPL-22 may be fitted (see limitation below).
- ICS 92 - AP22, XPL-12, XPL-22 may be fitted (see limitation below).

• PD4212E - PD4230E, PD4230VE may be fitted.

• PD4215E - PD4203E, PD4206E may be fitted.

• PD4222E - PD4230E, PD4230VE may be fitted

• PD4224E - PD4203E, PD4206E may be fitted.

• PD4226E - PD4203E, PD4206E may be fitted.

• PD4294E - no expansion panels are supported.

AP22, XPL-12 and XPL-22 Expansion Panels

If AP-22, XPL-12 and XPL-22 expansion panels are used in a mixed configuration i.e. more than one type of expansion panel is attached to the host panel the different panel types must be separated rather than mixed in the chain. For example if a mixture of four AP22 and XPL-22 panels are used with a host panel the all the AP-22 panels must be grouped together and all the XPL-22 panels must be grouped together. If the expansion panel types are mixed the panel keys may be incorrectly assigned on the expansion panels. Examples are shown below:

Host Panel -> AP22 -> AP22 -> XPL-22 -> XPL-22 is correct

Host Panel -> XPL-22 -> XPL-22 -> AP22 -> AP22 is correct

Host Panel -> XPL-22 -> AP22 -> XPL-22 -> AP22 is incorrect

Host Panel -> XPL-22 ->AP22 -> XPL-22 is incorrect

Host Panel -> XPL-22 -> XPL-22 -> AP22 is correct

Gooseneck Mic Type

The Gooseneck Mic Type allows the type of panel microphone to be configured. To set the microphone type highlight the item to allow the drop-down menu to be displayed. The options for microphones are Dynamic Balanced, Dynamic Unbalanced and Electret (default).

Note: Only available on V-Series panels.

Headset Mic Type

The Headset Mic Type allows the type of headset microphone to be configured. To set the microphone type highlight the item to allow the drop-down menu to be displayed. The options for headset microphones are Dynamic Balanced, Dynamic Unbalanced (default) and Electret. This setting applies to headset 1 and 2.

Note: Only available on V-Series panels.

The PTT switch can be in the panel headset or connected via the local options card.

Headset PTT Function

The Push to Talk function allows the action for PTT to be selected. The options are No Function, Activate All Talk Keys and Activate Two-Way Radio. The default is No Function. This function is triggered by any of the PTT inputs on a panel.

In the case of V-Series panels this function only relates to XLR-4 and XLR-5 type headsets that have been modified for PTT. V-Series XLR-7 headsets and headsets connected to the auxiliary audio connector use the logic 1 and 2 inputs (see Logic Inputs).

The effect of these functions are:

- No Function - PTT has no effect.
- Activate All Talk Keys - PTT will activate audio paths on all latched talk keys. Non-latching talk keys will not be activated.
- Activate Two-Way Radio - PTT will activate audio paths on all latched talk keys connected to two-way radios (normally via a FOR-22 unit).

Note: Not available on Concert panels.

HS Detect Cut LS

When enabled (True) this facility will automatically cut the audio to the panel loudspeaker if a headset is detected. Highlight the option and use the drop-down menu to set the option to True or False. The checkbox will indicate whether the option is enabled.

Note: Only available on V-Series panels.

Message Auto Delete

The message auto delete timeout sets the length of time in minutes before a message recorded in the listen again buffer is automatically deleted. If the delay is set to 99 minutes auto delete is disabled. To set the listen again auto delete timeout highlight the option and click on the drop-down menu to display the slider. Use the mouse to set the timeout to a value of 0 to 99 minutes.

Note: Only available on V-Series panels.

Mute Relay On Talk Key Press

If this is set to True the local panel GPO mute relay is fired when a Talk only key is pressed. The default setting is false.

Note: Not available on PD4212E, PD4215E, PD4222E, PD4224E and PD4226E panels.

Nearby Panel Partial

This attribute affects the way that Nearby Panels configured in Local Advanced operate.

The ‘Nearby Panel Partial’ attribute is set to True to enable audio from nearby panels to be routed to the headset. If it is not set audio from nearby panels is cut completely to prevent audio feedback.

Page Override

If a panel with Page Override set turns their main volume level down, an incoming page from another panel will reset the volume level so that the audio can be heard.

The panel main volume audio can be overridden by paging audio from another panel. The default setting is disabled. For Page Override to operate this must be set to True on any destination panel where the local main volume setting may need to be overridden by a calling panel. This is used in conjunction with Page Volume.

Note: Only available on ICS-2003E, ICS-102, PD4224E, I-Station, ICS-1008, ICS-1016, ICS-52E, ICS-62, ICS-92E, PD4212E, PD4215E, PD4226E, PD4222E, Concert, V-Series panels.

Page Volume

Allows the volume of the Page Override audio to be set. To set the Page Override volume select the Page Volume option box to display the volume adjust slider and use the mouse to set the required level. The level range is from 0 to 10. The default volume setting is 0.

This is used in conjunction with Page Override.

Note: Only available on ICS-2003E, ICS-102, PD4224E, I-Station, ICS-1008, ICS-1016, ICS-52E, ICS-62, ICS-92E, PD4212E, PD4215E, PD4226E, PD4222E, Concert, V-Series panels.

Remote Line Release

Allows the panel to release the selected telephone line which may be held on by the incoming caller anywhere in the system. The default is disabled.

Note: Not available on Concert panels.

Screen Saver Timer

The screen saver timer facility sets the length of time a panel is inactive elapse before the screen saver is displayed. The screen saver is used to prevent the display being damaged by being left for long periods with the same display. The time may be set to any value between 1 and 60 minutes. It cannot be disabled.

If the dim timer is set to a value other than “Always Dim” the screen saver timer will only start after the screen has dimmed. For example if the dim timer is set to 1 minute and the screen saver timer is set to 1 minute the screen saver will start after 2 minutes. If the dim timer is set to “Always Dim” the screen saver inactivity timer will start immediately.

Note: Only available on V-Series panels.

Simultaneous Main and Swap

The options controls whether the current talk audio paths are maintained or cut when the swap page is viewed. The default setting is disabled causing the audio paths from the main page to be cut when

the swap page is viewed. When enabled the audio paths are maintained from the main page when the swap page is viewed.

Note: This is available on the ICS-2003 and I-station only.

Speaker Dim

This allows the user to select the amount of Dim applied locally to the panel whenever a talk key is pressed - this is used to prevent audio feedback.

This is to prevent howl-round. When a talk selector is activated on a panel, the speaker volume is attenuated by the value set within speaker dim.

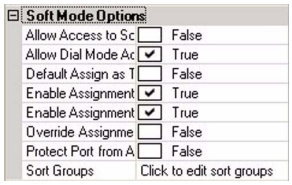
To change the setting select the box with the current setting to display the slider and use the mouse to drag the slider to the new setting. The speaker dim can be adjusted from -15dB to 0db. The default is -9 dB.

Note: For ICS 1008, ICS 1016 and 4000 Series II panels the speaker dim function can only be set to True or False, providing a -6 dB dim when set to True.

Applies to:

All panel devices.

SOFT MODE OPTIONS



Some V-Series options that control access to panel menus allow a pin code option to be selected. If no pin code has been set under 'Matrix Frame Preferences' and 'System Access Codes' a warning message will be displayed offering the user the option to set a pin code. If a no pin code is set selecting this option will allow all users to access the menu.

Default Assign as Talk and Forced Listen

When enabled this forces any key assigned to this panel to be a Talk and Forced Listen key. It is interlocked with the 'Enable Assignment as Listen' and 'Enable Assignment as Talk' settings so that whenever the 'Default Assign as Talk and Forced Listen' setting is True both 'Enable Assignment as Listen' and 'Enable Assignment as Talk' are forced to the True state. If either or both of these settings is then changed to False the 'Default Assign as Talk and Forced Listen' setting is automatically changed to False.

When this setting is False the Enable Assignment as Listen' and 'Enable Assignment as Talk' settings can be set normally.

The default setting is False.

Note: This functionality only takes effect when making assignments on a 4000 panel or a V-Series panel.

Diagnostic Menu Access

Allow access to the panel diagnostic menu via the local menu option. This allows some panel information to be displayed and access to panel reset and telephone line release functions. Access may be enabled for all users (True), denied to all users (False) or controlled by the PIN number. Select the option and click on the arrow to open the drop-down menu. Select the required access.

Note: Only on V-Series panels.

Allow Access to Soft Mode

Allow the panel to be switched into 'Soft Mode' via the local menu option so that the keys can be programmed locally instead of only being set centrally by ECS.

Note: Only on PD4224, PD4212 and PD4222 panels.

Allow Dial Mode Access

Allow the panel to dial out on a phone line using a preset key.

Note: Only on PD4224, PD4212, PD4222, I-Station, ICS 2003 panels.

Enable Assignment as a Listen

Allow the port to be assigned locally via Soft Mode as listen key by another panel. If it is set to False it will prevent a Listen key being assigned to the panel.

The default is True.

Note: This functionality only takes effect when making assignments on a 4000 panel, V-Series panel or a Concert Panel.

Enable Assignment as Talk

Allow the port to be assigned locally via Soft Mode as talk key by another panel. If it is set to False it will prevent a Talk key being assigned to the panel.

The default is True.

Note: This functionality only takes effect when making assignments on a 4000 panel, V-Series panel or a Concert panel.

Fast Key Assign

Enables the panel for local fast key assign. This facility allows the panel operator to locally assign panel keys to local or remote ports by direct input of the port number. The panel operator can also assign

keys directly from sort groups. For details on fast assign please refer to the V-Series panel user guide part 810365Z.

Note: Only on V-Series panels with numeric keypads.

Local Pref Menu Access

Allow access to the local preferences menu via the local menu option. This allows access to audio level control, brightness settings, timeouts and crosspoint reset. Access may be enabled for all users (True), denied to all users (False) or controlled by the PIN number. Select the option and click on the arrow to open the drop-down menu. Select the required access.

Note: Only on V-Series.

Override Assignment Protection

Allows this port to override the port protection of any port that may have been set in the matrix.

Note: Not on V-Series, Concert, AES Mono and Panel Aux.

Protect Port from Assignment

Prevents this port from being locally assigned by another panel in soft mode.

Sort Groups

Sort Groups

When set allows the panel to only locally assign ports from the Sort Group.

Opens a drop down menu so that sort group memberships can be edited and applied.

Note: Not on Concert, AES Mono and Panel Aux.

Supervisor Panel

Enables the panel to be a supervisor panel.

Note: Only on V-Series, PD4212 and PD4222 panels.

Sys Config Access

Allow access to the system configuration menu via the local menu option. This allows access to party line, fixed group, remote panel, local panel, forced listen, input level and output level menus. Access may be enabled for all users (True), denied to all users (False) or controlled by the PIN number. Select the option and click on the arrow to open the drop-down menu. Select the required access.

Note: Only on V-Series.

Applies to:

All panels unless otherwise noted.

TALLIES

In Use Tally

This allows the system to set a tally (flashing LED) on a panel key indicating that the port is currently in conversation with another panel or interface. The default is disabled.

VOICE OPERATED SWITCH

There are four settings in the Voice Operated Switch section of a port's advanced settings which determine how the audio gate operates.

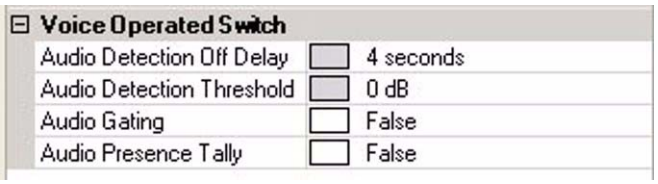


Figure 5-8: Voice Operated Switch Options

- **"Audio detection off delay"** determines how quickly the audio gate closes when the operator stops speaking. Adjust this value so that the audio gate does not close too early and cut off words at the end of sentences or during small gaps.
- **"Audio detection threshold"** sets the audio level at which the "audio gate" opens and closes. Typically the threshold value is set at the level of a human voice, so that when a person speaks into the microphone, the audio gate switches open to allow audio onto the intercom line. When the person stops speaking, the gate closes, regardless of the fact that background noise may be present.
- Recommended levels are -3dB for panels and -20dB for interfaces.
- **"Audio gating"** turns the audio gate function on or off. By default, this setting is off.
  This function gates (performs a logical AND) on the crosspoint and the Vox detection threshold. If the crosspoint is made from the port and the input Vox level exceeds the detection threshold then audio will be passed to the port.
- **"Audio presence tally"** (also known as Vox tally) causes a panel's listen key to flash on a panel whenever audio above the set threshold level is detected.

Also if the VOX control option is programmed this will activate when the gate opens.

Audio Detection Off Delay

This option determines the length of delay in seconds before the audio gate closes after the audio level falls below the preset threshold.

To set the Audio Detection Off Delay

1. In the Voice Operated Switch section of a port's Advanced Settings, click Audio Detection Off Delay.
2. A level adjustment slider is displayed on the screen.
3. Drag the level adjust slider to the desired setting from 0 to 4 seconds. The larger the value the greater the delay before the audio is cut. This can be used to ensure that the audio is not cut during short pauses.
4. Click outside the Voice Operated Switch section to close the virtual slider box. The new delay value is displayed.

Audio Detection Threshold

To set the Audio Detection Threshold

1. In the Audio Detection Threshold section of a port's Advanced Settings, click Audio Detection Threshold. A level adjustment slider is displayed to set the threshold to value between 0 and -45dB.
2. Drag the slider to the desired setting. Increasing the value causes the only very loud sounds to open the audio gate, while decreasing the value causes even very soft sounds to open the gate. The "audio presence tally" feature may be used to help set the gate at the level of the audio signal.
3. Click outside the Voice Operated Switch section to close the slider and update the display to the new setting.

Audio Gating

An "audio gate" allows ECS to restrict or "gate" background noise at a panel microphone or interface's input so that the background noise does not transmit to the intercom line. When the audio gate is activated the panel or interface operates as a flexible voice operated switch, which only transmits audio when it detects an audio signal characteristic level.

To enable Audio Gating

1. In the Audio Detection Threshold section of a port's Advanced Settings, click Audio Gating.

   A drop-down arrow appears on the screen.
2. Click the drop-down arrow to turn the audio gating feature on or off.

   A check appears on the screen to indicate the feature is on. The check disappears to indicate the feature is off.

Audio Presence Tally

To enable Audio Presence Tally

1. In the Audio Presence Tally section of a port's Advanced Settings, click Audio Presence Tally. A drop-down arrow appears on the screen.

2. Click the drop-down arrow to turn the Audio Presence Tally feature on or off.

The operator can speak into a panel's microphone and adjust the threshold value so that the audio presence light just goes out when the operator is not speaking, or input a tone into the interface input and adjust the threshold value.

Applies to:

On V12LD, V24LD, V12PD, V24PD, V12LDD, Concert, ICS 2003, ICS 102, PD4224, i-Station, CCI-22, ICS 1008, ICS 1016, ICS 52, ICS 62, ICS 92, PD4212, PD4215, PD4226 panels, Direct, AES Mono, Panel Aux, FOR-22 and Telephone devices.

Note: This feature is not available on IP panels.

LINKING OPTIONS

Remote System

Specifies the remote system the trunk device is connected to. This is configured in 'System' and is displayed in Advanced Settings for information only; it cannot be set using Advanced Settings.

Applies to:

Only used on Trunk devices.

FRAME AND MODULAR GPIS

The Eclipse matrix has eight General Purpose Inputs (GPI) on the processor card and these Inputs are automatically added to ECS in the Matrix Hardware screen as module 0. Further GPIs can be added to the system using GPI-6 modules by incrementing the number of GPI modules shown below the list.

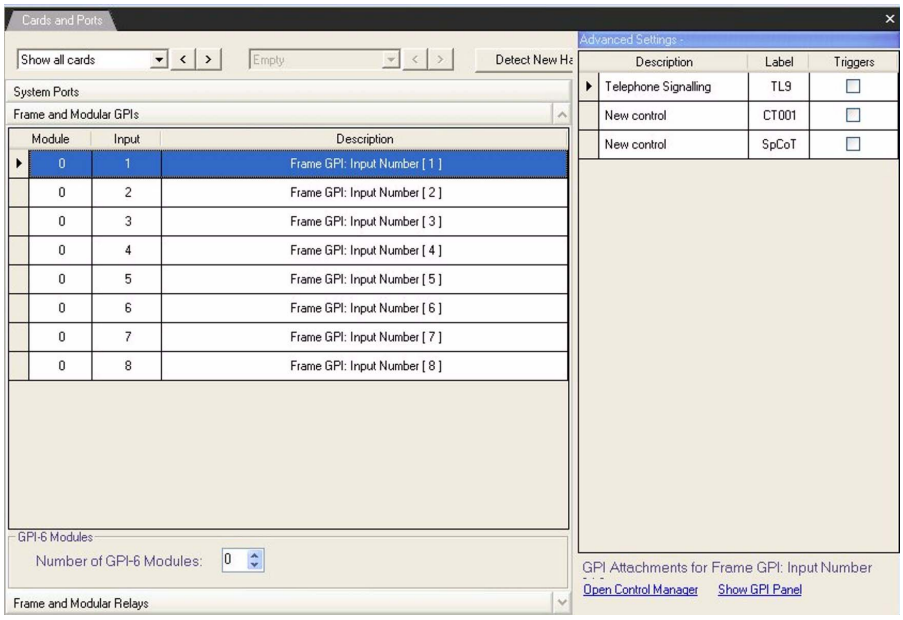


Figure 5-9: GPI-6 modules are added/removed from the Matrix Hardware

TO OPEN FRAME AND MODULAR GPIS SCREEN

1. Select the 'Cards and Ports' link from the Hardware menu.
2. Locate and left click the mouse button on the Frame and Modular bar. This operation opens the Frame and Modular GPI screen as above.

ADDING GPI-6 MODULES

1. To add a GPI-6 module open the Frame and Modular GPIs screen as described above.
2. Left click the mouse button on the up arrow next to the GPI-6 counter.
3. A new module will be added to the list using the next available module number and six new GPIs will be added.

REMOVING GPI-6 MODULES

1. To remove a GPI-6 module open the Frame and Modular GPIs screen as described above.
2. Left click the mouse button on the down arrow next to the GPI-6 counter.

3. The GPI module with the highest module number will be removed from the list and all the GPIs on that module will be deleted.

CONFIGURING FRAME AND MODULAR GPIS

1. To configure either a Frame or GPI-6 input, identify the input number to be used from the ‘Frame and Modular GPIs’ screen.
2. Highlight the row by left clicking the row.
3. From the ‘Advanced Settings’ window identify the required talk label.
4. Place a tick in the ‘IsAttached’ check box next to the required talk label.
5. To detach the talk label from the GPI uncheck the ‘Triggers’ box next to the talk label.
6. To configure the properties of a talk label attached to a GPI open the Control Manager using the link below the ‘Advanced Settings’ window.
7. Select the required Talk or Listen label by left clicking the row.
8. In the ‘Properties’ pane configure the required properties for the Talk or Listen label.

Note: When using an IMF-3 frame the GPI-6 cable should be connected first to the matrix GPI data connector before connecting any GPI-6 cards.

FRAME AND MODULAR RELAYS

The Eclipse Frame has 8 Frame General Purpose Outputs (GPO) and these Outputs are automatically added to ECS in the ‘Cards and Ports’ screen as module 0. RLY-6 modules are added/removed from the ‘Cards and Ports’ screen.

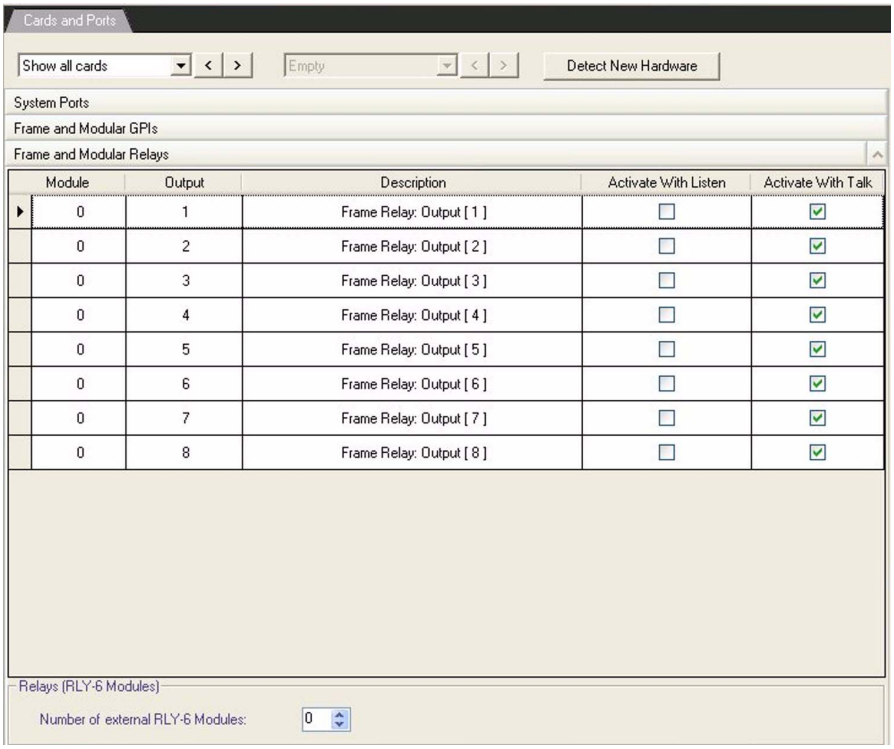


Figure 5-10: Relays Screen

TO OPEN FRAME AND MODULAR RELAYS SCREEN

1. Select the 'Cards and ports' link from the Hardware menu
2. Locate and left click the mouse button on the 'Frame and Modular Relays' bar. This operation opens the Frame and Modular Relays screen as above.

ADDING RLY-6 MODULES

1. Open the Frame and Modular Relays screen in the above way.
2. Left click the mouse button on the up arrow next to the RLY-6 counter.
3. The new module will be added to the display using the next available module number and six new outputs will be added numbered 1 - 6.

REMOVING RLY-6 MODULES

1. Open the Frame and Modular Relays screen in the above way.
2. Left click the mouse button on the down arrow next to the RLY-6 counter.
3. The relay module with the highest module number will be removed from the list and the GPOs deleted.

CONFIGURING FRAME AND MODULAR RELAYS

In the ‘Frame and Modular Relays’ window use the checkboxes to set whether the relay output is activated with talk and or listen.

The Control Manager is used to create and configure controls that can be attached to the relays.

CONFIGURING THE E-FIB FIBER CARD

The E-FIB fiber card is designed to provide trunking between Eclipse Omega and Median matrices. The fiber cards can also be configured to provide redundancy in communications link between Eclipse matrices. Each card provides two fiber rings.

ADDING AN E-FIB CARD

To add an E-FIB card, select the ‘Cards and Ports’ link from the Hardware menu. Select the down arrow next to the ‘Show all cards’ field. A list is displayed, showing P1 & P2 main and backup processor cards, then the ‘Not Configured’ slots where E-FIB Cards can be configured.

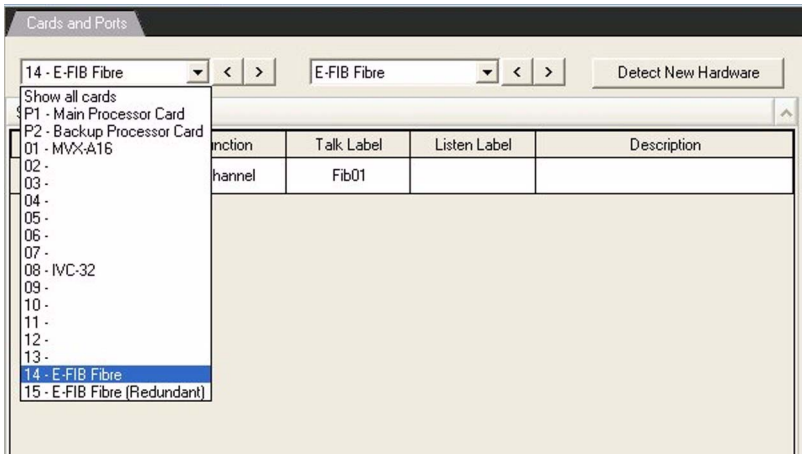


Figure 5-11: Eclipse Empty Slots

Using the mouse, navigate to a required slot number then left click the mouse button to select this slot. This action brings into focus the ‘Empty’ drop down list. From this list, select the down arrow, and then select ‘E-FIB Fibre’ or ‘E-FIB Fibre (Redundant) by left clicking the mouse button over the writing.

Note: Only one “E-FIB Fibre” and one “E-FIB Fibre (Redundant)” can be added. Attempts to add more will result in an error.

It is recommended that E-FIB cards are fitted in slots 6 and/or 7 of Median matrices and slots 14 and/or 15 of Omega matrices.

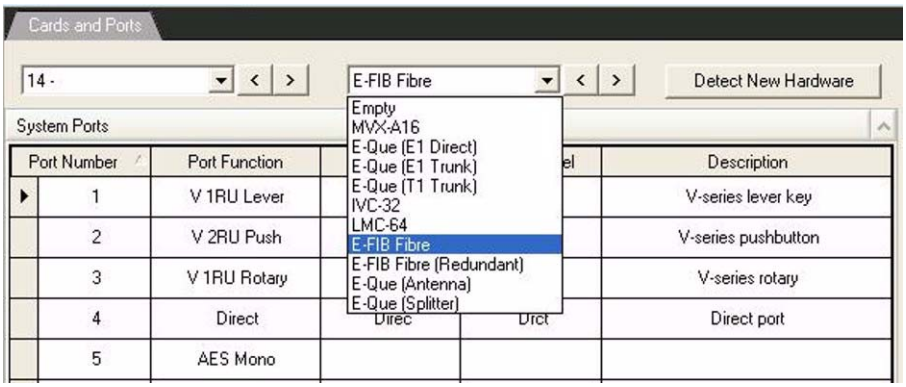


Figure 5-12: E-FIB Fiber Card Selection

This action automatically adds a fiber port ready to be configured. Repeat this step for the number of required fiber cards (only two cards maximum per frame).

REMOVING AN E-FIB CARD

To remove an E-FIB card, select the 'Cards and Ports' link from the Hardware menu. Select the 'Show All Cards' down arrow ('Show all cards' may not be the current selection as another slot may be selected) by left clicking the mouse button. Move the mouse up or down the list to the slot number of the E-FIB card required to be deleted. Select the E-FIB card by left clicking the mouse button. The card drop down list should now come into focus. Select the drop down arrow then select 'Empty' using the left mouse button. A warning dialogue box appears. Select 'Yes' using the left mouse button to confirm deletion.

CONFIGURING AN E-FIB CARD

The E-FIB card provides a single fiber port that can be configured to have Talk and Listen labels and a description.

Note: If the "E-FIB Fibre (Redundant)" is selected the column headings will be displayed in the 'System Ports' pane but the card parameters cannot be configured.

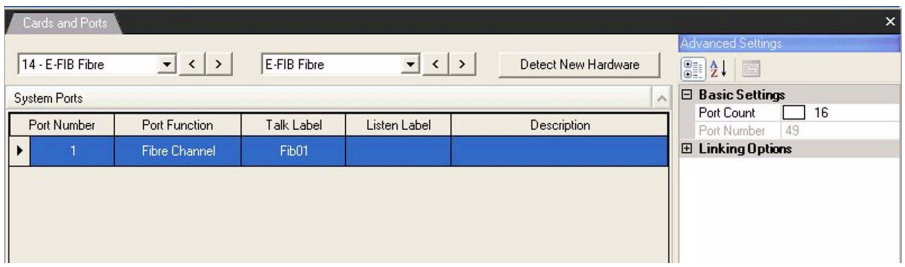


Figure 5-13: Fiber Card Configuration

The Advanced settings menu allows the following parameters to be set.

BASIC SETTINGS

Port Count

The port count specifies the number of unidirectional fiber channels that will be configured for the fiber card. The port count may be set to a maximum of 192 ports in multiples of 16. As a general guide the port count (fiber channels) can be set to the maximum of 192 ports in networks with five or fewer matrices as this will not use all the timeslots (but see note below).

For networks with more than five matrices the port allocations must take account of the maximum number of simultaneous talks and listens across the network with a maximum of 1024 timeslots being available. The matrix event log can be used to help tailor the port counts for the matrices. Alternatively the user may contact Clear-Com support for assistance in configuring the network.

Note: The port count should not be set to an excessive number (significantly more that the number of panels available for connection via the fiber card) as this may reduce system performance.

Port Number

The port number is set to the next available port on the system. For example, if two MXV-16 cards are installed before the fiber card the port number will be set to 33 (16+16+1). The port number cannot be changed in Advanced Settings.

LINKING OPTIONS

Remote System

The remote system that the fiber trunk is connected to. Selecting this option will display a list of remote systems that the fiber trunk may be connected to in order to select the target system. For a system to be listed it must have been set up in ‘My Systems’ as linked to the current matrix so that the hardware can be allocated.

CONFIGURING THE E-QUE CARD

The E-QUE card is designed to allow Eclipse matrices to be connected to CellCom/FreeSpeak wireless antennas/beltpacks or connected together using E1 or T1 protocol (see chapter 3 “Matrix Frame Preferences”).

ADDING AN E-QUE CARD

To add an E-QUE card, select the ‘Cards and Ports’ link from the Hardware menu. Select the down arrow next to the ‘Show all cards’ field. A list is displayed, showing P1 & P2 main and backup processor cards, then the ‘Not Configured’ slots where E-QUE Cards can be configured.

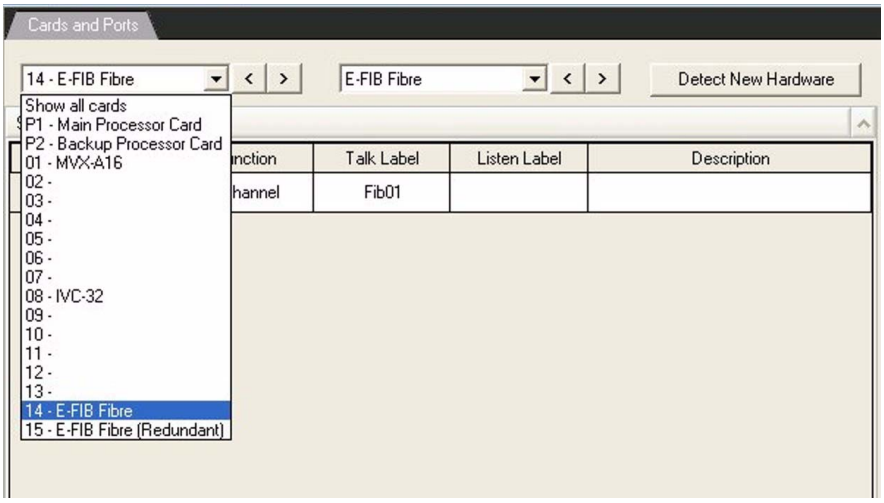


Figure 5-14: Eclipse Empty Slots

Using the mouse, navigate to a required slot number then left click the mouse button to select this slot. This action brings into focus the ‘Empty’ drop down list. From this list, select the down arrow, and then select the E-QUE card from the list according to the intended function. The available E-QUE card functions are:

- E-QUE (E1 Direct)
- E-QUE (E1 Trunk)
- E-QUE (T1 Trunk)
- E-QUE (Antenna)
- E-QUE (Splitter)

Select the required E-QUE function by left clicking the mouse button over the entry. The E-QUE entry selected should be correct for the intended use as the cards will be configured differently by ECS.

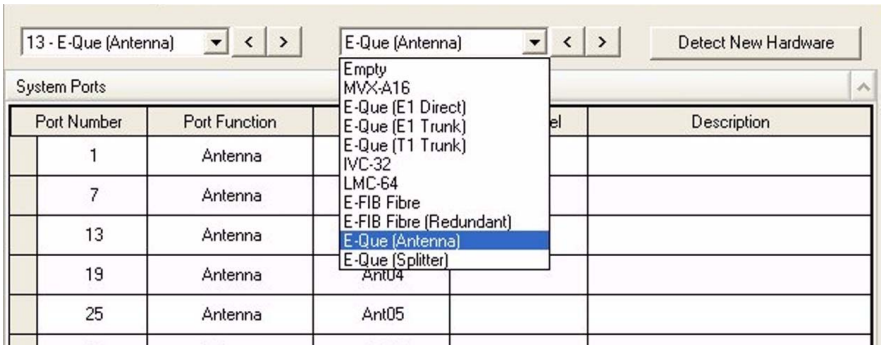


Figure 5-15: E-Que Card Selection

E-QUE cards can be configured as E1 Direct, E1 Trunk, T1 Trunk, Antenna or Splitter cards.

E-QUE cards should be fitted to the rightmost free slots in the Median or Omega matrices (furthest from the config cards). A maximum of four of any combination of E-QUE, IVC-32 and LMC-64 cards can be fitted to an Omega or Median matrix regardless of the E-QUE card mode. If the user attempts to add more than four E-QUE, IVC-32 and LMC-64 cards in total to the matrix an error message is displayed (Figure 5-16).

Figure 5-16: Configuring Too Many E-QUE/IVC-32 Cards

E1 Direct

This action automatically adds an E-QUE card configured for 60 direct ports using E1 protocol. Each E1 port can be used as an E1 communication line to another E1 device.

Port Function

This is always set to ‘E1 Direct’.

Talk Label

Talk label for the E1 direct port used to assign the port to a talk path.

Listen Label

Listen label for the E1 direct port used to assign the port to a listen path.

Description

Option port description up to 255 characters long.

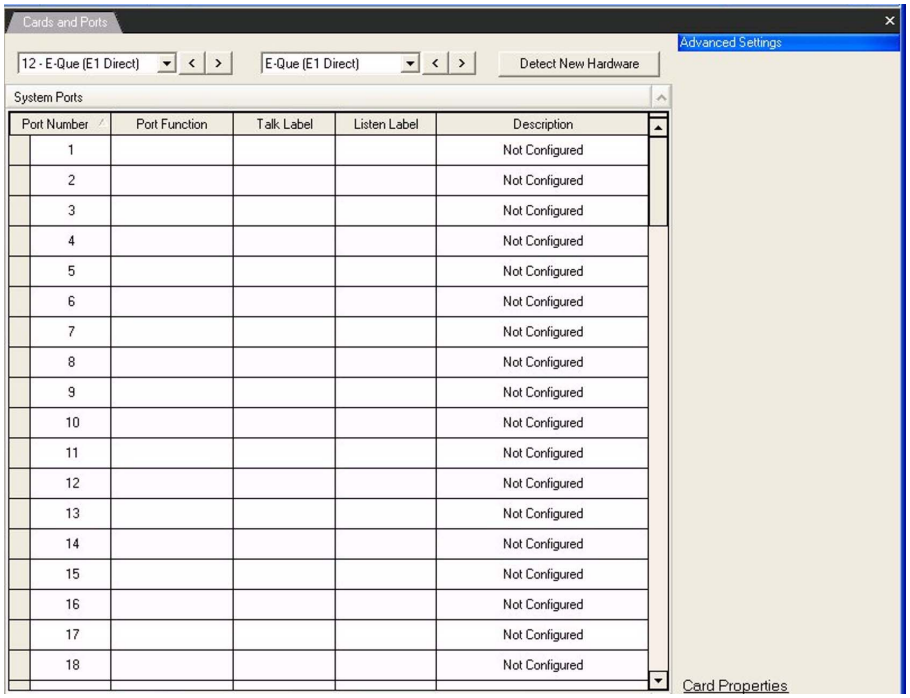


Figure 5-17: E1 Direct Ports

Card Properties

For an E-QUE card in E1 Direct mode the Clock Recovery mode and Codec should be set by clicking on the 'Card Properties' link in the lower right of the hardware display. This will display the Clock Recovery and Codec setup.

Figure 5-18: E1 Direct Card Properties

Card Position

The slot number of the selected card is displayed.

Clock Recovery

The data clock may be generated by the E-QUE card (Local Generated) or taken from the E1 line. Normally the card should be set to 'Line Recovery' for connection to a 4000 frame. For other devices the clock source will need to be determined before configuration. Select the correct configuration by clicking on the appropriate radio button.

Codec

E-QUE cards configured as E1 Direct use two cables plugged into ports 1 (top) and 5 (bottom) for the E-QUE card to provide E1 ports. The top cable (Top Half) provides the first 30 ports (1-30) and the bottom cable (Bottom Half) provides the second 30 ports (31 - 60). The top and bottom cables can be configured to use different Codecs. The Codecs available are:

- G722 - standard G722 conversion and compression.
- G722 A-Law - uses an A-law algorithm to optimize the G722 codec. This is often used in European systems.
- G722 µ-Law - uses a µ-law algorithm to optimize the G722 codec. This is often used in North America and Japan.

Click on the appropriate radio button to select the codecs for top and bottom cables.

E1 Trunk

An E-QUE card set to E1 Trunk is used to connect Eclipse matrices using E1 trunking protocol. The System Ports display will show two ports numbered 1 and 31.

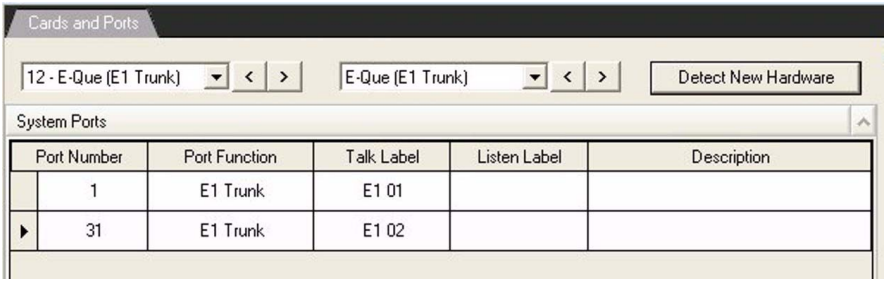


Figure 5-19: E1 Trunk Ports

Port 1 represents 30 "virtual" ports 1 - 30 which will be allocated automatically for communications. Port 31 represents a further 30 "virtual" ports 31 - 60 that are automatically allocated.

Port Function

This is always set to 'E1 Trunk'.

Talk Label

Talk label for the E1 trunk used to assign the trunk line in ‘My Systems’.

Listen Label

Listen label for the E1 trunk used to assign the trunk line in ‘My Systems’.

Description

Option port description up to 255 characters long.

Card Properties

For an E-QUE card in E1 Trunk mode the Clock Recovery mode and Codec should be set by clicking on the ‘Card Properties’ link in the lower right of the hardware display. This will display the Clock Recovery and Codec setup.

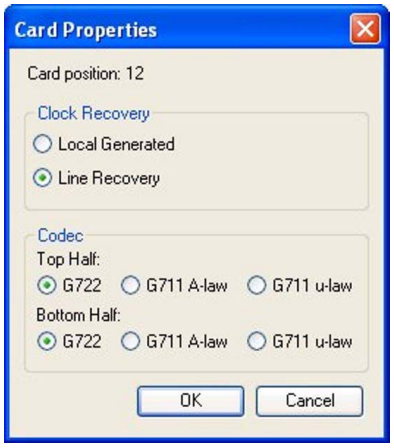


Figure 5-20: E1 Trunk Card Properties

Card Position

The slot number of the selected card is displayed.

Clock Recovery

The data clock may be generated by the E-QUE card (Local Generated) or taken from the E1 line. Normally the card should be set to ‘Line Recovery’ for connection to a third party device or E1 network. For other devices the clock source will need to be determined before configuration. Select the correct configuration by clicking on the appropriate radio button.

If connecting two Eclipse matrices back to back using E1:

- An E1 or T1 crossover cable is required.
- One E-QUE card should be set to ‘Local Generated’ clock and the other to ‘Line Recovery’ clock.

Codec

E-QUE cards configured as E1 Trunk use two cables plugged into ports 1 (top) and 5 (bottom) for the E-QUE card to provide E1 trunk ports. The top cable (Top Half) provides the first 30 ports (1-30) and the bottom cable (Bottom Half) provides the second 30 ports (31 - 60). The top and bottom cables can be configured to use different Codecs. The Codecs available are:

- G722 - standard G722 conversion and compression.
- G722 A-Law - uses an A-law algorithm to optimize the G722 codec. This is often used in European systems.
- G722 µ-Law - uses a µ-law algorithm to optimize the G722 codec. This is often used in North America and Japan.

Click on the appropriate radio button to select the codecs for top and bottom cables.

T1 Trunk

An E-QUE card set to T1 Trunk is used to connect Eclipse matrices using T1 trunking protocol. The System Ports display will show two ports numbered 1 and 25.

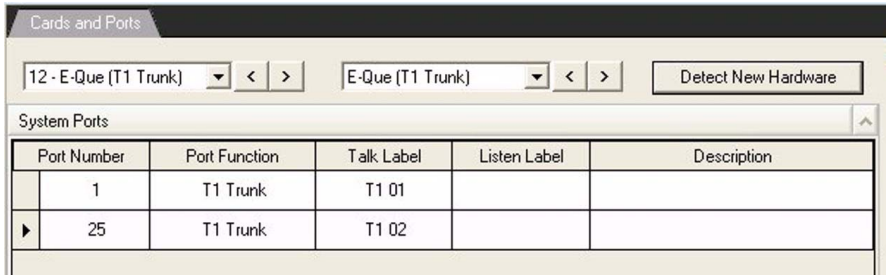


Figure 5-21: T1 Trunk Ports

Port 1 represents 24 “virtual” ports 1 - 24 which will be allocated automatically for communications. Port 25 represents a further 24 “virtual” ports 25 - 48 that are automatically allocated.

Port Function

This is always set to ‘T1 Trunk’.

Talk Label

Talk label for the T1 trunk used to assign the trunk line in ‘My Systems’.

Listen Label

Listen label for the T1 trunk used to assign the trunk line in ‘My Systems’.

Description

Option port description up to 255 characters long.

Card Properties

For an E-QUE card in T1 Direct mode the Clock Recovery mode and Codec should be set by clicking on the ‘Card Properties’ link in the lower right of the hardware display. This will display the Clock Recovery and Codec setup.

Figure 5-22: T1 Trunk Card Properties

Card Position

The slot number of the selected card is displayed.

Clock Recovery

The data clock may be generated by the E-QUE card (Local Generated) or taken from the T1 line. Normally the card should be set to ‘Line Recovery’ for connection to a third party device or a T1 network. For other devices the clock source will need to be determined before configuration. Select the correct configuration by clicking on the appropriate radio button.

If connecting two Eclipse matrices back to back using T1:

- An E1 or T1 crossover cable is required.
- One E-QUE card should be set to ‘Local Generated’ clock and the other to ‘Line Recovery’ clock.

Codec

E-QUE cards configured as T1 Trunk use two cables plugged into ports 1 (top) and 5 (bottom) for the E-QUE card to provide T1 trunk ports. The top cable (Top Half) provides the first 24 ports (1-24) and the bottom cable (Bottom Half) provides the second 24 ports (25 - 48). The top and bottom cables can be configured to use different Codecs. The Codecs available are:

• G722 - standard G722 conversion and compression.

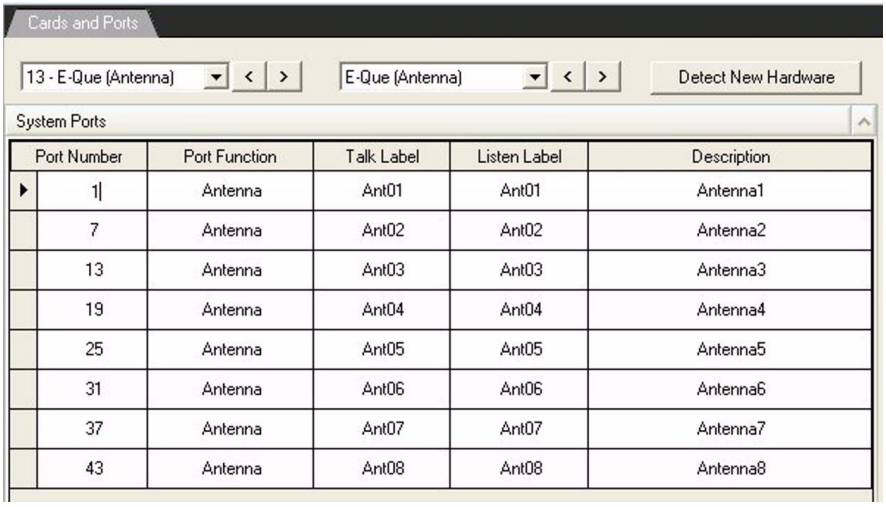
• G722 A-Law - uses an A-law algorithm to optimize the G722 codec. This is often used in European systems.

• G722 µ-Law - uses a µ-law algorithm to optimize the G722 codec. This is often used in North America and Japan.

Click on the appropriate radio button to select the codecs for top and bottom cables.

E-QUE Antenna

This action automatically adds an E-Que card with eight antenna ports configured. Each antenna provides six user ports. The hardware table shows the first user port number for each antenna rather than the E-Que port number. Therefore the first antenna is shown as port 1 (the first beltpack port) and the second antenna is shown as port 7 (previous first port number plus six), since beltpack ports 1-6 are on the first antenna. This is repeated for successive antennae.



Port Number	Port Function	Talk Label	Listen Label	Description
1	Antenna	Ant01	Ant01	Antenna1
7	Antenna	Ant02	Ant02	Antenna2
13	Antenna	Ant03	Ant03	Antenna3
19	Antenna	Ant04	Ant04	Antenna4
25	Antenna	Ant05	Ant05	Antenna5
31	Antenna	Ant06	Ant06	Antenna6
37	Antenna	Ant07	Ant07	Antenna7
43	Antenna	Ant08	Ant08	Antenna8

Figure 5-23: Antenna Ports

Port Function

This is always set to “Antenna”.

Talk Label

This is used to identify the E-Que antenna port location but is not used to assign talk paths.

Listen Label

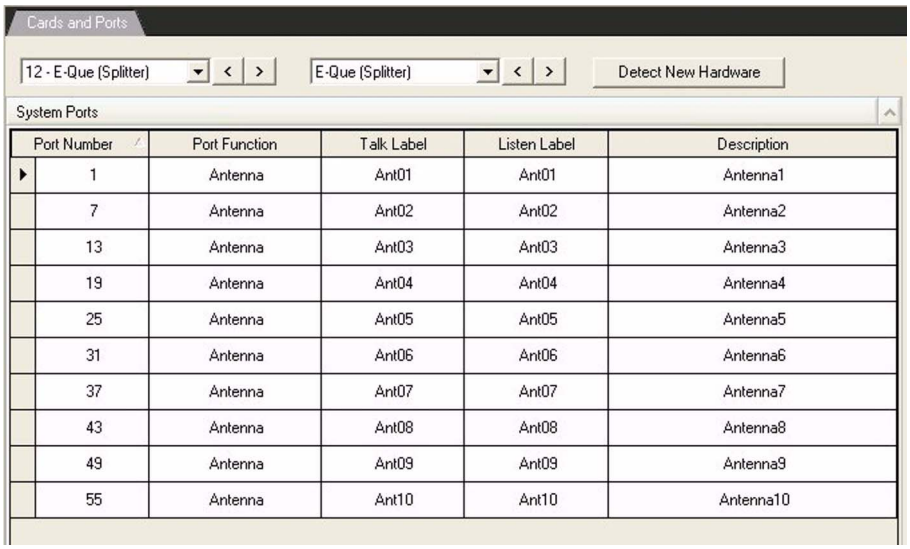
This is used to identify the E-Que antenna port location but is not used to assign listen paths.

Description

An optional description for the port of up to 255 characters long.

E-QUE Splitter

This action automatically adds an E-Que card with two splitter ports configured. Each splitter can support up to five antennae and each antenna provides six beltpack ports. The hardware table shows ten antennae with the first beltpack port number for each antenna rather than the E-Que port number. Therefore the first antenna is shown as port 1 (the first beltpack port) and the second antenna is shown as port 7 (previous first port number plus six), since beltpack ports 1-6 are on the first antenna. This is repeated for successive antennae.



Port Number	Port Function	Talk Label	Listen Label	Description
1	Antenna	Ant01	Ant01	Antenna1
7	Antenna	Ant02	Ant02	Antenna2
13	Antenna	Ant03	Ant03	Antenna3
19	Antenna	Ant04	Ant04	Antenna4
25	Antenna	Ant05	Ant05	Antenna5
31	Antenna	Ant06	Ant06	Antenna6
37	Antenna	Ant07	Ant07	Antenna7
43	Antenna	Ant08	Ant08	Antenna8
49	Antenna	Ant09	Ant09	Antenna9
55	Antenna	Ant10	Ant10	Antenna10

Figure 5-24: Splitter Ports

Port Function

This is always set to “Antenna”.

Talk Label

This is used to identify the E-Que antenna port location but is not used to assign talk paths.

Listen Label

This is used to identify the E-Que antenna port location but is not used to assign listen paths.

Description

An optional description for the port of up to 255 characters long.

REMOVING AN E-QUE CARD

To remove an E-Que card, select the Matrix Hardware link from the Eclipse menu. Select the 'Show All Cards' down arrow ('Show all cards' may not be the current selection as another slot may be selected) by left clicking the mouse button. Move the mouse up or down the list to the slot number of the E-Que card required to be deleted. Select the E-Que card by left clicking the mouse button. The card drop down list should now come into focus. Select the drop down arrow then select Empty using the left mouse button. A warning dialogue box appears. Select 'Yes' using the left mouse button to confirm deletion.

CONFIGURING AN E-QUE CARD FOR ANTENNA

To configure an E-Que card for Antenna select the card on the hardware list to display the configuration screen. Each of the eight ports on the card is given a port number reflecting the total number of beltpacks that can be supported via the E-Que card.

Antenna Connections

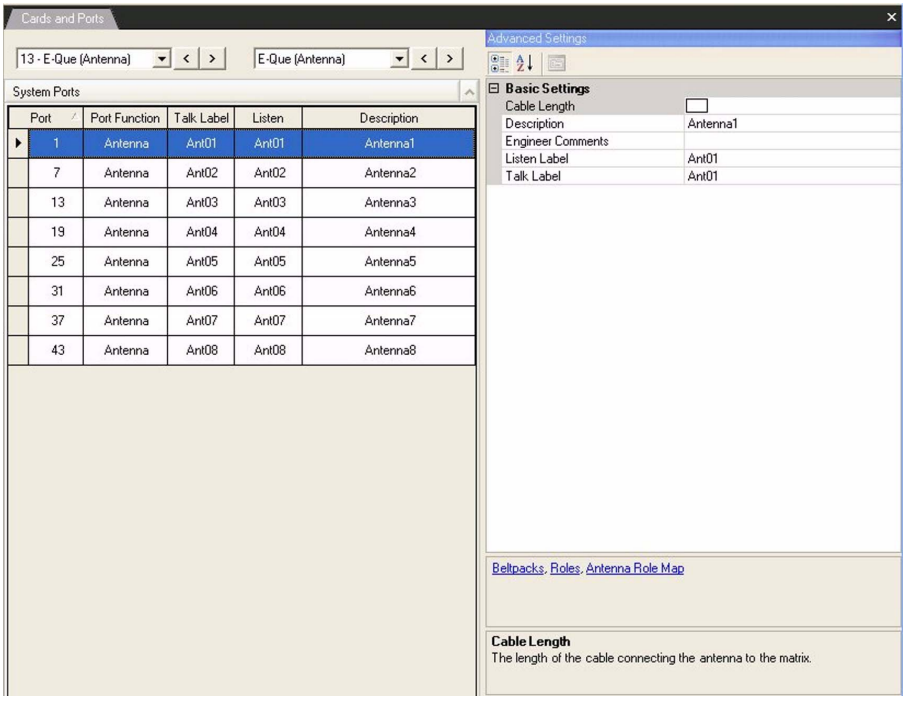


Figure 5-25: E-Que Antenna Configuration

Select the card port to be configured and open the 'Basic Settings' option under 'Advanced Settings - Beltpack Antenna' to set up the port parameters.

Cable Length

To set the cable length between the card and the antenna select the ‘Cable Length’ option and open the drop-down slider. User the mouse to adjust the cable length setting from 0 - 129 meters to 2860 - 2989 meters. The length set will be displayed next to the option.

Description

Enter an optional description for the antenna such as position or function.

Engineer Comments

A scratchpad for engineers to record any relevant information about the port or antenna.

Listen Label

Listen labels for antennas are only used for diagnostics purposes (antenna/role correlation).

Talk Label

Talk labels for antennas are only used for diagnostics purposes (antenna/role correlation).

Splitter Connections

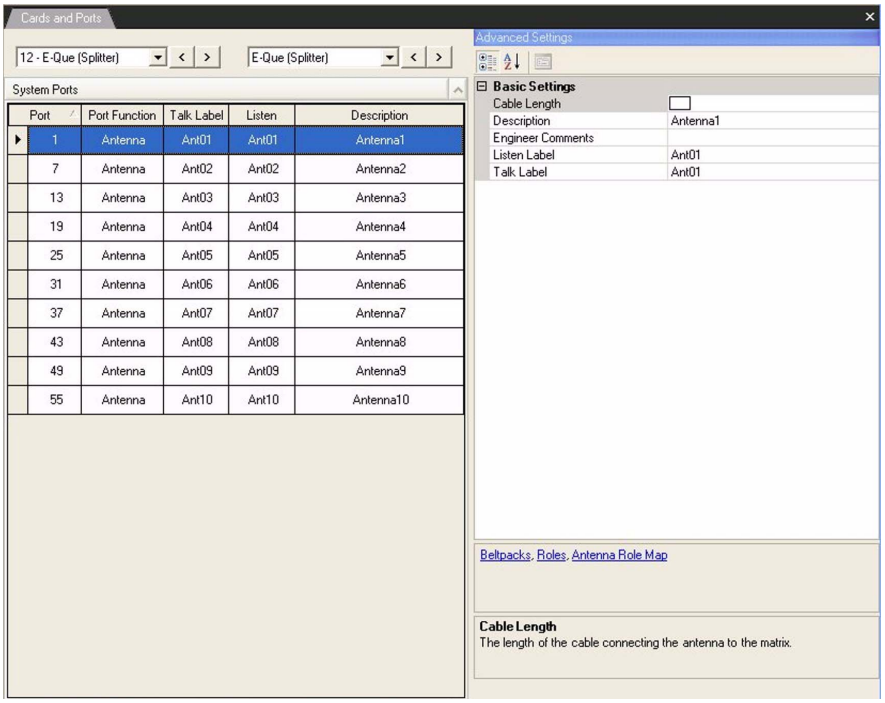


Figure 5-26: E-Que Splitter Configuration

Select the card port to be configured and open the ‘Basic Settings’ option under ‘Advanced Settings - Beltpack Antenna’ to set up the port parameters.

Cable Length

To set the cable length between the card and the antenna select the ‘Cable Length’ option and open the drop-down slider. User the mouse to adjust the cable length setting from 0 - 129 meters to 2860 - 2989 meters. The length set will be displayed next to the option.

Description

Enter an optional description for the antenna such as position or function.

Engineer Comments

A scratchpad for engineers to record any relevant information about the port or antenna.

Listen Label

Listen labels for antennas are only used for diagnostics purposes (antenna/role correlation).

Talk Label

Talk labels for antennas are only used for diagnostics purposes (antenna/role correlation).

To configure an E-Que card for Splitters select the card on the hardware list to display the configuration screen. In this case ten antennas will be displayed corresponding to the two splitters that can be connected to an E-Que card with each splitter supporting up to five antennas.

ANTENNAS ROLE MAP

Select the ‘Antenna Role Map’ link at the botom of the ‘Advanced Settings’ pane to display the status of the antennas and roles currently configured.

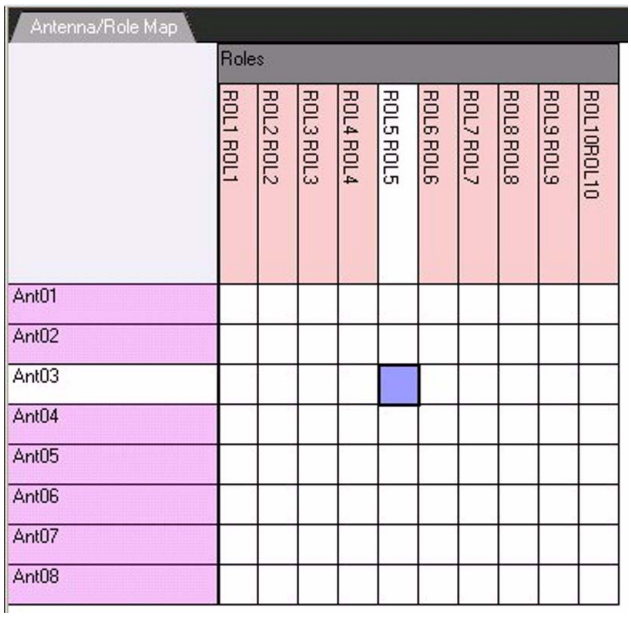


Figure 5-27: Antenna and Role Display

The mapping of roles onto antennas is indicated by the colored squares. When a role is registered to an antenna, a black dot is placed in the antenna row at the role position.

E-QUE TRUNK BASIC SETTINGS

Port Count

The port count specifies the number of virtual ports that will be configured for the cable. The port count may be set to any number between 0 and the maximum number of virtual ports on the cable (30 for E1, 24 for T1). As a general guide the port count should be set to the maximum number of simultaneous conversations. The recommended setting is 30 for E1 and 24 for T1.

Note: The port count should not be set to an excessive number (significantly more that the number of panels available for connection via the E-Que card) as this may reduce system performance.

Remote Port Count

The number of ports available for remote systems to use to communicate with the matrix.

LINKING OPTIONS

Remote System

The remote system that the E1 or T1 trunk is connected to. Selecting this option will display a list of remote systems that the trunk may be connected to in order to select the target system. For a system to be listed it must have been set up in 'My Systems' as linked to the current matrix so that the hardware can be allocated.

CONFIGURING THE IVC-32 CARD

The IVC-32 card is designed to allow Eclipse matrices to be connected to IP enabled V-Series panels or connected to Concert systems over a normal LAN or WAN using IP.

ADDING AN IVC-32 CARD

To add an IVC-32 card open the Hardware menu and select the 'Cards and Ports' link. Select the down arrow next to the 'Show all cards' field. A list is displayed, showing P1 & P2 main and backup processor cards, then the 'Not Configured' slots where IVC-32 cards can be configured.

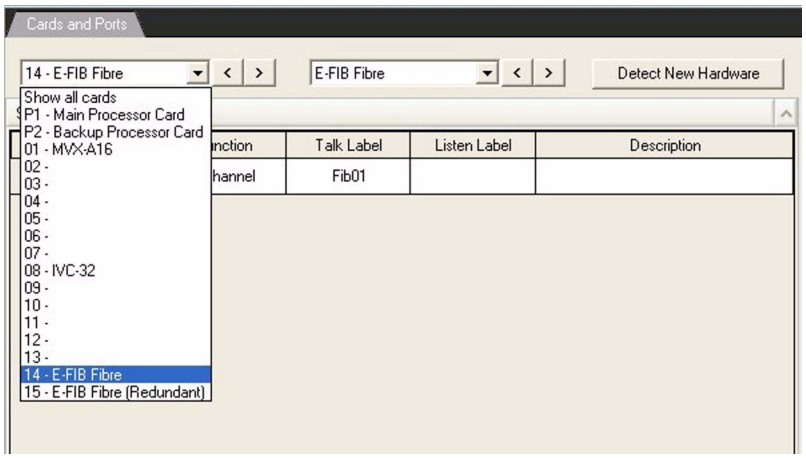


Figure 5-28: Eclipse Empty Slots

Using the mouse, navigate to a required slot number then left click the mouse button to select this slot. This action brings into focus the 'Empty' drop down list. From this list, select the down arrow, and then select the IVC-32 card.

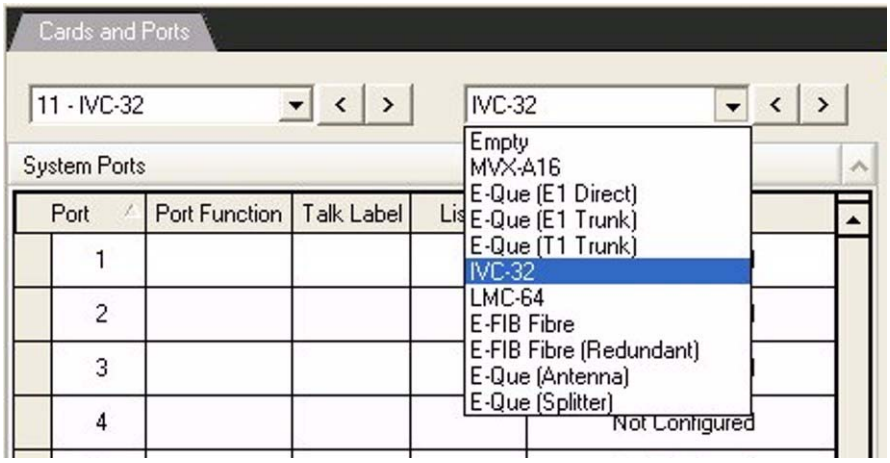


Figure 5-29: IVC-32 Card Selection

IVC-32 cards should be fitted to the rightmost free slots in the Median or Omega matrices (furthest from the config cards). A maximum of four in any combination of IVC-32, LMC-64 and E-QUE cards can be fitted to an Omega or Median matrix regardless of the E-QUE card mode. If the user attempts to add more than four IVC-32, LMC-64 and E-QUE cards in total to the matrix an error message is displayed.

Figure 5-30: Configuring Too Many E-QUE/IVC-32 Cards

This action adds an IVC-32 card to be used for communication over IP. The System Ports display will show thirty two ports that can be configured for various IP compatible panels.

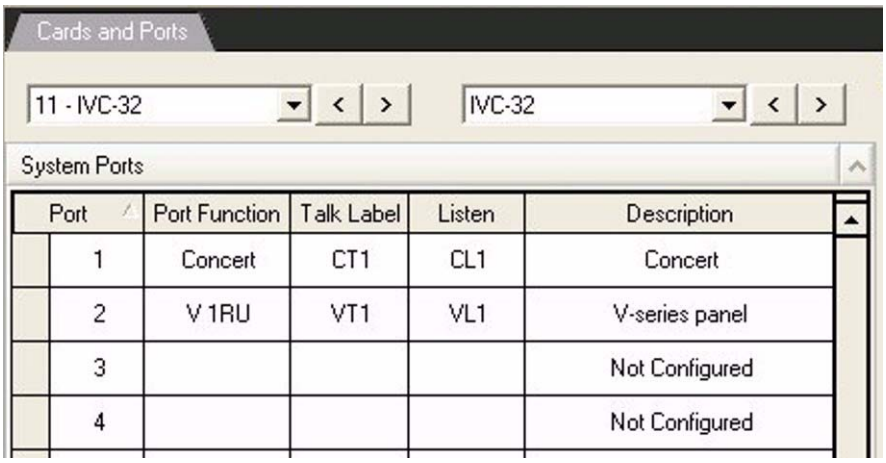


Figure 5-31: IP Ports

Port Number

The port number on the IVC-32 card.

Port Function

Selects the device attached to the port from a drop-down menu. Devices include IP enabled V-Series panels and Concert panels.

Talk Label

The talk label assigned to the port used to identify the port when configuring talk paths.

Listen Label

The listen label assigned to the port used to identify the port when configuring listen paths.

Description

An optional description for the port of up to 255 characters long.

The IVC-32 card must be configured before it can be used. To set the IP parameters click on the 'Card Properties' link on the lower right of the Matrix Hardware display. This will display the settable parameters.

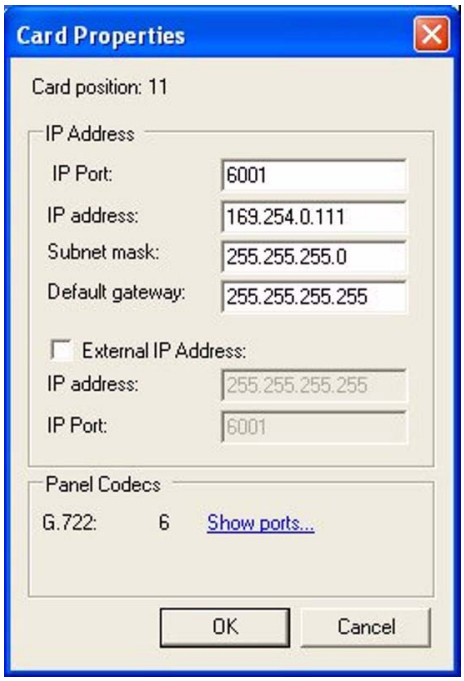


Figure 5-32: IVC-32 IP Parameters

General

Default ports used by the Eclipse system are 6001 for IP Panel communications, 42001 for ECS communications and 1300 for the matrix event log. Ports 42001 and 1300 are used by the UDP/ protocol. Eclipse system administrators are advised to check with network administrators or IT that these default ports may be used without causing a conflict with any other application on the network.

Each IVC-32 card requires a static IP address. It is recommended that these addresses are issued by IT or the Network Administrator to avoid conflicts with any other system on the network and are not part of the DHCP dynamically assigned range.

IP Port

Sets the port number to be used by the IVC-32 card when communicating over IP. This parameter should not normally be changed from the default value unless all the IP panels or Concert server are also updated to use the new port number. If this is not done the IP panels or Concert server will not be able to communicate with the IVC-32 card. Eclipse system administrators are advised to check with network administrators or IT that the default port may be used without causing a conflict with any other application on the network.

If the IP port number is changed ports 42001 and 1300 should not be used as these ports are already used by ECS. The Eclipse system administrator should check with the network administrator or IT to obtain a port number to use.

IP Address Assignment

Manually enter the IP address, subnet mask and default gateway for the IVC-32 card.

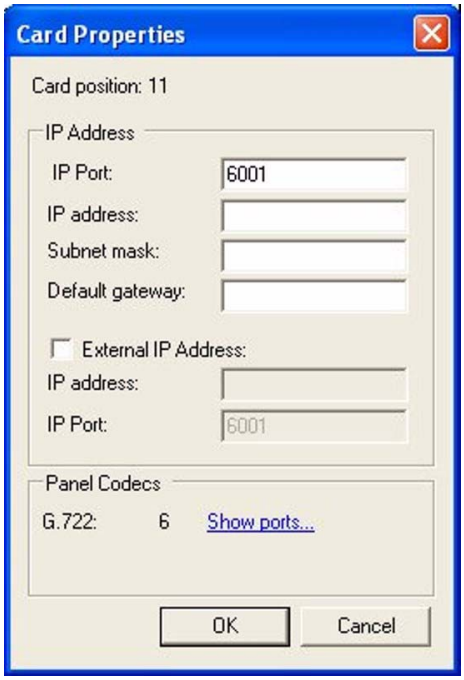


Figure 5-33: Manual IP Address Entry

IP Address

Static IP address of the IVC-32 card, assigned by IT or the Network Administrator. This will be used by IP panels and Concert clients to communicate with the matrix via the IVC-32 card.

Important

It is important to ensure that the IVC-32 card IP address does not clash with any other IP address on the network (another device is using the same IP address). If there is an IP address clash the IVC-32 card may repeatedly lose the connection with IP panels or Concert clients. If the IVC-32 card IP address clashes it may also cause the IVC-32 card to crash.

It is recommended that the IVC-32 is given a static IP address. The V-Series panels and Concert clients IP addresses should be assigned by a DHCP server.

Subnet Mask

Subnet mask used by the IVC-32 card to define the address range the card can access. Typically this will be assigned by IT or the Network Administrator. The default is 255.255.0.0.

Default Gateway

The address of the gateway (router) to be used to communicate with external devices such as IP panels and Concert clients over a wider IP network. This address is optional but if used must fall within the address range defined by the subnet mask.

External IP Address

If the Matrix is operating behind a firewall then port address forwarding can be used to expose a LAN-connected device to the outside world. Typically this will be assigned by IT or the Network Administrator.

This IP address must be manually entered on IP panels to communicate directly with the IVC-32 card. This address must be a unique address on the internet. It is not affected by the subnet mask.

External IP Address IP Port

IP port used when communicating directly with the IVC-32 card using the External IP address. The default port number is 6001 and this should not be changed unless the default port number on all external devices is also changed to the new port number.

Panel Codecs

The 'Show ports' links will display which ports on the IVC-32 cards are configured to use the G722 codec.

Figure 5-34: Port List for Codec

The codec options are configured in the IP Panel Settings under Advanced Settings for each port.

CONFIGURING THE LMC-64 CARD

The LMC-64 card is designed to allow Eclipse matrices to be provide audio level metering data to Production Maestro clients over an IP network.

ADDING AN LMC-64 CARD

To add an LMC-64 card open the 'Hardware' menu and select the 'Cards and Ports' link. Select the down arrow next to the 'Show all cards' field. A list is displayed, showing P1 & P2 main and backup

processor cards, then the ‘Not Configured’ slots where LMC-64 cards can be configured.

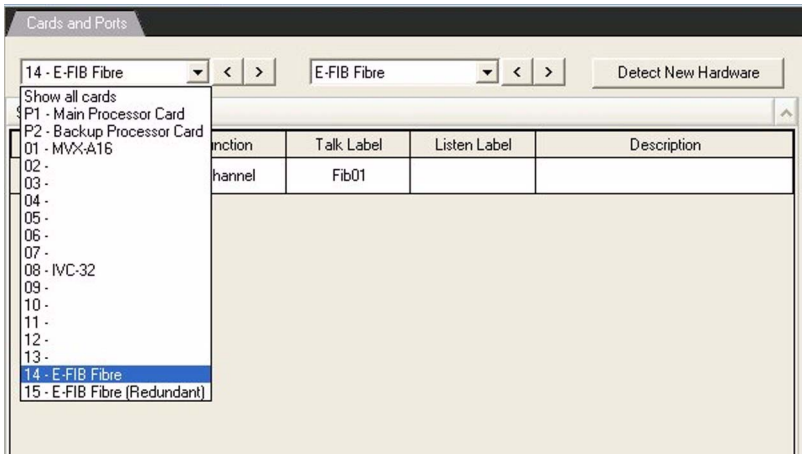


Figure 5-35: Eclipse Empty Slots

Using the mouse, navigate to a required slot number then left click the mouse button to select this slot. This action brings into focus the ‘Empty’ drop down list. From this list, select the down arrow, and then select the LMC-64 card.

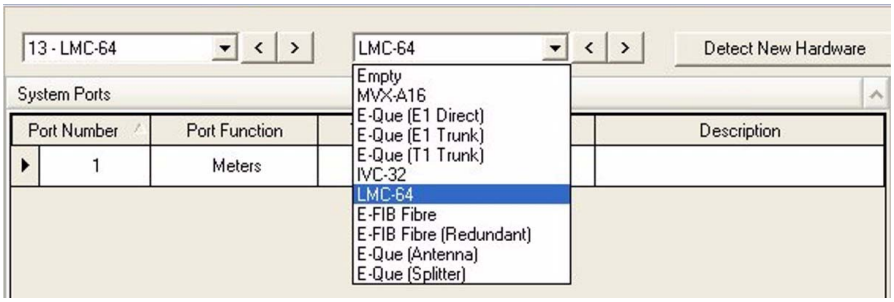


Figure 5-36: LMC-64 Card Selection

LMVC-64 cards should be fitted to the rightmost free slots in the Median or Omega matrices (furthest from the config cards). A maximum of four IVC-32, LMC-64 and E-QUE cards can be fitted to an Omega or Median matrix regardless of the E-QUE card mode. If the user attempts to add more than four IVC-32, LMC-64 and E-QUE cards in total to the matrix an error message is displayed.

Figure 5-37: Configuring Too Many E-QUE/IVC-32/LMC-64 Cards

This action adds an LMC-64 card to be used for communication over IP. The System Ports display will show a single port entry that can be configure for 16-64 meters.

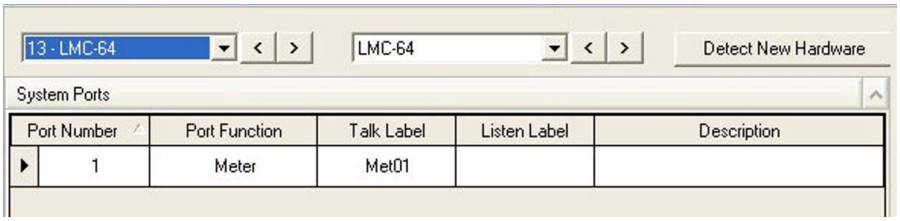


Figure 5-38: IP Ports

Port Number

The port number on the LMC-64 card. This does not have a function as the card does not provide external ports.

Port Function

This is always fixed as 'Meter'.

Talk Label

This is label does not have a function as the LMC-64 port cannot be assigned as a label. It can be edited.

Listen Label

This is label does not have a function as the LMC-64 port cannot be assigned as a label. It can be edited.

Description

An optional description for the port of up to 255 characters long.

The LMC-64 card must be configured before it can be used. To set the IP parameters click on the 'Card Properties' link on the lower right of the Matrix Hardware display. This will display the settable parameters.

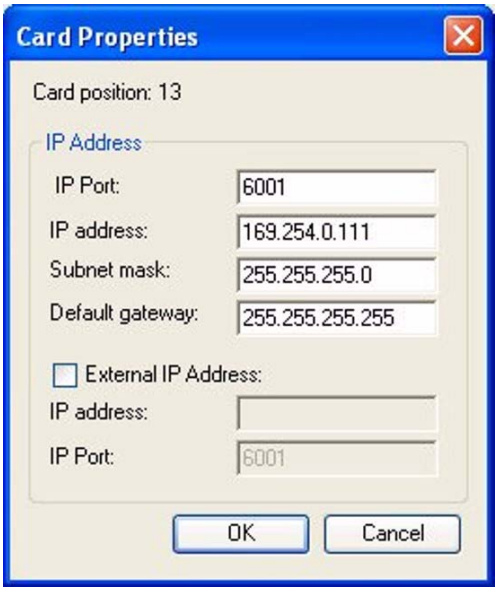


Figure 5-39: LMC-64 IP Parameters

General

Default ports used by the Eclipse system are 6001 for IP Panel communications, 42001 for ECS communications and 1300 for the matrix event log. Ports 42001 and 1300 are used by the UDP/ protocol. Eclipse system administrators are advised to check with network administrators or IT that these default ports may be used without causing a conflict with any other application on the network.

Each LMC-64 card requires a static IP address. It is recommended that these addresses are issued by IT or the Network Administrator to avoid conflicts with any other system on the network and are not part of the DHCP dynamically assigned range.

IP Port

Sets the port number to be used by the LMC-64 card when communicating over IP. This parameter should not normally be changed from the default value. Eclipse system administrators are advised to check with network administrators or IT that the default port may be used without causing a conflict with any other application on the network.

If the IP port number is changed ports 42001 and 1300 should not be used as these ports are already used by ECS. The Eclipse system administrator should check with the network administrator or IT to obtain a port number to use.

IP Address Assignment

Manually enter the IP address, subnet mask and default gateway for the LMC-64 card.

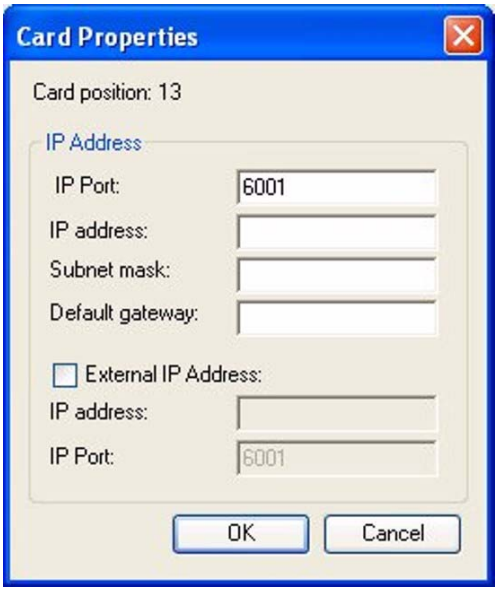


Figure 5-40: Manual IP Address Entry

IP Address

Static IP address of the LMC-64 card, assigned by IT or the Network Administrator. This will be used by Production Maestro clients to communicate with the LMC-64 card.

Important

It is important to ensure that the LMC-64 card IP address does not clash with any other IP address on the network (another device is using the same IP address). If there is an IP address clash the Production Maestro clients may lose audio meter data. If the LMC-64 card IP address clashes it may also cause the LMC-64 card to crash.

Subnet Mask

Subnet mask used by the LMC-64 card to define the address range the card can access. Typically this will be assigned by IT or the Network Administrator. The default is 255.255.0.0.

Default Gateway

The address of the gateway (router) to be used to communicate with Production Maestro clients over a wider IP network. This address is optional but if used must fall within the address range defined by the subnet mask.

External IP Address

If the matrix is operating behind a firewall then port address forwarding can be used to expose a LAN-connected device to the outside world. Typically this will be assigned by IT or the Network Administrator.

This IP address must be used by external Production Maestro clients to communicate with the LMC-64 card. This address must be a unique address on the internet. It is not affected by the subnet mask.

External IP Address IP Port

IP port used when communicating directly with the LMC-64 card using the External IP address. The default port number is 6001 and this should not be changed unless the default port number on all external devices is also changed to the new port number.

FIXED GROUPS

A fixed group is a list of port labels that are represented by a single, fixed group label. The fixed group label can be assigned to selector keys on one or more panels, which when activated, simultaneously accesses all members of that fixed group.

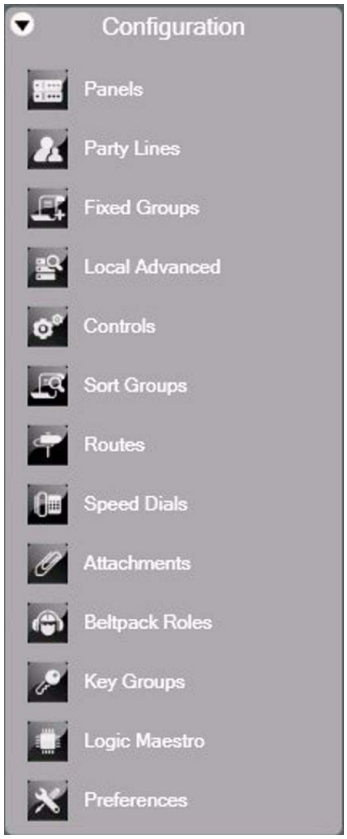


Figure 5-1: Eclipse Setup Menu

FIXED GROUPS SETUP AND CONFIGURATION

1. To create a Fixed Group and assign members to that group the following steps should be followed:
2. From the 'Configuration' menu select the 'Fixed Groups' link. This opens the Fixed Groups configuration screen.

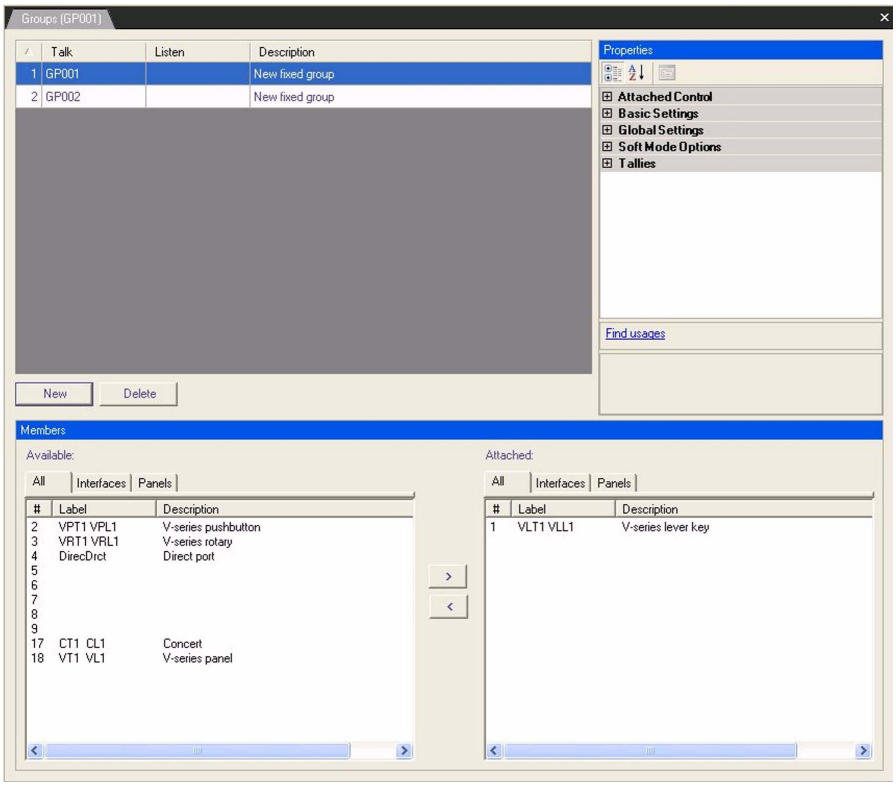


Figure 5-2: Fixed Groups List

3. Select the ‘New’ button at the bottom left of the Groups window (top left window of the screen).
4. Replace the auto-filled Group Talk label with a meaningful label.
5. Replace the auto-filled Group Listen label with meaningful label.
6. Replace the auto-filled Group description with a more meaningful description.
7. In order to add members select the select the required members from the ‘Available’ window (bottom left of the screen) and click on the ‘>’ in the section between the lower windows to transfer the members to the ‘Attached’ window in the bottom right of the screen. Alternatively double-clicking on the required item will transfer it to the Attached window. Also right clicking on a member of the Available group will display a menu allowing it to be attached.
8. To remove members from the group select the members to be removed in the ‘Attached’ window and click on the ‘<‘ symbol in the central section to return them to the ‘Available’ window. Alternatively double-clicking on the required member will move it back to the Available group. Also right clicking on a member of the Attached group will display a menu allowing it to be detached.

Fixed Groups can be made up of local and remote members (see Chapter 10).

FIXED GROUP ATTACHED CONTROLS

Attachments can be attached to Fixed Groups that will allow a Route, Relay or Speed Dial to be activated via a secondary action.

1. Open the Fixed Groups screen by selecting the ‘Fixed Groups’ link on the Configuration menu.
2. Create a Fixed Group or select a Fixed Group that was been previously created.
3. Expand the ‘Attached Control’ item in the ‘Properties’ window.
4. Select the ‘Secondary Action’ item in the ‘Attached Control’ list.
5. Select the drop down arrow and select the required control.

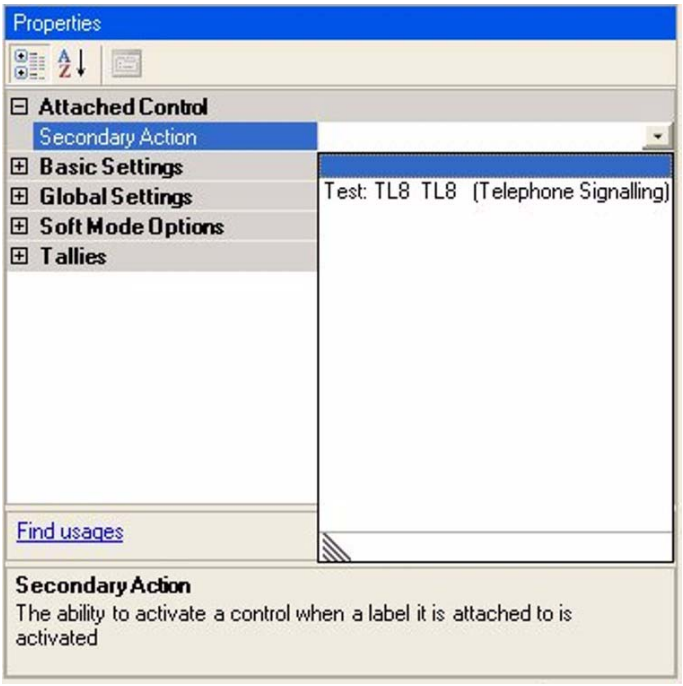


Figure 5-3: Fixed Group Attach Control Screen

FIXED GROUP BASIC SETTINGS

The ‘Basic Settings’ list displays the fixed information about a group and can be used to edit the group description, Talk and Listen Aliases and Talk and Listen labels.

To enable/disable Basic Settings

1. Open the Fixed Groups screen by selecting the ‘Fixed Groups’ link on the Configuration menu.
2. Create a Fixed Group or select a Fixed Group that was been previously created.
3. Expand the ‘Basic Settings’ item in the ‘Properties’ window.

Figure 5-4: Fixed Group Basic Settings Screen

To edit an item in the Basic Settings list select the item in the left hand column and edit the text in the right hand column.

FIXED GROUP GLOBAL SETTINGS

To enable/disable Global Settings

1. Open the Fixed Groups screen by selecting the ‘Fixed Groups’ link on the Configuration menu.
2. Create a Fixed Group or select a Fixed Group that was been previously created.
3. Expand the ‘Global Settings’ item in the ‘Properties’ window.
4. Select the ‘Auto Signal’, ‘Latch Disable’ or ‘Page Override’ item in the ‘Global Settings’ list.
5. Select the drop down arrow and select the required status.

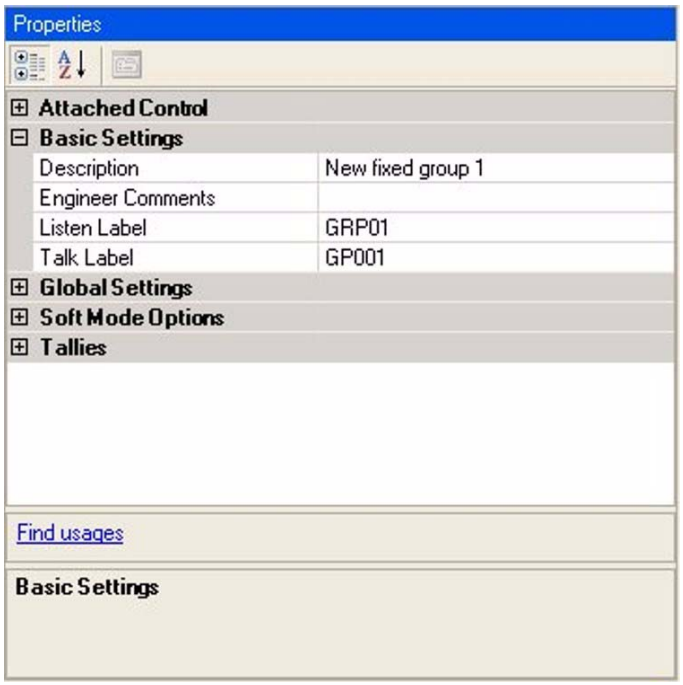


Figure 5-5: Fixed Group Global Settings

FIXED GROUP SOFT MODE OPTIONS

The 'Soft Mode Options' list display items which relate to the Soft Mode available on certain panel types. Currently this is restricted to Sort Groups.

To enable/disable Soft Mode Options

1. Open the Fixed Groups screen by selecting the 'Fixed Groups' link on the Configuration menu.
2. Create a Fixed Group or select a Fixed Group that was been previously created.
3. Expand the 'Soft Mode Options' item in the 'Properties' window.
4. Select the required options:

   • Default Assign as Talk and Forced Listen. When true the default for a key assigned to this label is Talk and Forced Listen.

   • Enable Assignment as Listen. This must be enabled to allow a 4000E or V-Series panel operator to assign a listen key to this label. If it is not enabled a 4000E/V-Series panel operator cannot assign a listen key to the label.

   • Enable Assignment as Talk. This must be enabled to allow a 4000E or V-Series panel operator to assign a talk key to this label. If it is not enabled a 4000E/V-Series panel operator cannot assign a talk key to the label.

- Protect Port from Assignment. When this option is enabled the port cannot be locally assigned as a talk/listen key by another panel.

5. Select the drop down arrow and set the required status (True or False). The status box will be checked or unchecked to indicate True or False.

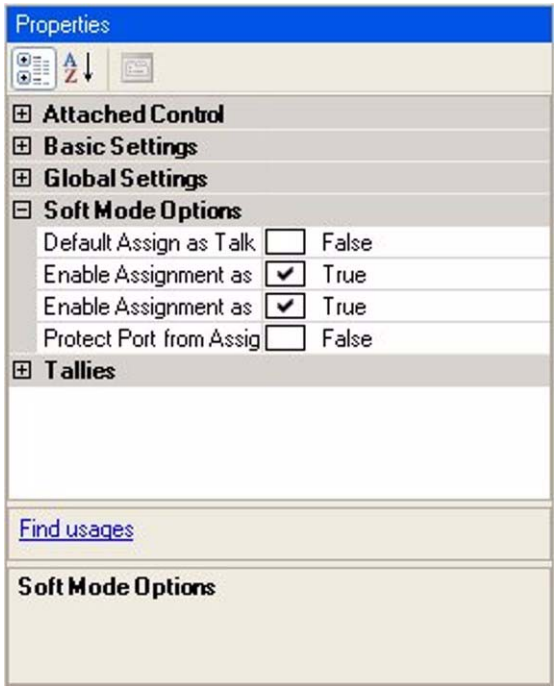


Figure 5-6: Fixed Group Soft Mode Options

FIXED GROUP TALLIES

To enable/disable Tallies

1. Open the Fixed Groups screen by selecting the 'Fixed Groups' link on the Configuration menu.
2. Create a Fixed Group or select a Fixed Group that was been previously created.
3. Expand the 'Tallies' item in the 'Properties' window.
4. Select the 'In Use Tally' item in the 'Tallies' list.
5. Select the drop down arrow and select the required status.

This allows the system to set a tally (flashing LED) on all the panel keys that are assigned to the Fixed Group whenever a talk is active on the Fixed Group. In the case of multiple matrices in a linked set the 'In Use' tally is broadcast to all other systems in the linked set. In this way the feature is seamless over the matrices in a linked set.

The default is disabled.

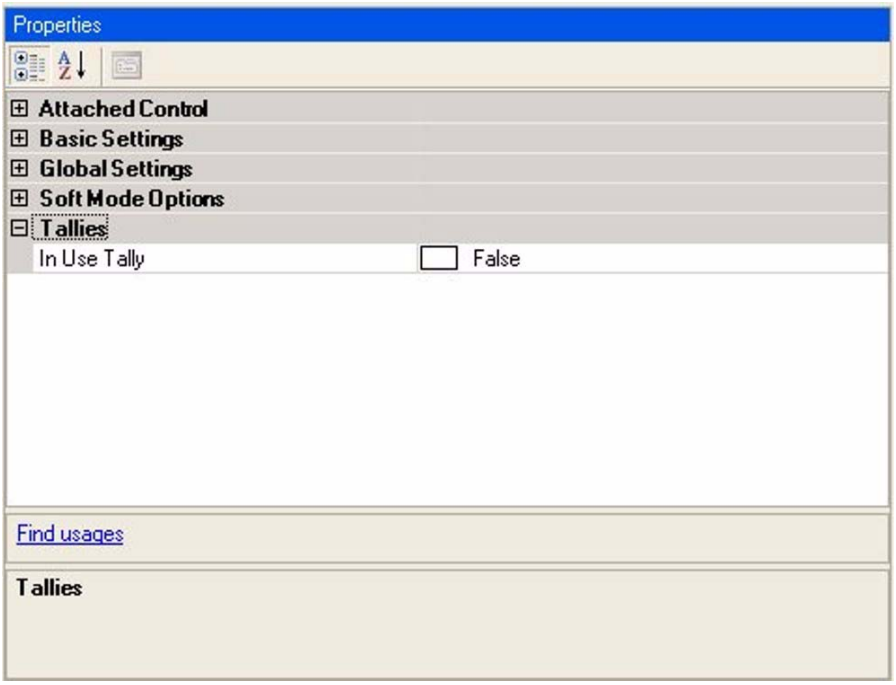


Figure 5-7: Fixed Groups Tallies

SORT FUNCTION ON FIXED GROUPS MEMBERS

ECS provides a sort capability that allows the ECS user a quick and easy way of grouping common items such as FOR-22s together. The sort function has been implemented in both the 'Attached' window and 'Available' window.

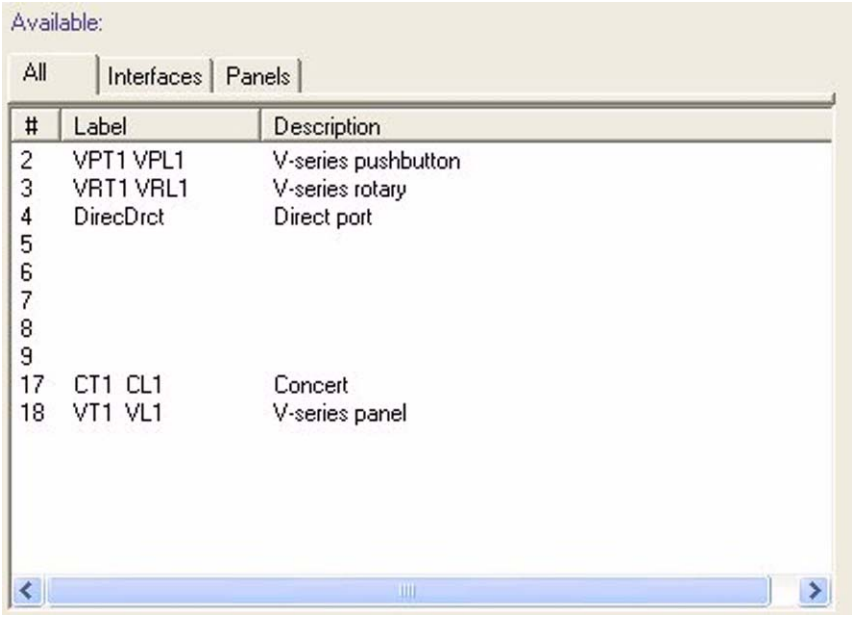


Figure 5-8: Group Members List

To operate the sort function, select the Fixed Groups link from the Eclipse Menu and select the required Fixed Group. Use the 'All' tab on the Attached window to display all the members of the groups, or the 'Interfaces' tab to display only the interfaces in the group or the 'Panels' tab to list the panels in the group.

The '#' tab will sort the group members by ascending or descending port number.

SORT GROUPS

Sort Groups are groups of other items such as controls, fixed groups, interfaces, panels and party lines that can be treated as a single item and accessed in local menu mode to assign a member of the sort group to a key. Selecting Sort Groups in the ECS Setup menu displays the sort group editor.

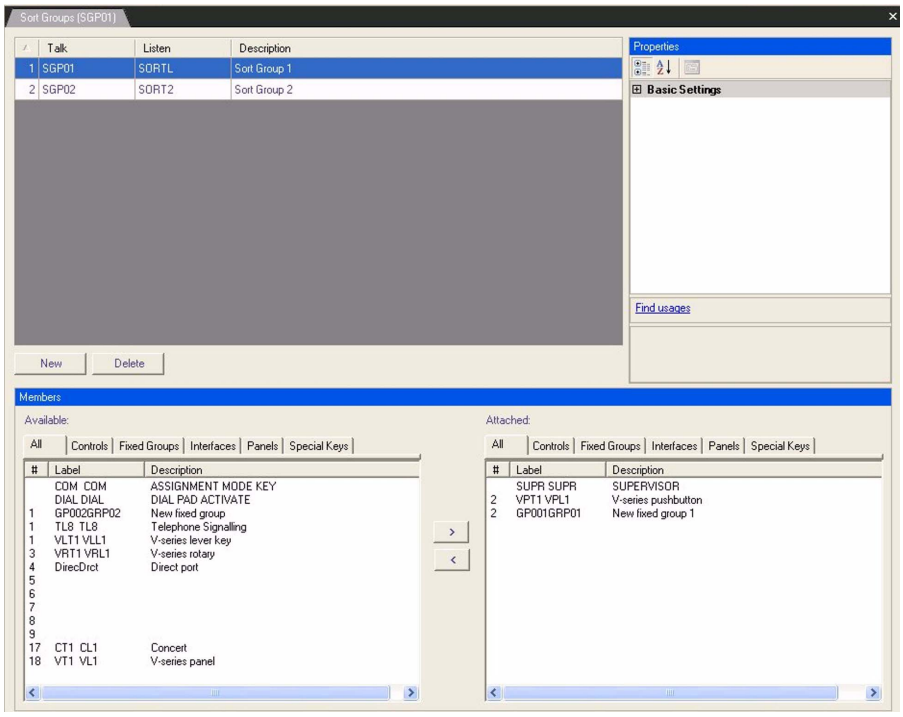


Figure 5-9: Sort Group Editor

To create a new sort group click on the ‘New’ button and the new sort group will be added to the main window (top left window). To add members to the sort group select the required item in the lower left window (the ‘Available’ window) and click on the ‘>’ symbol in the center partition to transfer them to the lower right window (the ‘Attached’ window). To remove items from the sort group select the item in the ‘Attached’ window and click on the ‘<‘ symbol in the center partition to move the item back to the ‘Available’ window.

The ‘#’ button on the Available and Attached panes sorts the members by port number in ascending or descending order, preceded by non-port items such as controls.

The ‘Label’ button sorts the members by name alphabetically and the ‘Description’ button sorts the members alphabetically by description.

The tabs above the Available and Attached panes filter the members by type.

To set the properties of the sort group open the ‘Basic Settings’ menu in the Properties window (top right).

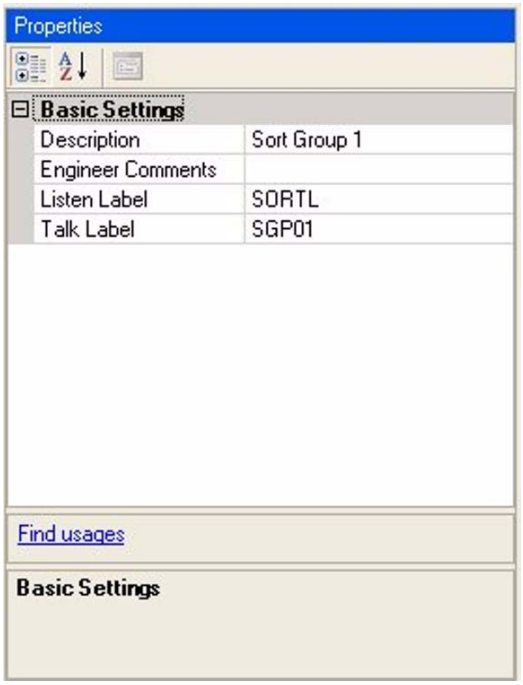


Figure 5-10: Sort Group Properties

BASIC SETTINGS

Description

Enter an optional description for the sort group such as function.

Engineer Comments

A scratchpad for engineers to record any relevant information about the sort group.

Listen Label

The listen label that is available for panel configuration.

Talk Label

The talk label specified for use in the panel configuration table.

KEY GROUPS

Key Groups provide a way of assigning a label to keys on multiple panels in a system or within a linked set. Once the key group members have been set up using ECS, the target of the key group can be changed with a single assignment in Production Maestro (Pro Mode only).

Up to 100 key groups can be set up on a system; each key group can only be assigned to a single target such as a party line (Conference in Production Maestro) or 4-wire port (4-Wire Viewer in Production Maestro) or a panel port.

To set up Key Groups select 'Key Groups' in the ECS Setup menu to open the key groups editor.

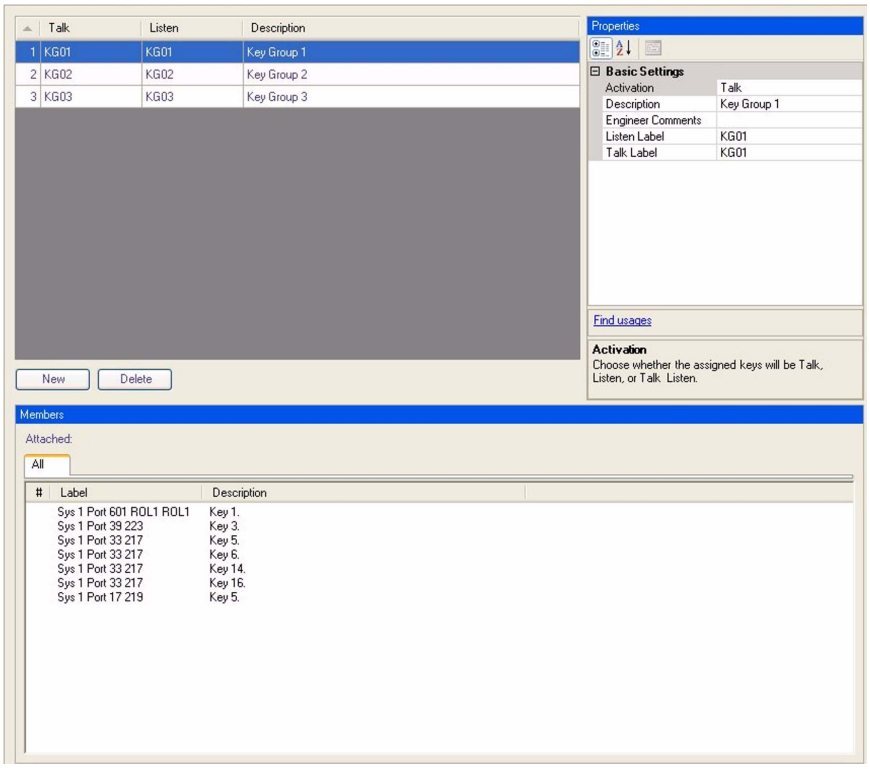


Figure 5-11: Key Groups Editor

Click on the 'New' button to create a new key group and select the group to configure it using the 'Properties' pane. Open the 'Basic Settings' menu to set up the key group properties.

BASIC SETTINGS

Activation

The activation setting determines how the assigned keys the key group will behave when the key group is activated. To set the activation

select ‘Activation’ on the ‘Basic Settings’ and open the drop-down menu.

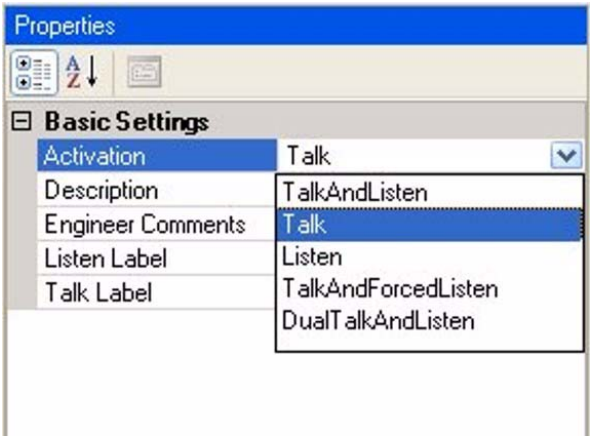


Figure 5-12: Key Group Activation

The activation options are: Talk and Listen, Talk, Listen, Talk and Forced Listen or Dual Talk and Listen.

- Talk and Listen sets all the key group keys to talk with listen when the key group is active.
- Talk sets all the key group keys to talk when the key group is active.
- Listen sets all the key group keys to listen when the key group is active.
- Talk and Forced Listen sets all the key group keys to talk key with permanently made listen when the key group is active.
- Dual talk and Listen sets all the key group keys to Dual talk and listen when the key group is active.

Description

Contains the description for the selected key group.

Engineer Comments

A scratchpad for engineers to record any comments about the key group or the key group target.

Listen Label

The listen label for the key group that will be displayed on the keys assigned to the key group.

Talk Label

The talk label for the key group that will be displayed on the keys assigned to the key group.

KEY GROUP MEMBERS

The key group editor will display a list of all the members of the currently selected key group in the lower ‘Attached’ pane.

The key members cannot be changed in this pane but by right-clicking on an item a ‘Goto’ option is displayed.

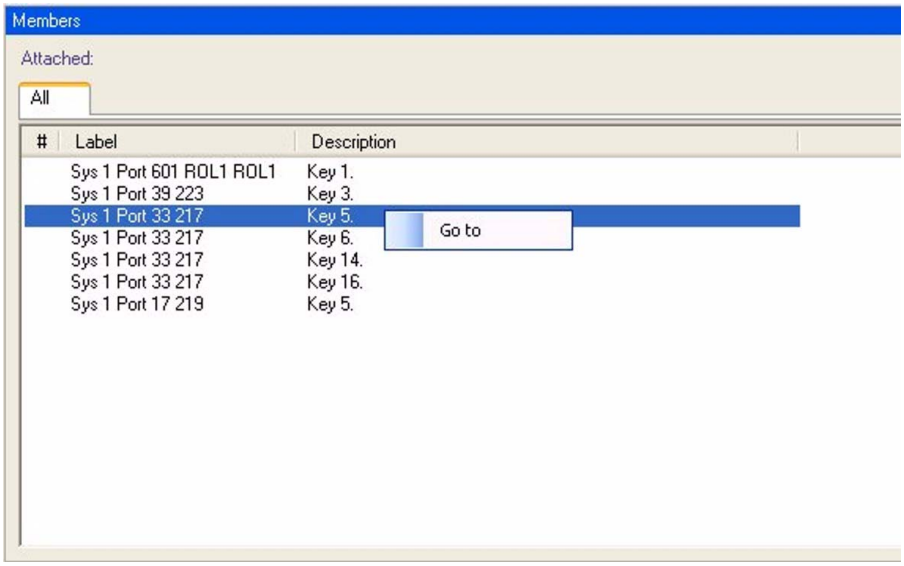


Figure 5-13: Key Group Member Source

Clicking on this will open the Panel Programming tab and display the panel the key is on and highlight the assigned key with a white box.

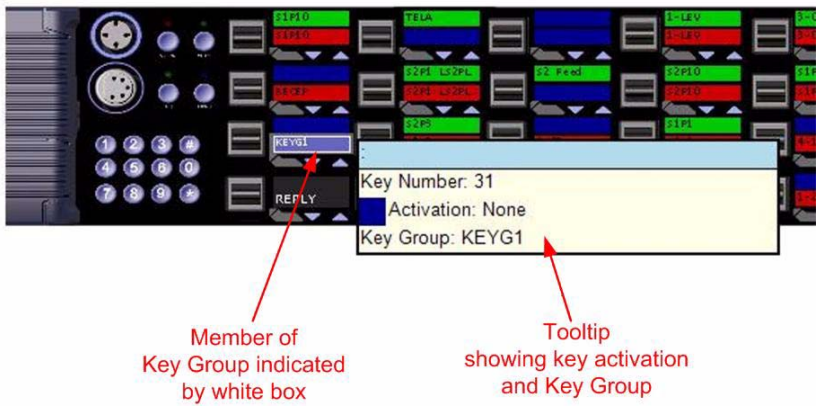


Figure 5-14: Key Group Member on Panel

Panel keys are assigned to a key group from the Panel Programming tab. Select the required panel and key then right-click to display the properties menu.

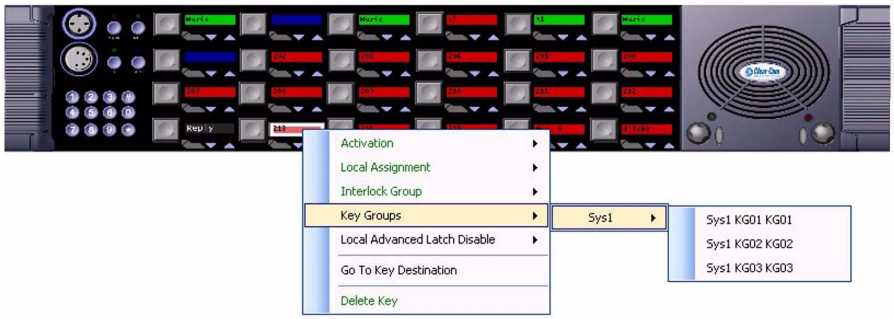


Figure 5-15: Adding a Key to a Key Group

Select 'Key Groups' to display a list of all the available key groups and select the destination key group. Left click on the required key group to add the key to the key group. The assignment will be indicated by the addition of a white box round the key and a checkbox against the key group.

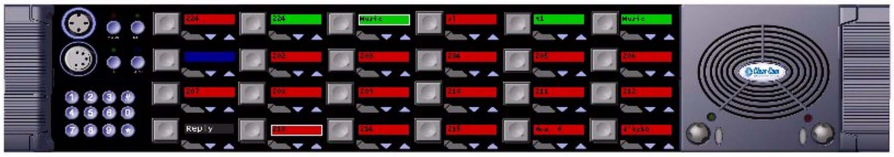


Figure 5-16: Key Added to a Key Group

To remove a key from a key group select the key in panel programming and right-click on it to open the options menu. Select the 'Key Groups' option to display a list of key groups and click on the checkbox for the key group the key is to be removed from.

Keys may already be assigned to destinations before being added to a key group. In this case the key functions remain active until the key group is assigned to a conference or 4-Wire port by Production Maestro, at which point the key functions are overridden by the key group destination. If the key group is deassigned by Production Maestro the keys will revert to their previous states.

A red reset will not delete the destination assignment of a key group, while a black reset will delete the destination assignment of a key group.

A key group can only be introduced to the Eclipse working configuration using a configuration download i.e. keygroups cannot currently be applied to a system in online mode.

The ECS software will only include a configured key group in the map download for a particuler system if the keygroup is in use on that system. This means that in a linked set configuration, any system that utilises a newly created keygroup must be downloaded to.

PARTY LINES

An ECS party line is a virtual Party Line. When assigned to selector keys on various panels in the system, that label enables anyone in the system who activates a talk or listen (or both) to that Party Line label to talk/listen to anyone else who has joined the Party Line the at the same time. ECS permits the assignment of panels to a Party Line; however this is normally completed in the Panel Programming screen by assigning the party line label onto the panel.

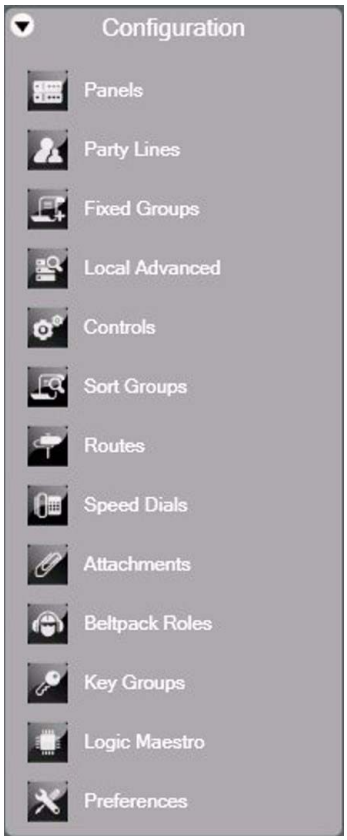


Figure 5-17: Setup Menu

To create a Party Line and assign permanent members to that party the following steps should be followed:

1. From the Configuration menu select the 'Party Lines' link. This opens the Party Lines configuration screen.

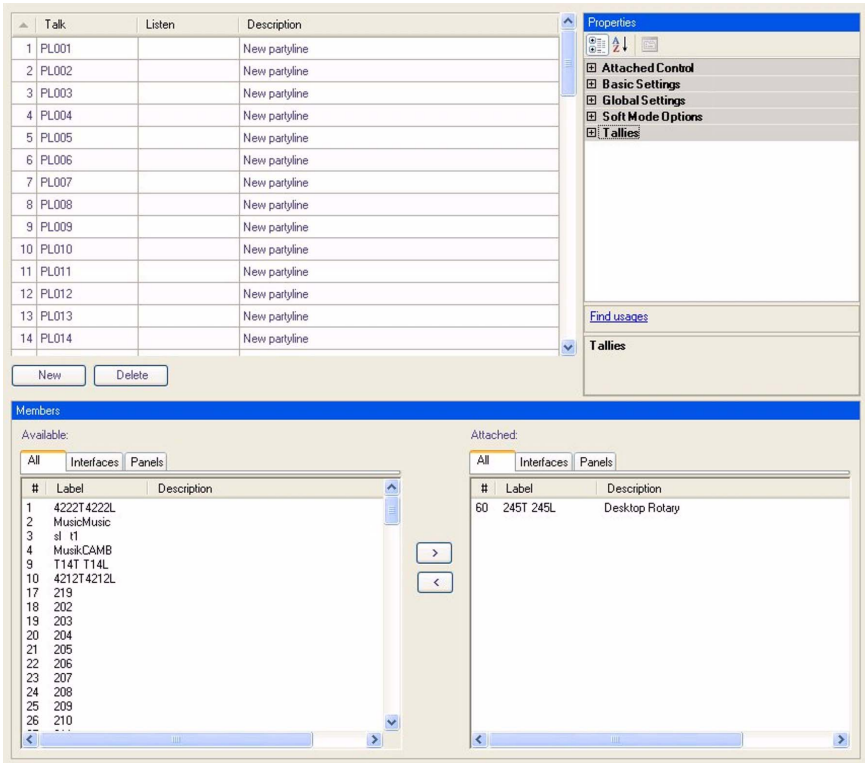


Figure 5-18: Party Line Setup Screen

2. Select the ‘New’ button at the bottom left of the Party Lines window.
3. Change the Party Line label and description fields with more meaningful identifiers.
4. In order to add permanent fixed members select the required member in the ‘Available’ pane.
5. Click on the ‘>’ button to transfer the member to the ‘Attached’ pane.
6. Right-click on a member in the ‘Attached’ pane to open a configuration menu and select whether the attached member is Talk, Listen or Talk and Listen.

The Party Line label is able to be programmed onto a panel key.

The ‘#’ button on the Available and Attached panes sorts the members by port number in ascending or descending order, preceded by non-port items such as controls.

The ‘Label’ button sorts the members by name alphabetically and the ‘Description’ button sorts the members alphabetically by description.

The tabs above the Available and Attached panes filter the members by type.

Once a Party Line is created, a system must be downloaded to in order to utilse that partyline i.e. it is not sufficient to only download to the frame that hosts the Party Line and e.g. use Production Maestro to assign members from the entire linked set to the Party Line.

The recommended use of this feature is that all Party Lines are configured and then a download to all frames is carried out. The Production Maestro software can then be used to manipulate these Party Lines in an online fashion.

PARTY LINE ATTACHED CONTROLS

Controls can be attached to Party Lines that will allow a Route, Relay or Speed Dial to be activated via a secondary action.

1. Open the Party Line screen by selecting the ‘Party Lines’ link on the Configuration menu.
2. Create a Party Line or select a Party Line that was been previously created.
3. Expand the ‘Attached Control’ item in the ‘Properties’ window.
4. Select the ‘Secondary Action’ item in the ‘Attached Control’ list.
5. Select the drop down arrow and select the required control.

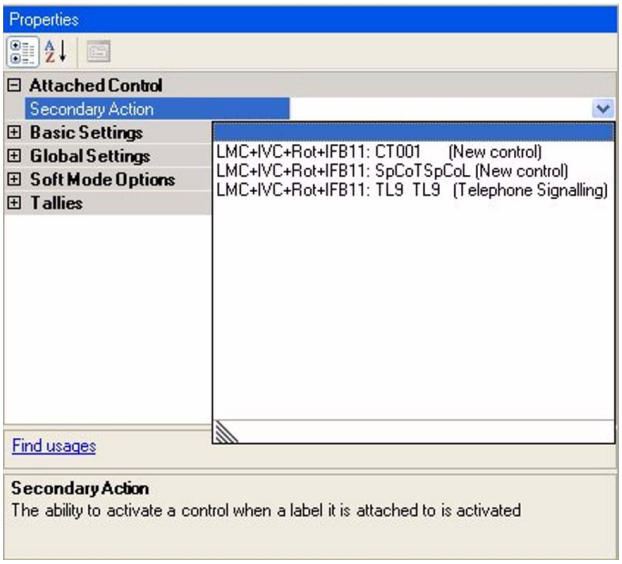


Figure 5-19: Party Line Attach Control Screen

PARTY LINE BASIC SETTINGS

The ‘Basic Settings’ list displays the fixed information about a Party Line and can be used to edit the Party Line description, Talk and Listen Aliases and Talk and Listen labels and Shared Partyline.

To enable/disable Basic Settings

1. Open the Party :Line screen by selecting the ‘Party Lines’ link on the Configuration menu.
2. Create a Party Line or select a Party Line that was been previously created.
3. Expand the ‘Basic Settings’ item in the ‘Properties’ window.

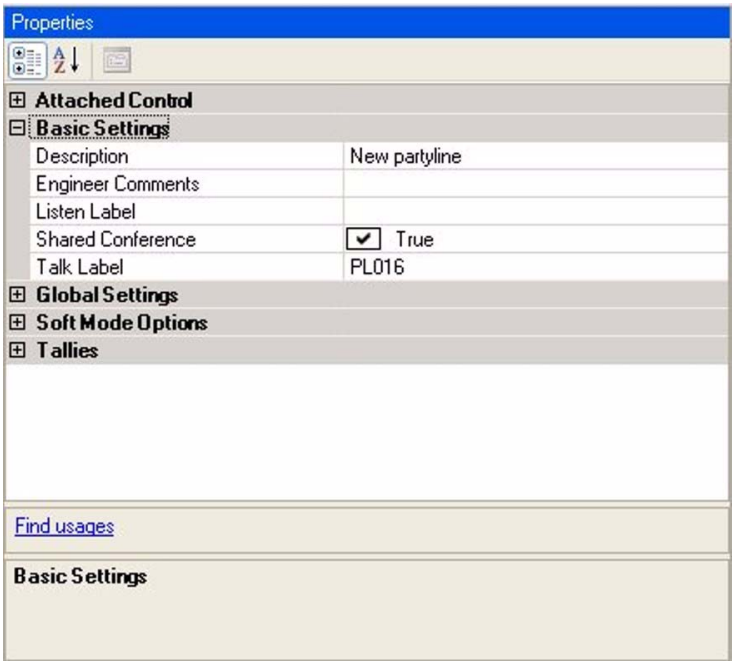


Figure 5-20: Party Line Basic Settings

The Basic Settings are:

- Description - description of the party line to indicate function etc.
- Engineer Comments - engineering information about the party line.
- Listen Label - the Listen label for the party line.
- Shared Partyline - if set to True (the default) the party line is available to all the matrices in a linked set. If set to False it is only available locally (on the matrix it is physically connected to).
- Talk Label - the Talk label for the party line.

PARTY LINE GLOBAL SETTINGS

To enable/disable Global Settings

1. Open the Party Line screen by selecting the 'Party Lines' link on the Configuration menu.
2. Create a Party Line or select a Party Line that was been previously created.
3. Expand the 'Global Settings' item in the 'Properties' window.
4. Select the 'Auto Listen', 'Auto Signal' or 'Latch Disable' item in the 'Global Settings' list.
5. Select the drop down arrow and select the required status.

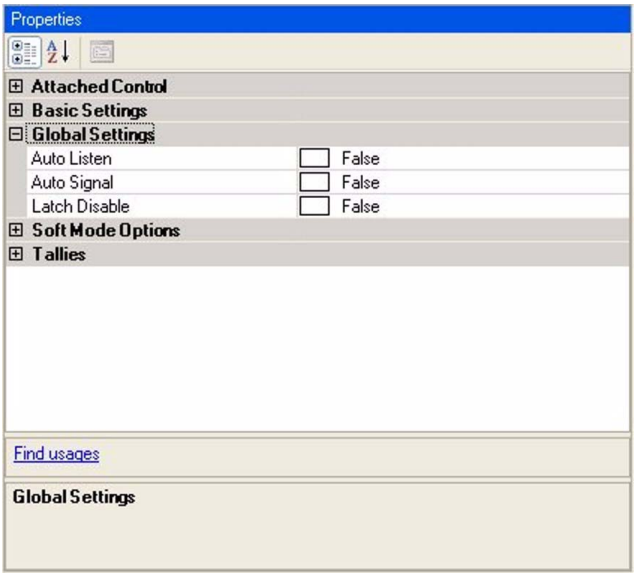


Figure 5-21: Party Line Global Settings

PARTY LINE SOFT MODE OPTIONS

To enable/disable Soft Mode Options

1. Open the Party Line screen by selecting the 'Party Lines' link on the Configuration menu.
2. Create a Party Line or select a Party Line that was been previously created.
3. Expand the 'Soft Mode Options' item in the 'Properties' window.
4. Select the required options:
   - Default Assign as Talk and Forced Listen. When true the default for a key assigned to this label is Talk and Forced Listen.
   - Enable Assignment as Listen. This must be enabled to allow a 4000E or V-Series panel operator to assign a listen key to this label. If it is not enabled a 4000E/V-Series panel operator cannot assign a listen key to the label.
   - Enable Assignment as Talk. This must be enabled to allow a 4000E or V-Series panel operator to assign a talk key to this label. If it is not enabled a 4000E/V-Series panel operator cannot assign a talk key to the label.
   - Protect Port from Assignment. When this option is enabled the port cannot be locally assigned as a talk/listen key by another panel.
5. Select the drop down arrow and select the required status.

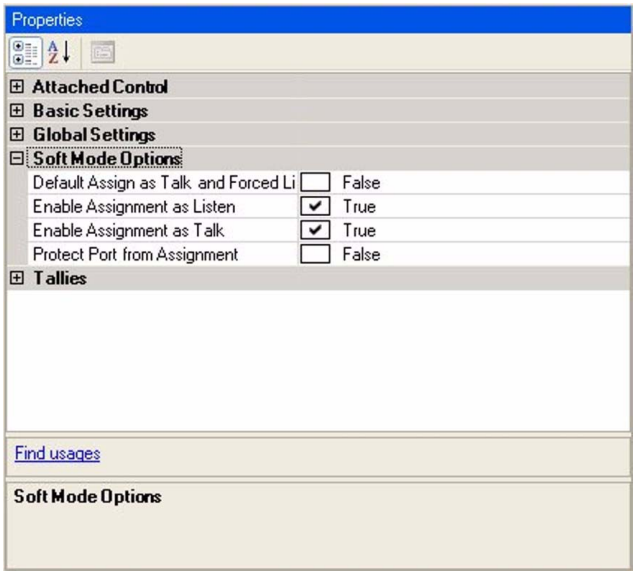


Figure 5-22: Party Line Soft Mode Options

PARTY LINE TALLIES

To enable/disable Tallies

1. Open the Party Line screen by selecting the 'Party Lines' link on the Configuration menu.
2. Create a Party Line or select a Party Line that was been previously created.
3. Expand the 'Tallies' item in the 'Properties' window.
4. Select the 'In Use Tally' item in the 'Tallies' list.
5. Select the drop down arrow and select the required status.

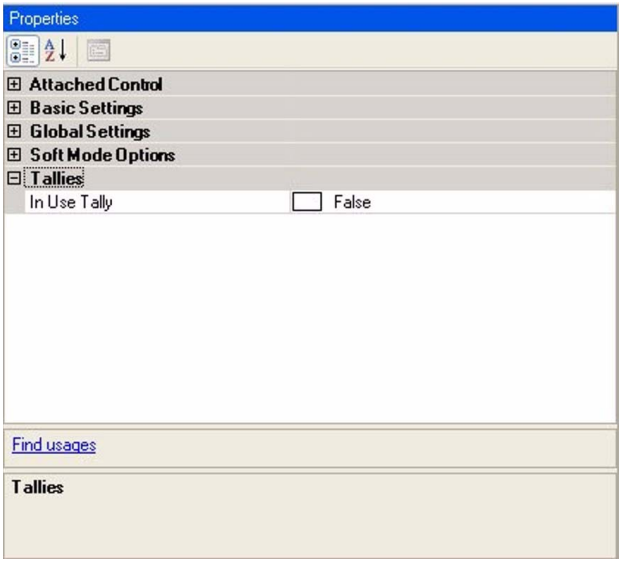


Figure 5-23: Party Line Tallies

This allows the system to set a tally (flashing LED) on all the panel keys that are assigned to the Party Line whenever a talk is active on the Party Line. In the case of multiple matrices in a linked set the 'In Use' tally is broadcast to all other systems in the linked set. In this way the feature is seamless over the matrices in a linked set.

The default is disabled.

ROUTES

A route is an audio path between two points in the matrix that can be activated by another intercom panel's selector key. The Routes link provides the following functions:

- Define the source port and destination label for each route.
- Determine whether each route will be activated with a talk key, a listen key, or both.
- Enable a reverse listen (a reversal of the route's direction when it is activated by a Talk).

A route is defined by selecting a source port, a destination label, and providing a description. The source can be any port in the local system. A source cannot be a nonport label, including a party line or fixed group. The destination can be any audio label in the system including a Party Line or a Group or remote ports, except a control label. When a route is activated, it will set a talk from the source port to the destination label.

It is possible to activate the route by activating a talk and/or a listen to the route's label.

If the Action is set to Talk the route will act as a unidirectional audio path whenever a talk or listen to the route is activated. If the route action is set to Reverse Listen the route will act as a bi-directional audio path provided 'Activate with Listen' is also set.

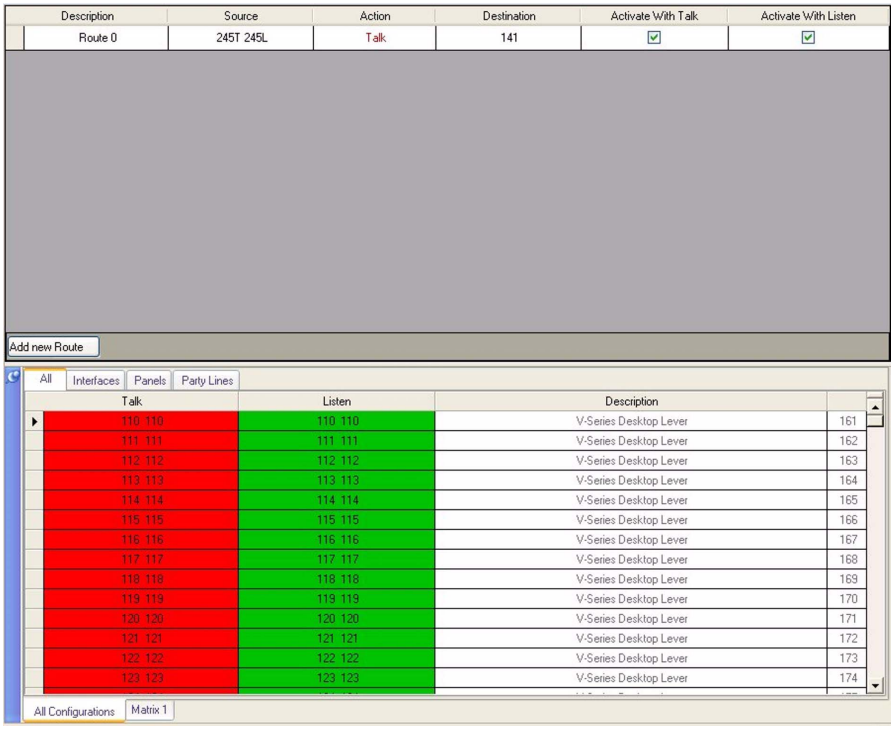


Figure 5-24: Routes Configuration Screen

After the route has been set up using this screen, it is possible to assign it to a label from the Control Manager screen. Within the Panel Programming screen and the Stacked Keys area, with the Control Label programmed onto a panel then double clicking this Label, the attachments to the Label are displayed.

The following is an explanation of each column:

DESCRIPTION

Enter the description of the route into this field. This field is an information field only and is not used by the Eclipse System.

SOURCE

The route Source is the label of the calling Panel/Interface.

ACTION

The Action field specifies how the route will behave when it is activated. When the mouse pointer is placed in the action field an arrow is displayed. Right click on the arrow to display the drop-down menu of possible route actions.

Figure 5-25: Route Action Menu

Talk

When this route action is selected the route will act as a talk only route from the source to the destination. Signalization will appear on the destination.

Talk & Reverse Listen

When this route action is set audio will be routed from the source to the destination and signalization will appear on the destination. Audio will also be routed from the destination to the source.

Reverse Listen

When this route action is set the route will allow the source to listen to audio from the destination. No signalization will appear on the source.

Inhibit Talk

When the route is activated all audio from the source to the destination will be blocked.

DESTINATION

The Route Destination is the label of the Panel Interface receiving the call.

ACTIVATE WITH TALK

When this box is checked, the route will activate whenever anyone sets a talk key to the route's label.

ACTIVATE WITH LISTEN

When this box is checked, the route will activate whenever anyone sets a listen key to the route's control label.

Note: Activating the route by a listen has exactly the same effect as activating it by a talk, unless the Reverse Listen box has been checked making a bi-directional audio path between the source and destination.

CREATING A ROUTE

Select the ‘Routes’ link from the Configuration menu. The Routes screen opens, the top area of the screen is used to configure Routes and the bottom area contains all Labels that are available to select and utilize. Select ‘Add new Route’ button, complete the description field then select either activate with Listen or activate with Talk. It is also possible to have both Activate with Listen and Activate with Talk selected. Assign a Source and a Destination to the Route.

TO ASSIGN A SOURCE AND DESTINATION TO A ROUTE

1. Left Click the mouse on the required Source Label from the Labels area of the screen. Move the mouse cursor to the top area of the screen. Left click in the Route Source of the Route. This places the Label in the Route Source of the Route.
2. Move the mouse back to the lower area of the screen, then left click on the Label of the required destination Label. Move the mouse back to the upper area and left click the mouse in the Route Destination of the Route.
3. After completing all routing assignments, click on the ‘Controls’ link in the Configuration menu. Attach the route to the Control label and program onto a panel.

CHANGING THE ROUTE SOURCE OR ROUTE DESTINATION LABELS

1. Open the Routes screen.
2. Locate the Route that requires modifying, Left click the mouse button in the Route Source or Route Destination field of the Route. This deletes the Label that was allocated to the Route.

Left click the mouse button on the new required Label and then click in the Route Source or Route Destination of the Route.

DELETE A ROUTE

To delete a Route, select the ‘Routes’ link from the Configuration menu. This opens the Routes configuration screen. Locate the Route from the list to delete. Highlight the row by left clicking the mouse button in the grey button next to the description field. On the Keyboard press the **delete key**. Select ‘Yes’ to confirm deletion.

SPEED DIALS

SPEED DIAL (DTMF SEQUENCES)

The MVX16a matrix card can generate DTMF Tones using the DTMF Daughter board fitted into the slots on the MVX card. DTMF Tones are the “beeps” made by a Touch Tone Telephone.

The Speed Dial screen defines the name, activation type DTMF Sequence and the source of the sequence which is currently a Telephone interface. There is a 23 digit limit on a DTMF Sequence.

The currently allowable dial sequences are as follows: The numbers through 0 – 9 the pound (#) and asterisk (*) characters. A DTMF Sequence is defined as a sequence of these numbers.

A Speed Dial must be attached to a control label with the Speed Dials label attached to this control, then the control label is programmed onto the panel next to the label of the telephone. To Activate the Speed Dial activate the label to the telephone interface, then activate the Speed Dial label by latching the selector of the label.

SPEED DIAL SETUP

In order to setup a speed dial the following steps should be followed:

Select ‘Speed Dials’ from the Configuration menu. The above screen shot displays the Speed Dial screen.

	Description	Activate With Listen	Activate With Talk	DTMF Auto Dial	Speed Dial Source
▶		☑	☑		
	Speed Dial 0	☑	☑	012345678901234567890123456789	T14TT14L

Figure 5-26: Speed Dial Setup

To add a new speed dial click on the ‘Add new Speed Dial Sequence’ button at the bottom left of the speed dial window. A new speed dial entry will be created with the default description highlighted.

Complete the Description, Activate with Listen, Activate with Talk, DTMF Auto Dial number and the Speed Dial Source fields.

Note: A comma (,) may be placed in the DTMF sequence to add a pause of 500ms between digits or before the DTMF sequence if required.

Create a control using the ‘Controls’ link on the Configuration menu. Then attach the speed dial to the control by selecting the control so that it is highlighted. Then select the required speed dial from the ‘Available’ members pane and click on the right arrow to transfer it to the ‘Attached’ members pane. The speed dial is now attached to the control.

To detach a speed dial from a control simply select the control and then select the speed dial to be detached in the ‘Attached’ members pane. Click on the left arrow to move it back to the ‘Available’ pane.

Program the label of the Telephone Interface and the Control to activate the Speed Dial from the panel Programming screen.

Download to the Frame by an Apply Label Changes download.

To activate the Speed Dial, select the Label of the Telephone Interface, then select the label of the Speed Dial’s control.

DELETE A SPEED DIAL

To delete a Speed Dial, select the ‘Speed Dials’ link from the Configuration menu. This opens the Speed Dial configuration screen. Locate the Speed Dial from the list to delete. Highlight the row by left clicking the mouse button in the grey button next to the description field. On the Keyboard press the **delete key**. Select ‘Yes’ to confirm deletion.

CONTROLS

Relay options, routes and speed dials can only be accessed by being first placed inside a control. A control can then be placed on a panel key for activation.

The ‘Controls’ link on the Configuration menu provides a screen location where the use of controls are used for association with attachments to allow a label to activate a route, relay or speed dial for the currently required control.

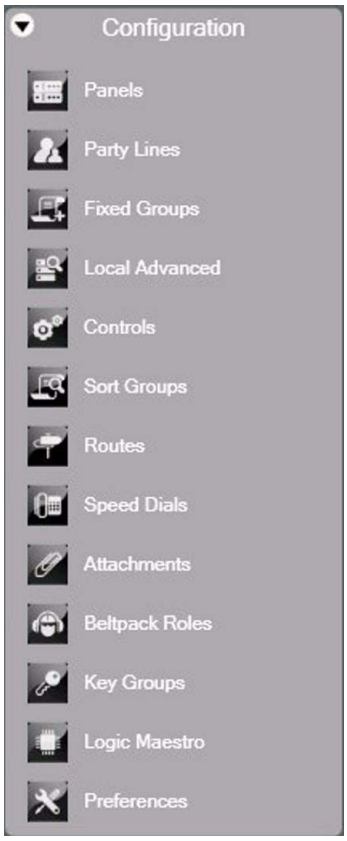


Figure 5-27: Setup Menu

To access the Control Manager select the ‘Controls’ link from the Configuration menu.

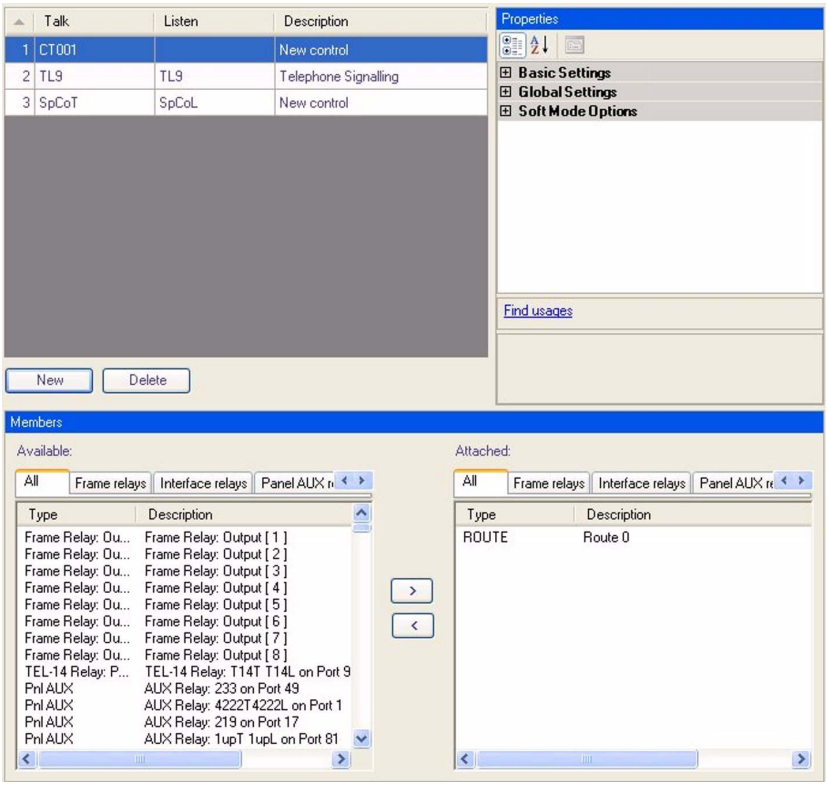


Figure 5-28: Control Manager Screen

The Control Manager screen is split into 4 windows, which allows the following activities:

CONTROL VIEWER

The Controls window provides a list of all available controls. Also Controls are created and deleted from within this area. To create a new control, select the 'New' button. This adds a control to the list. Controls are automatically identified with a talk and listen label, the default labelling is ctrl1 and onwards.

To delete a Control, highlight the Control from the Control Viewer window then select the 'Delete' button.

PROPERTIES

The Properties window allows the user to edit the Control's Basic Settings, Global Settings and Soft Mode Options.

Controls Basic Settings

The 'Basic Settings' list displays the fixed information about a Control and can be used to edit the Control description, Talk and Listen Aliases and Talk and Listen labels.

To enable/disable Basic Settings

1. Open the Control Manager screen by selecting the 'Controls' link on the Configuration menu.
2. Create a Control or select a Control that was been previously created.
3. Expand the 'Basic Settings' item in the 'Properties' window.
4. Update the settings as required.

Figure 5-29: Control Manager Basic Settings

Global Settings

To enable/disable Global Settings

1. Open the Control Manager screen by selecting the 'Controls' link on the Configuration menu.
2. Create a Control or select a Control that was been previously created.
3. Expand the 'Global Settings' item in the 'Properties' window.

4. Select the ‘Latch Disable’ item in the ‘Global Settings’ list.
5. Select the drop down arrow and select the required status.

Figure 5-30: Control manager Global Settings

Soft Mode Options

The ‘Soft Mode Options’ list display items which relate to the Soft Mode available on certain panel types. Currently this is restricted to Sort Groups.

To enable/disable Soft Mode Options

1. Open the Control Manager screen by selecting the ‘Controls’ link on the Configuration menu.
2. Create a Control or select a Control that was been previously created.
3. Expand the ‘Soft Mode Options’ item in the ‘Properties’ window.

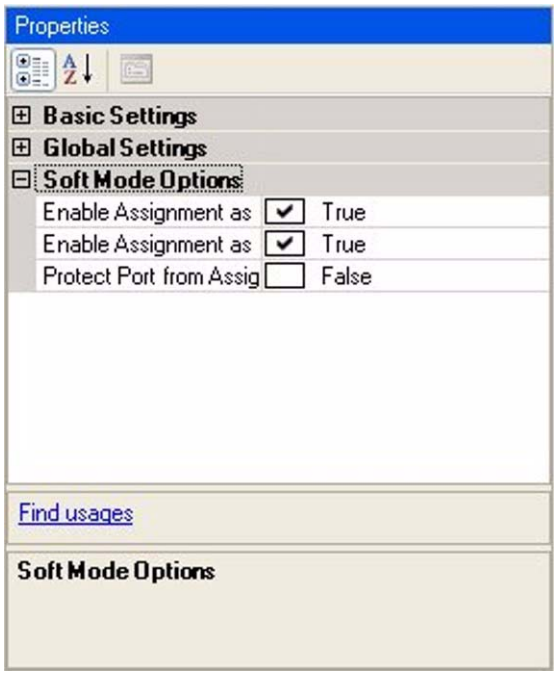


Figure 5-31: Control Manager Soft Mode Options

AVAILABLE ACTIONS

The Available window provides a complete list of all the available relays, routes and speed dials (Actions) that can be attached to a Control.

To attach an Action to a Control, select or create a Control from the Control Viewer and then either double click the required Action in the available Actions window or select the Action and click on the '>' symbol between the windows. This transfers the Action into the Attached Actions window. The Control label can then be placed onto a panel key or attached as a secondary action to a panel, Interface, Fixed Group or Party Line depending on user requirements.

ATTACHED ACTIONS

The Attached Actions window provides a list of Actions that have been attached to a Control. Also within this window Actions can be removed from Controls.

To remove an attachment of an Action from a control, select the Control from the Control Viewer window; from the Attached Actions window double click the Action that is no longer required or select the Action and click on the '<' symbol between the Available and Attached windows. This places the Action back into the Available Actions window.

Select the 'Matrix Frame Preferences' link to display the options for a number of system wide functions.

RELAY NAMING

The Available and Attached windows have tabs for the various types of Actions allowing them to be filtered for ease of selection. Two of the tabs are “Panel AUX relays” and “Panel mute relays”. These functions correspond to these relay outputs in the ICS panel documentation. In the case of V-Series and Eclipse 4000 Series panels the output relays and labelled as 1 and 2. The correspondence between the labels in ECS and the panel hardware is:

Panel mute relay - relay output 1

Panel AUX relay - relay output 2

TEL-14 CONFIGURATION OPTIONS

From the Hardware menu select the ‘Cards and Ports’ to display the Eclipse hardware setup. Locate the Telephone Interface and select it. The Advanced Settings for the telephone are displayed. Open the ‘DTMF Settings’ menu in Advanced Settings to set up the DTMF facilities.

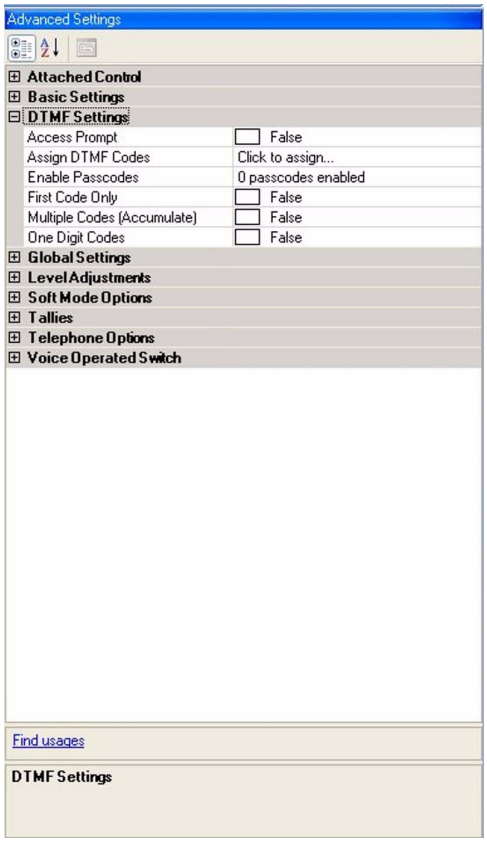


Figure 5-32: Telephone Interface Settings

Set the ‘Access Prompt’ to true, and then select the ‘Enable Passcodes’ field from the Advanced Settings and open the drop down menu listing the passcodes configured under ‘Matrix Frame Preferences’. Select the Passcode by placing a tick in the check box beside the required password. Apply the changes to the Frame by completing an ‘Apply changes to System’ download.

The selected Passcode is then specific to that TEL-14 interface.

INWARD DTMF Access

DTMF Access allows combinations of DTMF tones that are pre-assigned with specific meanings to have access to the Eclipse system. The Assign DTMF Access field within the Advanced Setting screen of a telephone screen allows setting all parameters related to the DTMF-tone decoding. Each MVX-16A Crosspoint Card provides sixteen ports, on each MVX card there are 4 slots where DTMF Daughter boards are required to be fitted before DTMF-tone encoding and decoding is possible. DTMF decoding is the ability to interpret DTMF tones. DTMF encoding is the ability to create DTMF tones.

Selector codes are the two-digit numerical codes that outside callers use to access the system. The codes initiate the specification of audio paths when system is accessed via DTMF inward access. If the [One Digit Codes] field is set to true, only the ten single-digit codes [0] through [9] will function as selector codes.

If the ‘Multiple Codes (Accumulate)’ option has been selected in Advanced Settings the inward DTMF stream may contain multiple selector codes, for example to activate more than one panel or control. If this is the case it is advisable to separate the selector codes by placing a space in the source string to ensure that selector codes after the first are correctly identified.

Note: The characters used to specify a space or pause between codes may vary with the equipment calling into the Eclipse system; consult the manufacturers instructions for details.

Control Codes are codes that perform specific functions, including:

·00 - Clear Last Entry—This code will clear the paths that were activated by the last selector code entry. If [00] is entered twice, the paths that were activated by the last two selector code entries will clear, and so on.

·91 - Send Call Signal—This code will send a call from the port to the matrix as if a call signal was sent by an external device connected to the port.

·92 - Disable DTMF Decoding—This code turns off DTMF decoding. This may be desirable because certain program sources may contain DTMF tones not intended to be interpreted as selector codes, and that can inadvertently reroute the audio path. For further information See “First Code Only” on page 5-105.

·99 or 099 - Clear All—Either of these codes will clear all currently active talk and listen paths.

Prompt tones are tone sequences that the MVX-16A sends to the user. The MVX-16A issues the following four distinct prompt tone sequences:

"Access Code Request"—Indicates that the system is ready for an access code to be entered. If the system does not recognize the entered access codes, it will repeat the access code request prompt. The number of attempts to enter the access code is limitless. The prompt consists of a low tone followed quickly by a higher tone. The sequence is quickly repeated three times.

"Access Granted"—Indicates that the system has acknowledged the access code and that access to the Eclipse has been granted. The prompt consists of four tones, each increasing in pitch and immediately followed by a "ready” prompt.

"Ready"—Signals that the system is ready for a selector code entry. It also indicates that it has acknowledged the last selector code entered. The prompt consists of a single high-pitched tone.

"Error"—Indicates that an invalid code has been entered. Error prompts result from:

1. Selecting a code that is less than 10 or greater than 59
2. Selecting a code without talk or listen labels assigned to it
3. Assigning a control code before a port has been activated.

Multiple Codes

If the Multiple Codes is set to false only one selector code can be active at a time. Entering a second selector code will automatically deactivate any audio paths that were activated by the previous selector code. If this field is set to true, any number of selector codes can be active at the same time. To deactivate a selector code, either enter the selector code number preceded by a zero or enter a clear last or clear all control code.

One Digit Codes

If One Digit Codes is set to true the selector codes are limited to one digit—0 though 9—plus the quick keys—pound (#) and asterisk (*). These codes are easier to remember and dial; however, they also have the following limitations:

- Only ten codes are available
- Control codes are not recognized
- The pound and asterisk keys can only be assigned a single digit code
- The system will no longer recognize the "0<selector code>" form, which will deactivate any established individual path. This means if multiple codes, has been enabled a previously established path cannot be deactivated.

First Code Only

If the First Code Only is set to true the DTMF tone detection will be disabled after the first valid code has been received. DTMF decoding can also be disabled by entering the disable DTMF decoding control code (92), described in the Control Codes section.

Certain circumstances may encourage the disabling of DTMF-tone detection. During normal operation, DTMF tones in the port's audio input are decoded at all times. However, certain audio program sources— such as telephone company commercials—may contain DTMF tones that are not intended to be interpreted as selector codes, and can inadvertently reroute the audio path. Certain voices or musical instruments can also fool the DTMF tone detection circuitry into detecting false DTMF tones.

By disabling DTMF-tone detection after the program feed has been set up, the paths will not be accidentally rerouted. To re-enable tone decoding, hang up and call back again.

Quick Codes

These menus define the Touch-Tone keypad's asterisk (*) and pound (#) keys as quick keys through the use of quick codes. If a two-digit pair (corresponding to one of the valid selector codes or control codes) is selected from the menus for the asterisk or the pound, the DTMF port will translate the asterisks or pound's DTMF tone into that two-digit code. For example, if the asterisk key is supposed to clear all paths, select [00] from the [*] menu. If the [One Digit Codes] box is checked, the quick keys cannot be assigned control codes.

To configure DTMF access codes

Multiple Code Setup

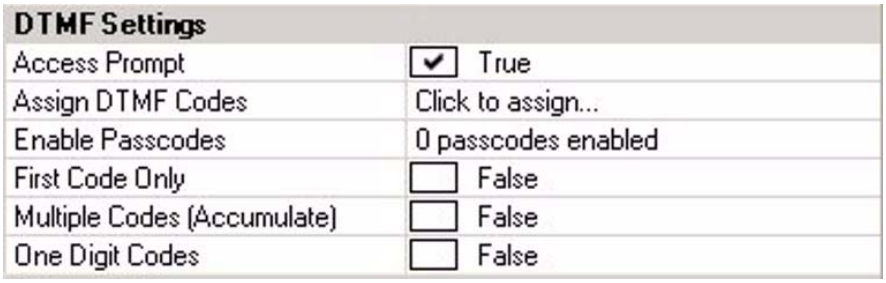


Figure 5-33: DTMF Setup

Multiple codes enable an operator to stack multiple routes so that having called one destination a sequential call can be made to a further destination without ending the first call.

Assign DTMF Codes

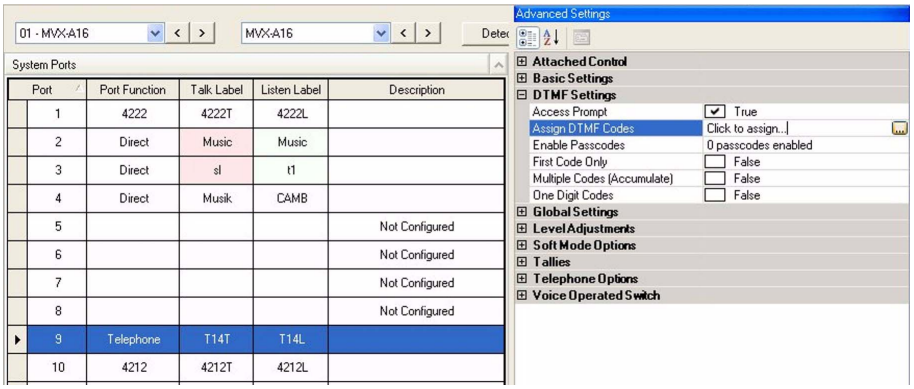


Figure 5-34: Telephone Interface

1. From the telephones Advanced Setting screen select Assign DTMF Codes to open the Multiple Codes DTMF Assignment screen.

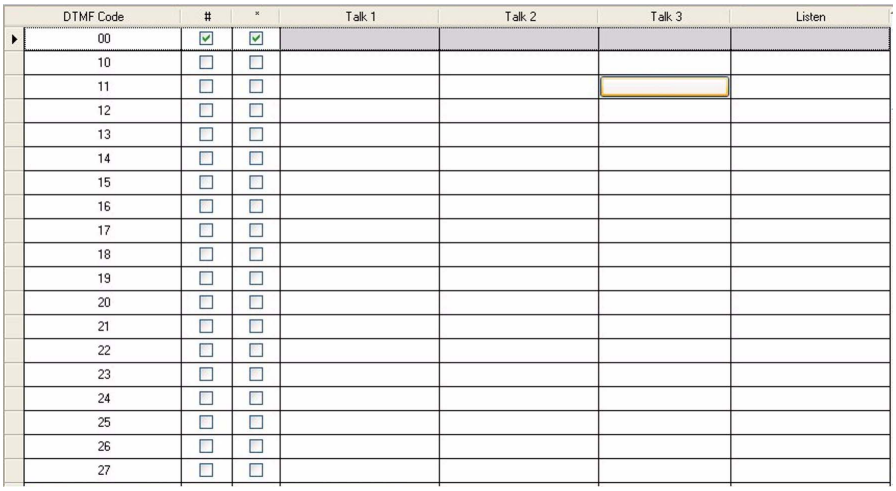


Figure 5-35: DTMF Assignment Screen

2. Select the desired destination label from the palette of available destinations, at the bottom of the screen.
3. Find the desired code in the DTMF Codes column.
4. The columns to the right of the DTMF Codes column allow assigning as many as three talk labels and one listen label for each key. Click in the column for the desired type of label for the desired code: Talk 1, Talk 2, Talk 3, or Listen. The selected label will appear in the desired cell. If this cell has already been assigned a label, the new label will displace the old one.
5. Download the new configuration to the Frame with an Apply Label Changes download.

Note: Although above describes a single route multiple routes can be attached to a control.

One Digit Code Setup

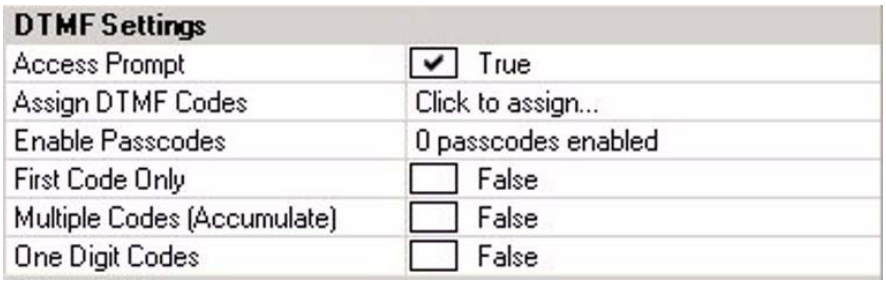


Figure 5-36: Code Setup

To assign the one-digit selector codes (numbered "0" through "9"), set the [One Digit Codes] field in the Advanced Settings screen for a telephone interface to true.

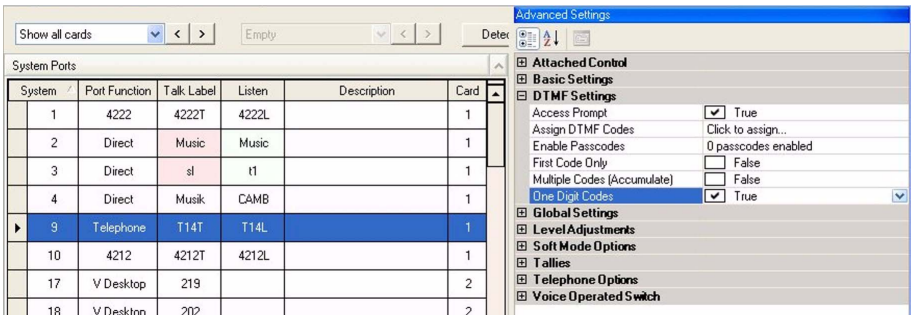


Figure 5-37: Matrix Screen

1. From the telephones Advanced Setting screen select Assign DTMF Codes to open the DTMF Assignment screen.

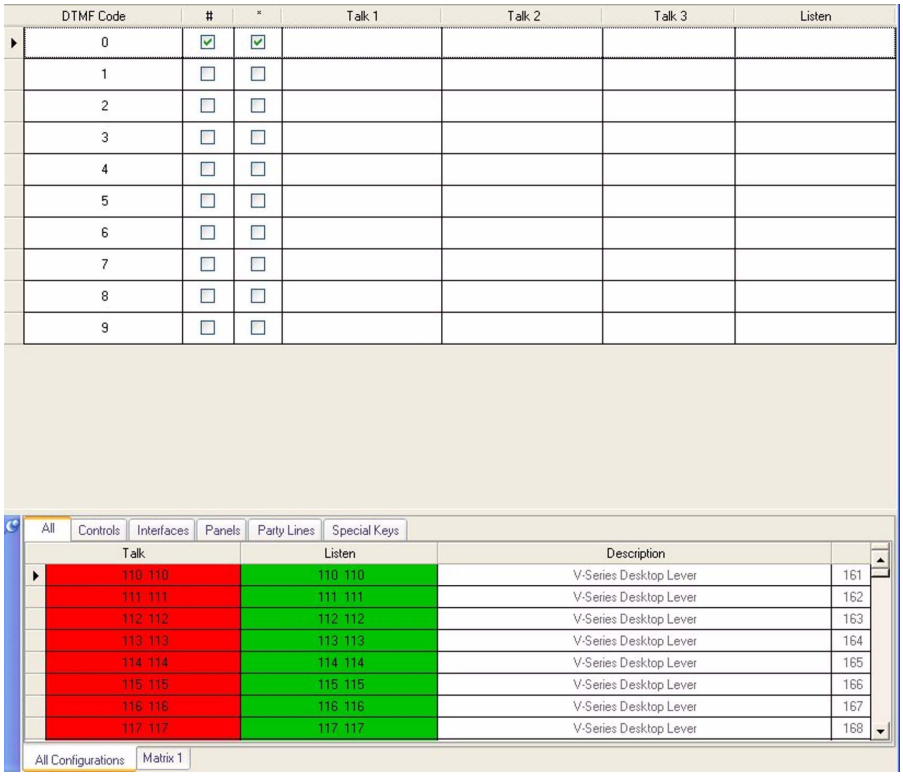


Figure 5-38: Single Digit DTMF Assignments

2. Select the desired destination label from the palette of available destinations, at the bottom of the screen.
3. Find the desired code in the DTMF Codes column.
4. The columns to the right of the DTMF Codes column allow assigning as many as three talk labels and one listen label for each key. Click in the column for the desired type of label for the desired code: Talk 1, Talk 2, Talk 3, or Listen. The selected label will appear in the desired cell. If this cell has already been assigned a label, the new label will displace the old one.

5. Download the new configuration to the Frame with an Apply Label Changes download.

LOGIC MAESTRO

The ‘Logic Maestro’ link on the Configuration menu opens the Logic Maestro window. Logic Maestro allows the user to create complex controls using an interactive graphic editor.

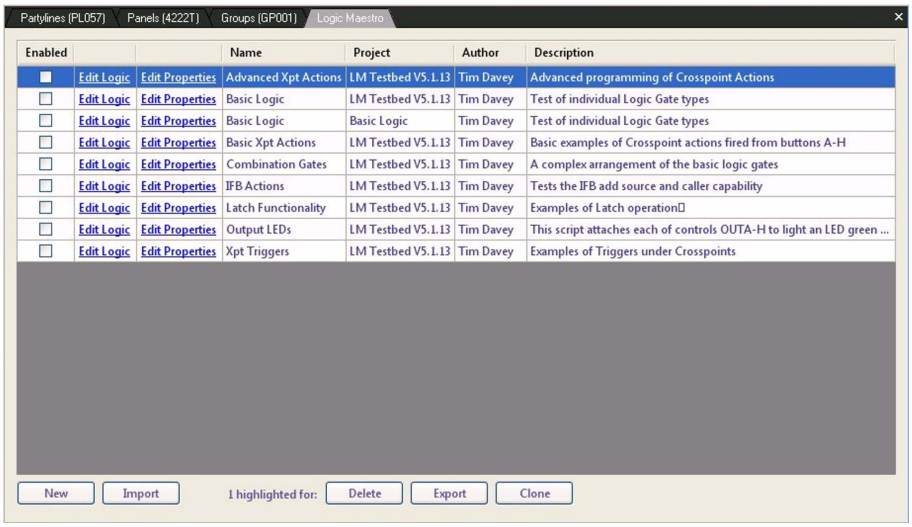


Figure 5-39: Initial Logic Maestro Screen

Logic Maestro requires a separate license to be purchased before it can be used.

Logic Maestro operations are described in a separate manual (part 810414Z).

PREFERENCES

The ‘Preferences’ link on the Configuration menu opens the ‘Matrix Frame Preferences’ dialog allowing the matrix system setups to be configured. This dialog is also accessible from the System Layout screen and is described in chapter 3 under “Matrix Frame Preferences”.

BELTPACKS

Selecting ‘Beltpacks’ from the ECS setup menu displays the beltpack configuration editor which will allow beltpacks to be added and configured. Before a beltpack will work, it must be registered to the system. To do this:

1. In ‘Matrix Frame Preferences’ set the correct DECT system ID and Frequency.
2. Configure the COM port to use for the beltpacks.
3. Open the Beltpacks screen, and enter a beltpack.
4. Connect the required beltpack on the COM port.
5. Press the "Register connected Beltpack to this system" button.

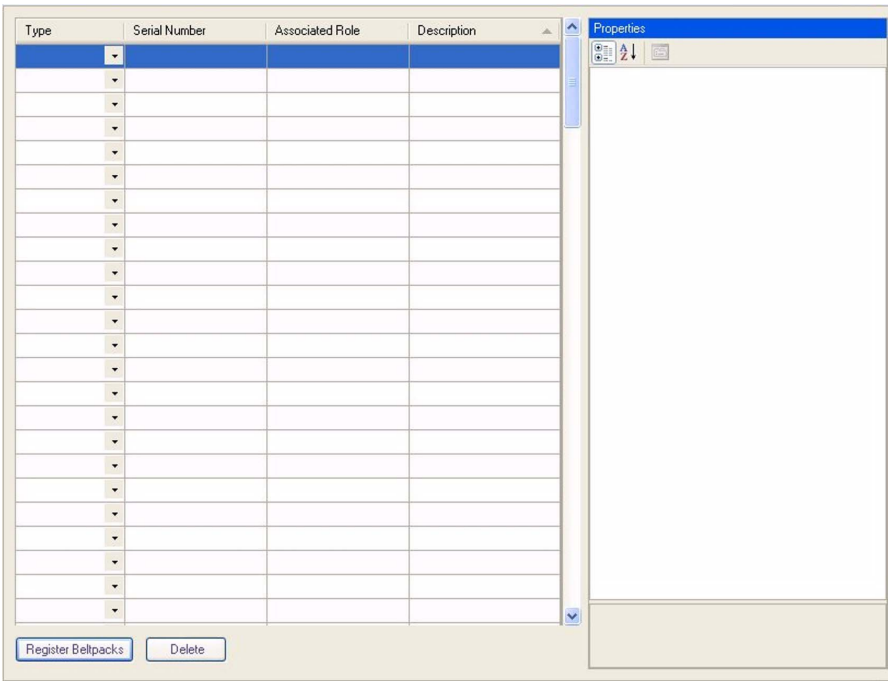


Figure 5-40: Beltpack Registration Setup

Click on the ‘Register Beltpacks’ button to register a beltpack. A list of instructions to register a beltpack will be displayed.

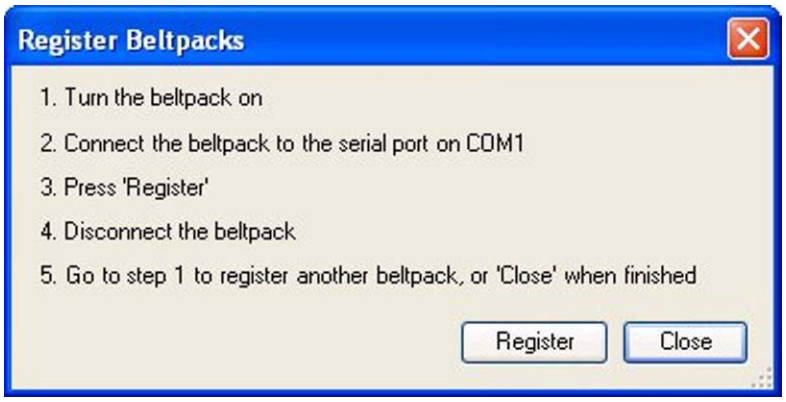


Figure 5-41: Beltpack registration Instructions

When the beltpack has been powered up and connected click on the 'Register' button. A confirmation screen will be displayed when the beltpack has been registered.

Figure 5-42: Beltpack Registration

If the beltpack cannot be registered an error message will be displayed.

Figure 5-43: Beltpack Registration Error

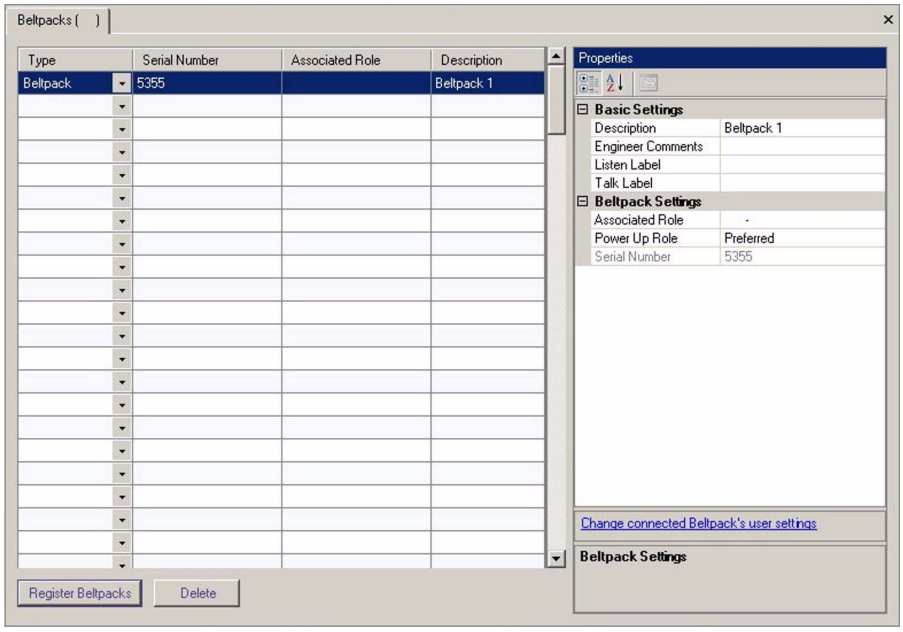


Figure 5-44: Beltpack Editor

The 'Associated Role' field can be edited by positioning the cursor in the box and editing the text in the normal way. A description of the beltpack can be added in the 'Description' column.

BELTPACK PROPERTIES

To set the properties for the beltpack open the required options in the 'Properties' window (top right).

Basic Settings

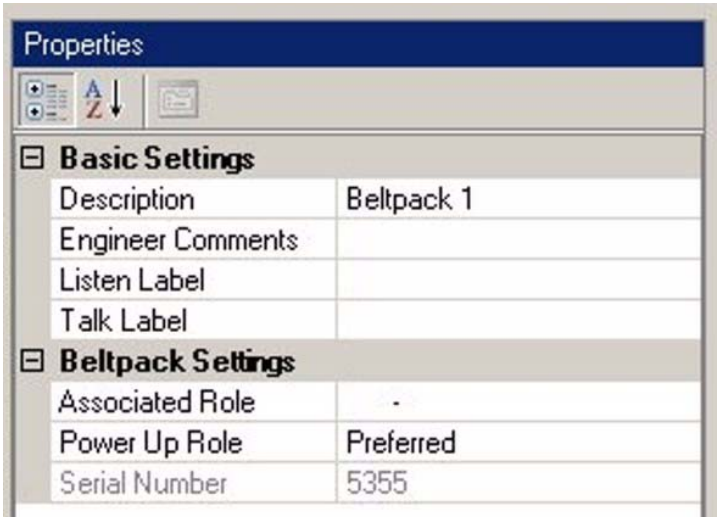


Figure 5-45: Beltpack Basic Settings

Associated Role

Select a role from the list of available beltpack roles set up using the Beltpack Roles facility.

Description

Enter an optional description for the beltpack such as user or department.

Engineer Comments

A scratchpad for engineers to record any relevant information about the beltpack.

Listen Label

The listen label that is available for panel configuration.

Power Up Role

This defines whether the beltpack role is set to a preferred role or a fixed role when it is powered up.

Serial Number

The beltpack serial number. This field is non-editable.

Talk Label

The talk label specified for use in the panel configuration table.

BELTPACK ROLES

Beltpack roles define the beltpack in the same way as a label defines a key on a panel so that assigning a role to a beltpack has the effect of creating a label for it that can be referenced by other devices in the system such as a panel.

To create and edit beltpack roles select the ‘Beltpack Roles’ entry in the Setup menu to display the beltpack roles editor.

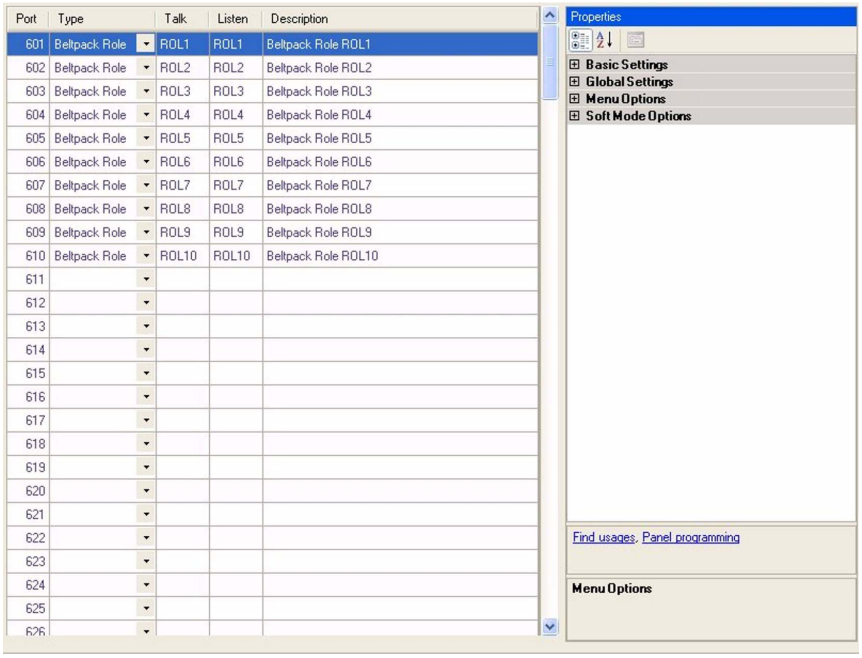


Figure 5-46: Beltpack Role Editor

To create a new beltpack role select a port and click on the ‘Type’ drop-down menu and select the entry ‘Beltpack Role’. This will add a new role entry on the selected port. The Talk and Listen labels can be edited by placing the cursor in the box and clicking to select the entry and editing the text in the normal way. To edit the description position the cursor in the description box and select the text to edit it.

Highlighting the role allows the role properties to be entered using the ‘Properties’ window.

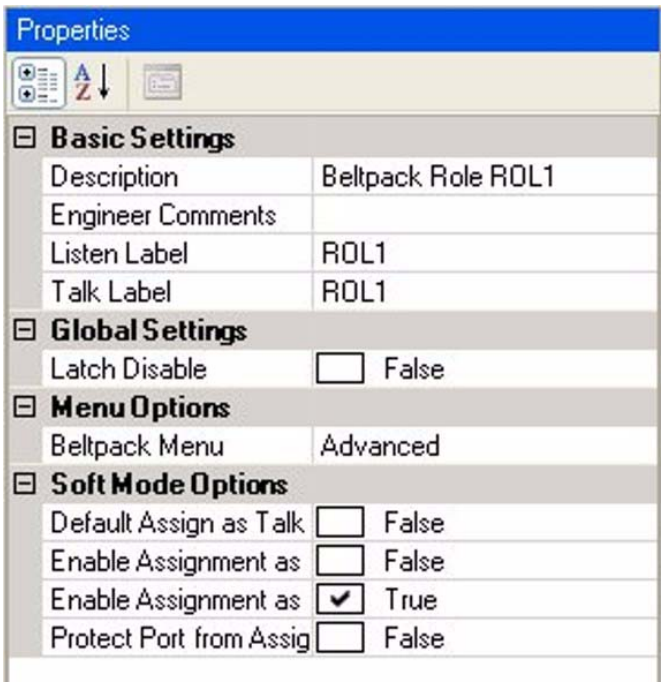


Figure 5-47: Beltpack Role Properties

BASIC SETTINGS

Description

Enter an optional description for the beltpack role such as user or department.

Engineer Comments

A scratchpad for engineers to record any relevant information about the beltpack role.

Listen Label

The listen label that is available for panel configuration.

Talk Label

The talk label specified for use in the panel configuration table.

GLOBAL SETTINGS

Latch Disable

The setting determines if the beltpack PTT is latching or non-latching in the same way as a key on a panel may be latching or non-latching.

MENU OPTIONS

Beltpack Menu

The setting determines the level of access the beltpack user has to the beltpack menus to alter settings. The four settings are:

- Advanced - full access to all menu options and settings.
- Normal - beltpack microphone type and headphone limiter setting are locked, all other options and settings are available.
- Basic - all beltpack options and settings are locked except contrast, master volume, key lock, tap latch, page lock and information screens.
- None - all menus and settings are locked and cannot be viewed.

SOFT MODE OPTIONS

Default Assign as Talk and Forced Listen.

When true the default for a key assigned to this label is Talk and Forced Listen.

Enable Assignment as a Listen

Allow the port to be assigned locally via Soft Mode as listen key by another panel.

Enable Assignment as Talk

Allow the port to be assigned locally via Soft Mode as talk key by another panel.

Protect Port from Assignment

Prevents this port from being locally assigned by another panel in soft mode.

BELTPACK PROGRAMMING

Beltpack programming (assigning labels to keys, setting beltpack operating parameters etc is now carried out in Panel Programming treating the beltpack as a panel where labels can be dragged and dropped onto keys in the same way as panels.

To program a beltpack select ‘Panel programming’ from the Configuration menu and select the required beltpack from the drop-down list of panels at the top of the window. The beltpack mimic will be displayed.

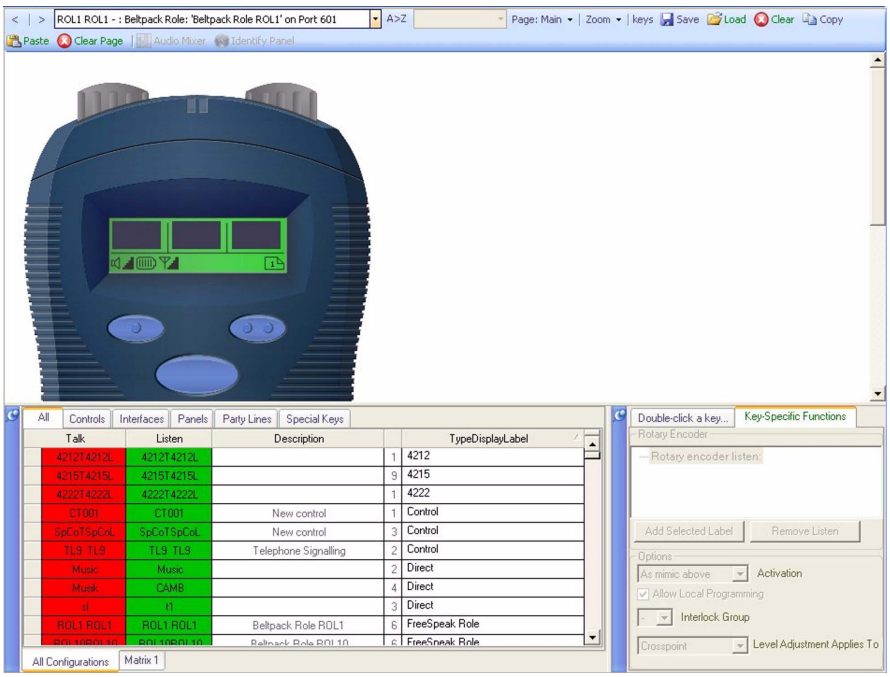


Figure 5-48: Beltpack Programming Screen

Labels can be selected from the list and dragged and dropped onto beltpack keys.

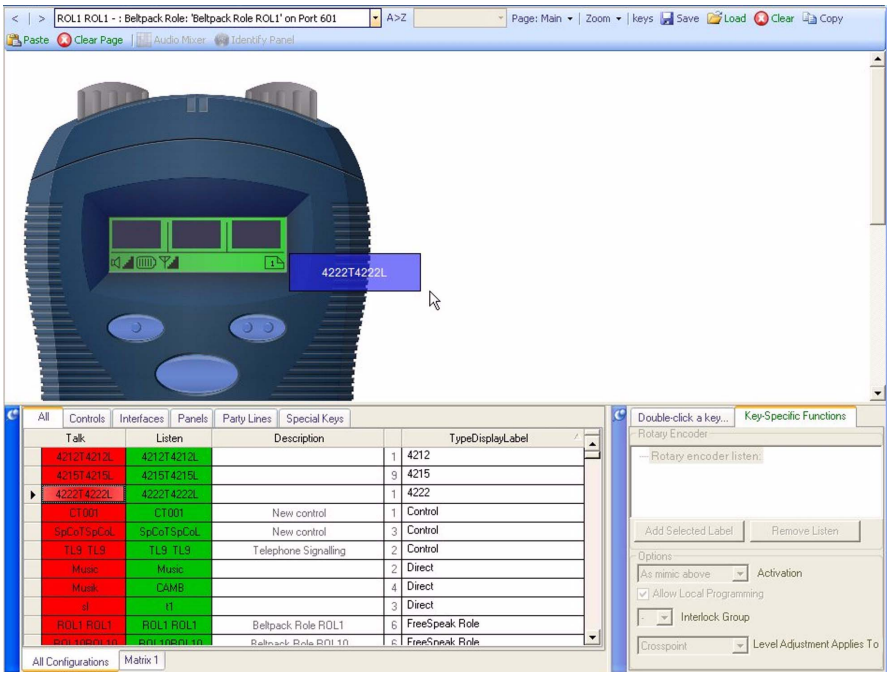


Figure 5-49: Assigning a Label to a Beltpack Key

Six pages of keys are available on the beltpacks; the key pages are selected from the drop-down ‘Page’ list. The pages are Main (the default page), Shift1, Shift2, Shift3, Shift4, Shift5.

When the pointer is placed over a key the status of the key is displayed showing the beltpack role, key number and the key type.

Figure 5-50: Beltpack Key Properties

Right clicking on a key will open a key configuration menu allowing the key type, local assignment, interlock group and latch disable to be set up.

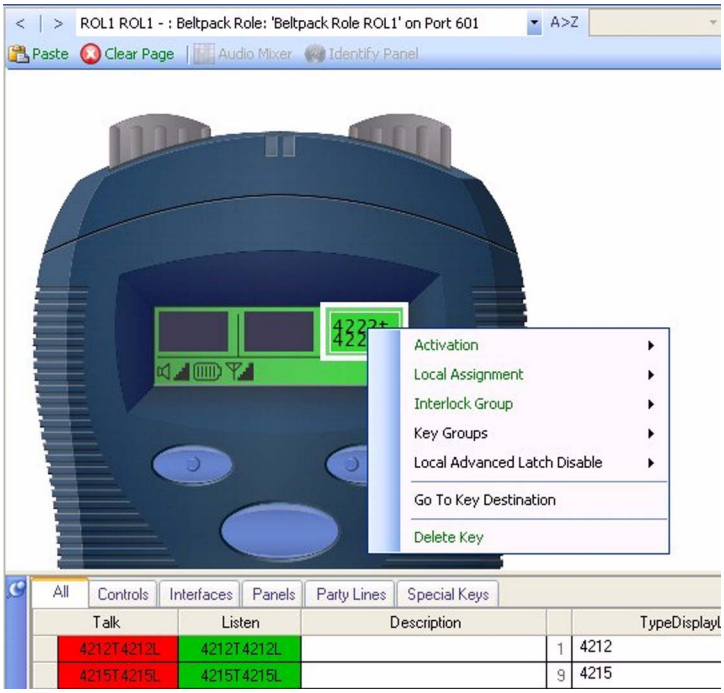


Figure 5-51: Key Configuration Menu

Activation

The activation option allows the key type to be configured to determine how the key will behave when activated via the pushbutton. To set the key activation type right click over the required key to display the options menu and then select the 'Activation' item to display the activation options.

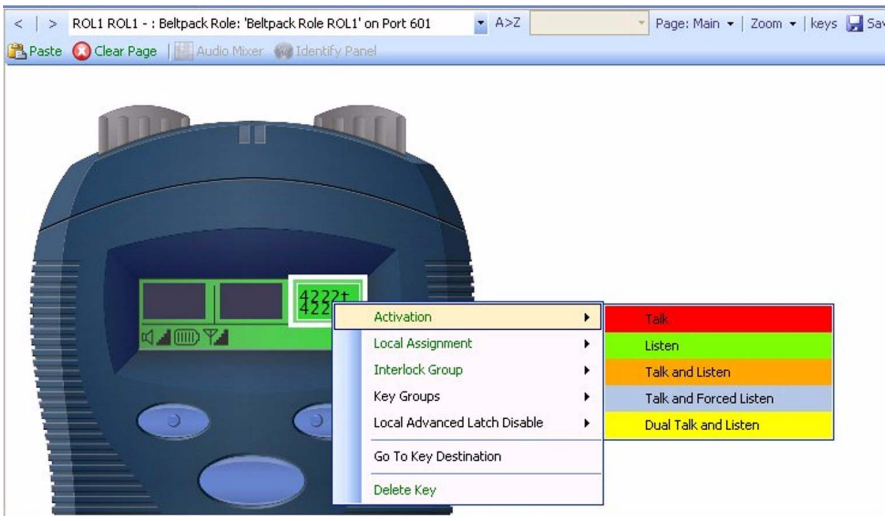


Figure 5-52: Beltpack Key Assignment Menu

The activation options are: Talk, Listen, Talk and Listen, Talk and Forced Listen or Dual Talk and Listen.

- Talk sets a talk from the beltpack to a destination with no automatic listen to the destination.
- Listen sets a key to listen to the source without talking to the destination at the same time. Use as a monitor key (press the volume level up/down buttons under the display to increase listen level).
- Talk and Listen sets a talk key with listen (press the volume level up/down buttons under the display to increase or mute the listen level).
- Talk and Forced Listen sets a talk key with permanently made listen (press the volume level up/down buttons under the display to increase or mute the listen level).
- Dual talk and Listen sets a Dual talk and listen key. This makes the pushbutton activate a Talk and Listen on a press and hold or latch a Listen with a short press and release (less than 200ms) on the same pushbutton.

Local Assignment

Click on the ‘Local Assignment’ entry to display the available options for local key assignment. The options are to allow local key assignment and to disallow local key assignment. If the local assignment is allowed for the key then the beltpack key can be assigned by updating the beltpack with key assignments uploaded from the matrix via the ‘Upload’ control on the toolbar.

Interlock Group

The ECS user can assign several keys on a beltpack into a selector group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

Note: For example if a beltpack had three keys programmed to talk to a cameras 1 to 3 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all beltpack keys.

To add a key to an interlocked group

1. From Panel Programming, select the beltpack.
2. Right click on the required key to display the key options list.
3. Select the ‘Interlock Group’ entry to display the interlock group options list.
4. Select the required interlock group or ‘None’ if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

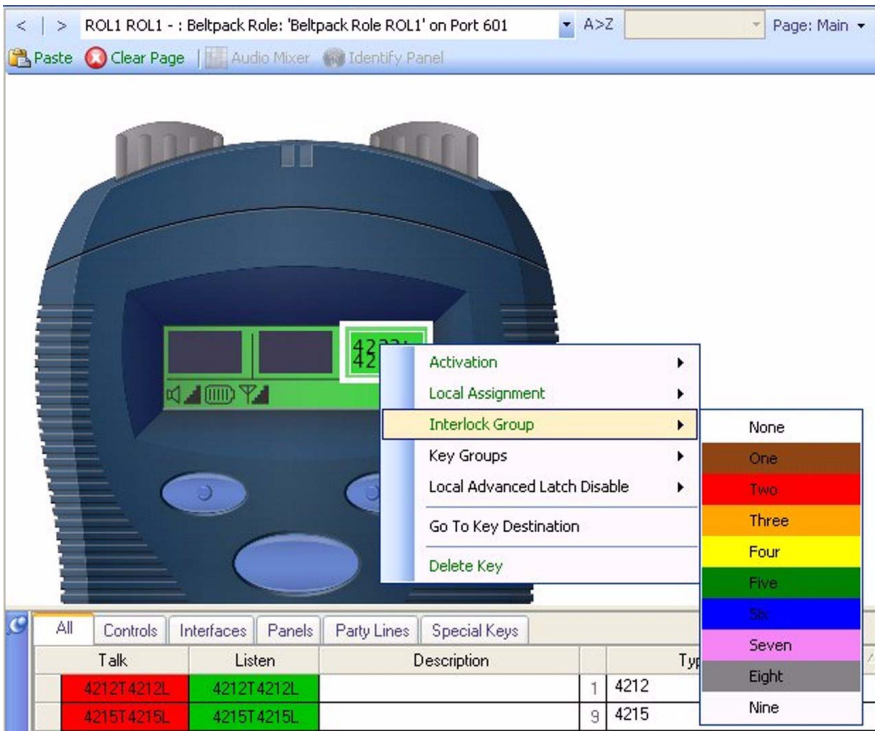


Figure 5-53: Beltpack Interlock Group Assignment

Local Advanced Latch Disable

This allows latching of keys to be disabled locally on the beltpack. May be set to On or Off.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the Matrix Hardware editor screen with the destination the key refers to highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted; the green listen label for that key will not be deleted.

6 IP MANAGER

INTRODUCTION TO IP MANAGER

The I.V. Core facility allows the ECS operator to centrally manage IP panels, IVC-32 cards and Concert users. To start IP Manager click on the 'I.V. Core' link in the 'Hardware' menu.

Figure 6-1: Eclipse Hardware Menu

The initial IP Manager display shows three panes for managing the configuration of IP panels, Concert users and IVC-32 IP interface cards.

When the IP Manager is opened it will automatically search for IVC-32 cards in configured matrices and IP enabled V-series panels on the same network as the configured matrices.

Note: ECS operators should not open more than one instance of the IP Manager to assign or monitor IP panels on the same frame at the same time.

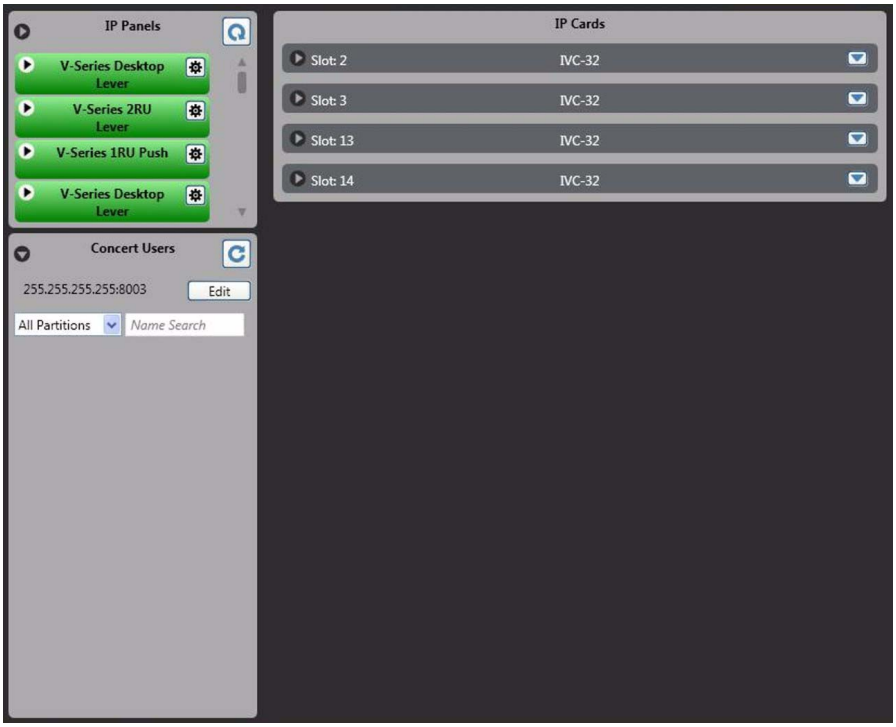


Figure 6-2: IP Manager Initial Display

The IP Panels and Concert Users panes have a menu button in the top left corner for opening menus for diagnostics and the discover button in the top right corner to start ECS searching for the specified items.

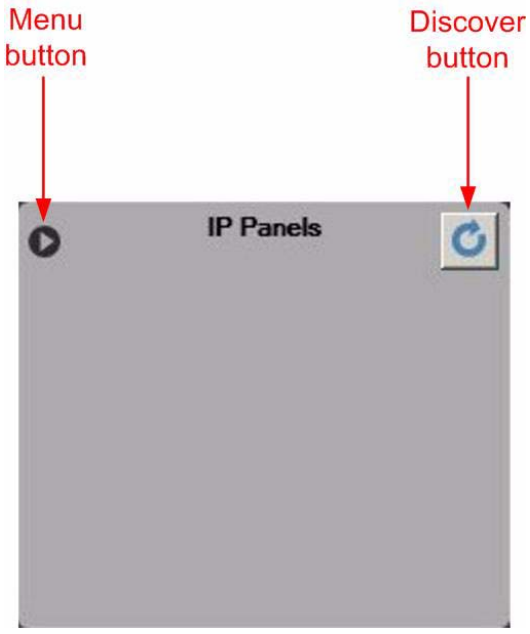


Figure 6-3: IP Manager Pane Buttons

Clicking on the menu button will open the menus associated with the type of IP device associated with the pane.

Clicking on the discover button at the top left corner of the IP Panels pane will cause the IP Manager to search for all the IP panels on the network.

The IP Cards pane has a similar layout but does not have a discover button. Instead the left-hand button on the header bar opens or closes the list of IVC-32 cards detected in the current matrix.

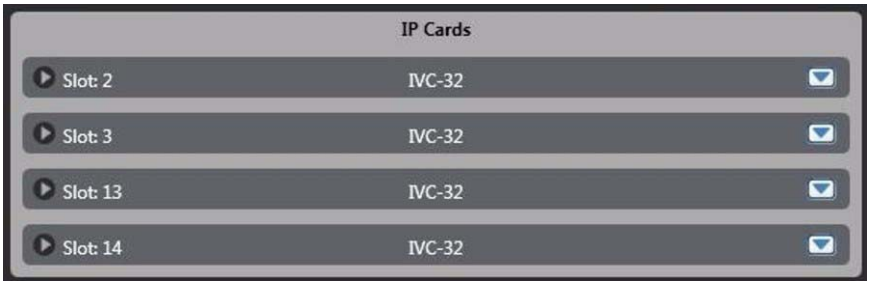


Figure 6-4: IP Cards Pane

The left and right buttons on each IVC-32 card display are used to open displays for the individual cards.

IP PANELS

Clicking on the 'IP Panels' discover button will cause ECS to search all the systems on the network for IP enabled V-Series panels and display all the panels detected as a list.

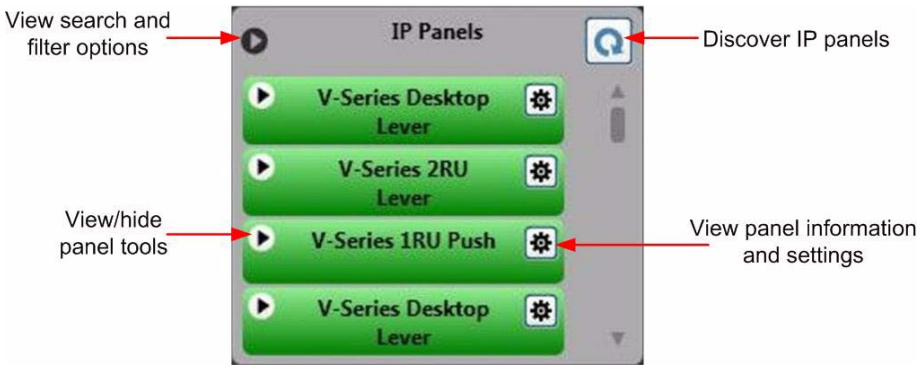


Figure 6-5: IP Panel List

The panels listed are color coded according to status. The color codes are:

- Blue - panel has been discovered but does not have a login IP address, User ID or password configured.
- Green - panel has been discovered and is logged in to the current configuration.

- Amber - panel has been discovered that is configured in this configuration but is not logged in.
- Grey - panel has been discovered with an IP address that is not for the matrix in this configuration. The panel may be configured for another matrix and may be logged in to that matrix.
- Red - panel has been discovered that is not in one of the other states. The panel may be configured for this matrix but is not in the current configuration.
- Mauve - panel has been discovered but the panel status is undetermined. Panels may be displayed in this color briefly during discovery until the panel status is established and the color will then change to reflect the panel status.

Clicking on the left button of a panel entry will display an 'Identify Panel' button.

Figure 6-6: Identify Panel Button

Clicking on the identify button will request that the panel enters its 'IDENTIFYME' mode with the panel LEDs flashing red across the panel. The 'Identify Panel' text will be displayed in bold and a red bar will move across the button to show that the mode is active.

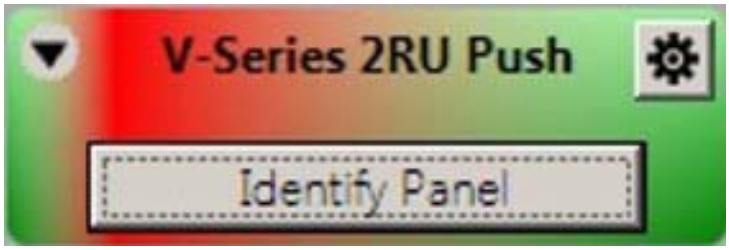


Figure 6-7: Identify Function Active

Clicking on the button again will end the identify mode.

Clicking on the right button will display a list of all the available information about the panel.

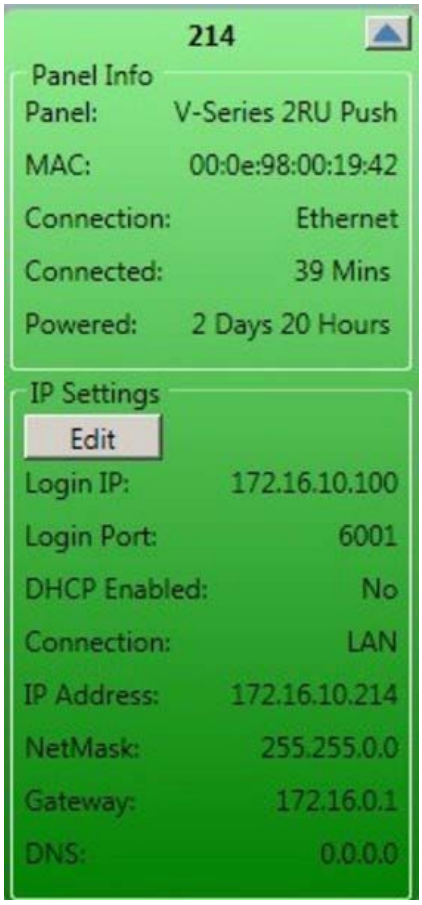


Figure 6-8: IP Enabled Panel Info

The panel information displayed shows the following:

- Panel - panel type.
- MAC - panel MAC address.
- Connection - the protocol used in the panel connection.
- Connected - the length of time the panel has been connected without a reset.
- Powered - the length of time since the panel was last powered up.

The IP settings displayed are the same as those set on the panel using the panel IP setup menus (see V-series manual).

- Login IP - the IP address of the IVC-32 card that the panel will try to log in to.
- Login Port - the port the panel will use to log in to the IVC-32 card.
- DHCP Enabled - whether the panel should obtain an address from a DHCP server or use a preset address.
- Connection - the type of connection; WAN, LAN or Internet.

- IP Address - the IP address of the panel.
- Netmask - the subnet mask for the network the panel is on.
- Gateway - the IP address of the gateway to be used when connecting to the matrix.
- DNS - the IP address of the Domain Name Server to be used by the panel to obtain an IP address automatically if DHCP is enabled.

Clicking on the ‘Edit’ button will enable the IP settings to be changed from the IP Manager.

Figure 6-9: Editing IP Panel Settings

When the edits are completed click on the tick button to accept the changes or the cross button to cancel the changes.

If a parameter is set to an invalid state, such as part of an IP address being set to a number greater than 255 the error will be flagged by a red border around the item when attempting to save it. The invalid entry will not be sent to the panel and the entry will be reset to the original value if edit mode is cancelled.

Figure 6-10: Panel Setting Error in Edit Mode

Note: Care should be taken when making some changes as they may prevent the panel from logging in to the IVC-32 card, for example by changing the login IP or login port.

Clicking on the left arrow button at the top of the IP Panels pane will display the panel filter facilities allowing panels to filtered by state and/or by name.

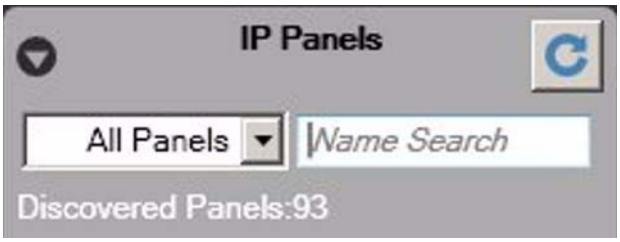


Figure 6-11: IP Panel Filter Options

To filter panels by status open the status menu (show as ‘All Panels’) and select the panel status filter.

Figure 6-12: Status Filter Menu

Select the required status filter to list all the panels in that state.

Figure 6-13: Panel Status Filtering

To filter panels by name enter the panel IP address, MAC address or panel ID into the 'Name Search' box and click on the 'Discover' button to refresh the display.

ASSIGNING A PANEL TO AN IVC-32 PORT

Panels can be assigned to ports on an IVC-32 card by dragging the panel icon from the IP Panels pane to the assignment zone on the IVC-32 card. Panels can also be moved from one IVC-32 port to another. The results of the action will depend on the status of the panel.

- Moving (assigning) a panel to a port on the IVC-32 card will only adjust the current user ID in the panel if no user ID in the panel currently exists. In this case a unique user ID is used as the user ID of the connection. The password on the connection is left blank. This initial state of the panel represented by the blue color and indicates that the panel is known to be out of use and ready for assignment.
- If a current user ID setting already exists on a panel it is not adjusted during an assignment. If the panel is used in another currently inactive Eclipse configuration this association would now have been broken.
- When a panel is not used by the current configuration but has a user ID (even though this may be a stale configuration) and the matrix IP address is in the current configuration the panel is

shown as red. This indicates that care should be taken before using this panel i.e. check its current usage before assigning it

- If a panel's matrix IP address is not in the current configuration and a user ID is set the panel is shown as grey to indicate it is configured for use on another system. In this state only a user logged in as administrator (in ECS) may assign it to an IVC-32 in the currently active configuration.
- To un-assign a panel that has been assigned to a port on an IVC-32 card, simply drag the panel off the port and drop it in the blank area to the right of the IVC-32 cards.

IP CARDS

The IP Cards pane will display a list of all the IVC-32 cards detected in the current matrix with the number of the matrix slot the card is in.

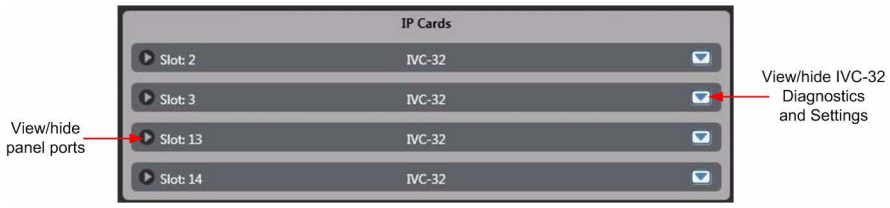


Figure 6-14: IVC-32 Cards List

Clicking on the left menu button on any card will display diagnostics and the current card configuration and allow the card configuration to be edited.

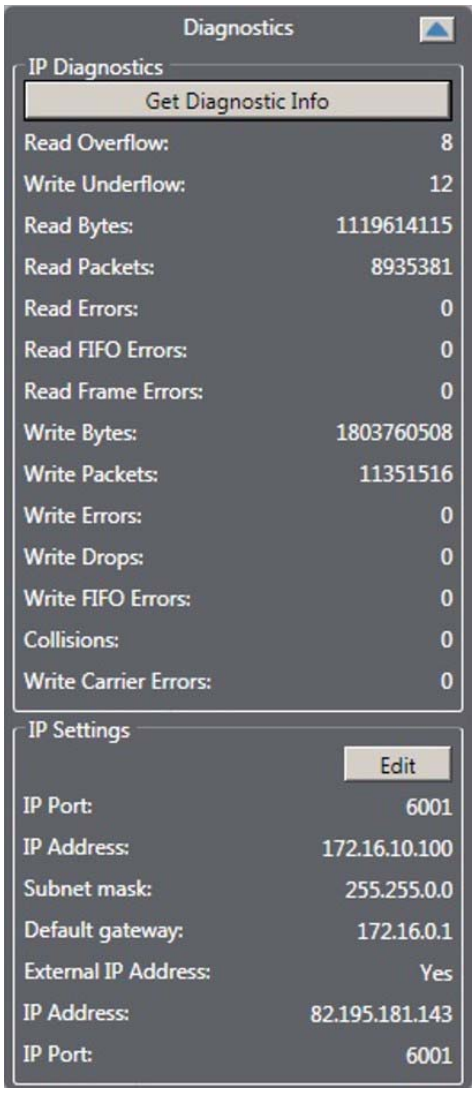


Figure 6-15: IVC-32 Cards Diagnostics and Settings

Click on the 'Get Diagnostic Info' button to retrieve the current buffer overflow statistics. If a significant number of buffer overflows are reported this may indicate network problems.

IVC-32 IP SETTINGS

The ‘IP Settings’ section displays the IP setup of the IVC-card. Click on the ‘Edit’ button to enable this section to allow changes. The fields will change from grey text to input boxes. The external IP address and IP port will only be enabled if the ‘External IP Address’ box is checked.

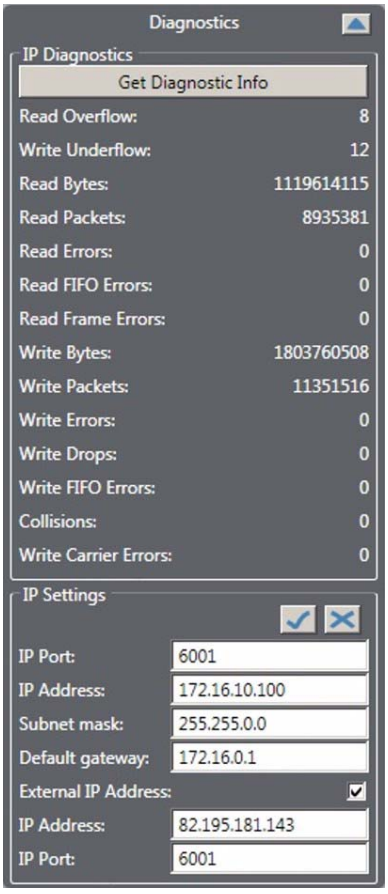


Figure 6-16: Editing IVC-32 Card Settings

IP Port

The port the panel will use to log in to the IVC-32 card. This will be the internal IP port if the panel is on the same LAN, or the external IP port if not.

This parameter should not normally be changed from the default value unless all the IP panels or Concert server are also updated to use the new port number. If this is not done the IP panels or Concert server will not be able to communicate with the IVC-32 card. Eclipse system administrators are advised to check with network administrators or IT that the default port may be used without causing a conflict with any other application on the network.

If the IP port number is changed ports 42001 and 1300 should not be used as these ports are already used by ECS. The Eclipse system

administrator should check with the network administrator or IT to obtain a port number to use.

IP Address

The IP address of the IVC-32 card that the panel will try to log in to. This will be the internal IP address if the panel is on the same LAN, or the external IP address if not.

Subnet Mask

Subnet mask used by the IVC-32 card to define the address range the card can access. Commonly set to 255.255.0.0 or 255.255.255.0.

Default Gateway

The address of the gateway to be used to communicate with external devices such as IP panels and Concert clients over the IP network.

External IP Address

This checkbox enables editing of the external IP address and port number below the checkbox.

IP Address

The external IP address that can be used to communicate directly with the IVC-32 card itself rather than the matrix via the IVC-32 card. This address is not used by IP panels etc.

IP Port

The external IP port used when communicating directly with the IVC-32 card using the external IP address.

When the edits are complete click on the tick button to save the changes. Alternatively click on the cross button to discard the changes. As soon as the changes are confirmed ECS will send them to the IVC-32 card.

IVC-32 CARD PANEL LIST

Clicking on the right button will display a list of the panels connected to the IP ports on the IVC-32 card.

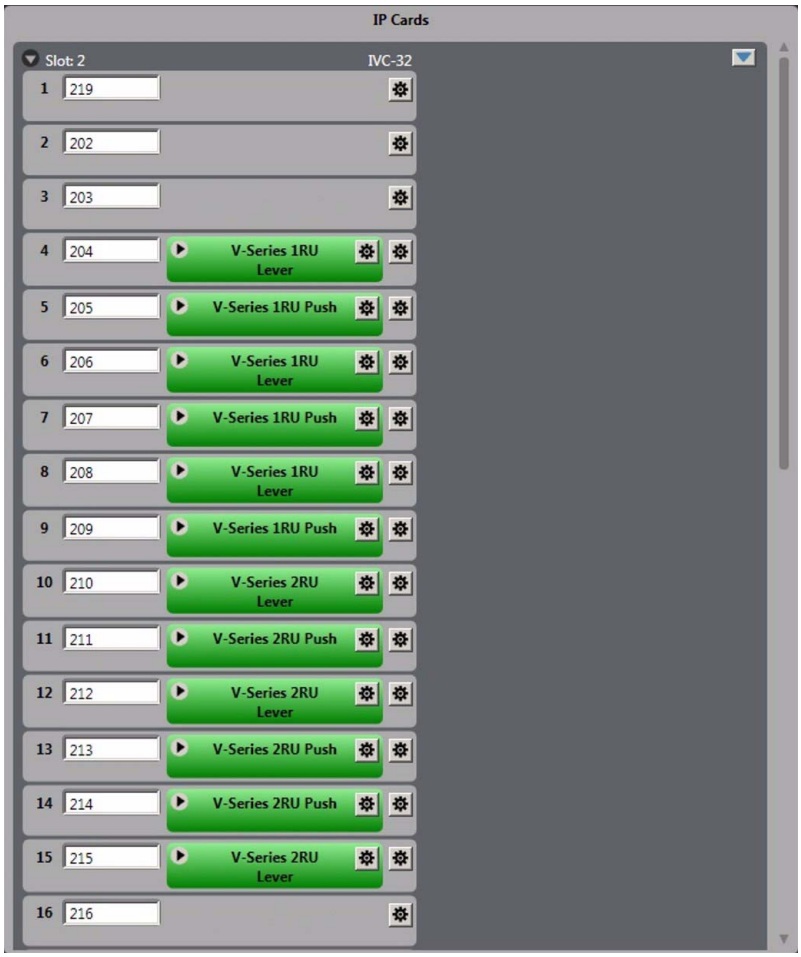


Figure 6-17: List of Ports on an IVC-32 Card

To display diagnostics for a panel click on the down arrow button on the right side of the entry for the required panel. This will open a diagnostics display of cumulative error data for the panel and the IVC-32 port it is connected to. Where data is presented for both panel and port this can be used to diagnose whether any network problems are at the matrix or panel end of the link.

Click on the 'Get Diagnostic Info' button to retrieve the current panel diagnostic data and display it.

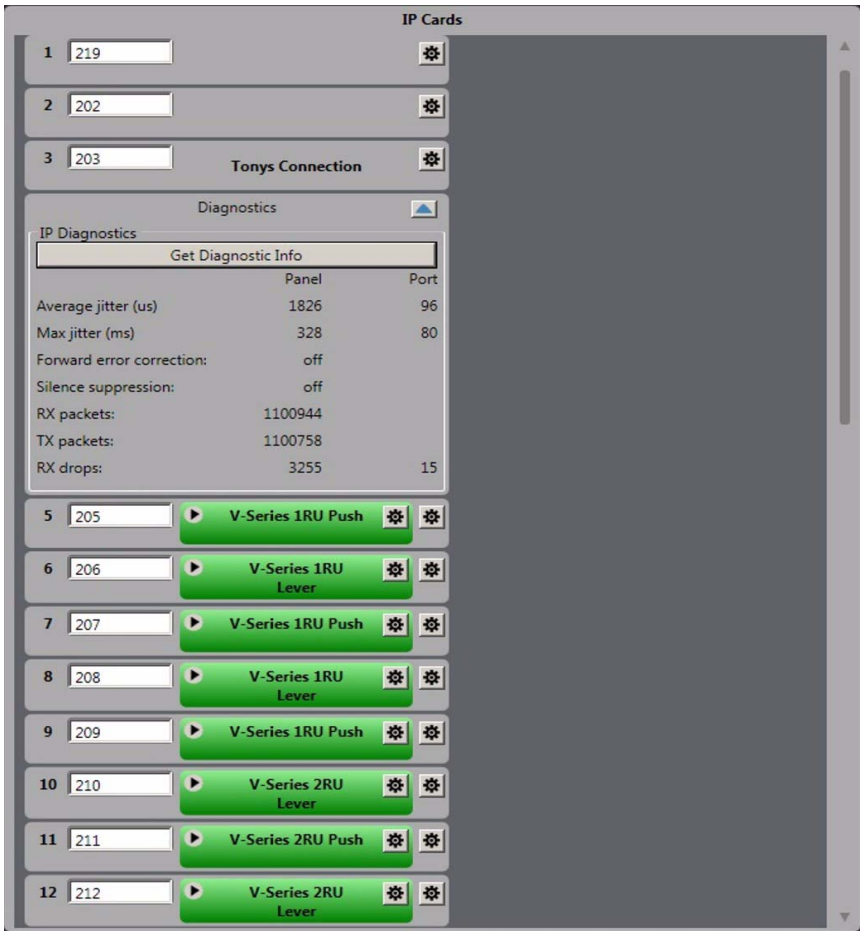


Figure 6-18: Panel Diagnostics Display

Jitter is a measure of the quality of the network connection. It represents the variation in the time period with which audio packets are received. For example, if an audio packet is expected every 10 milliseconds, but one audio packet is received 13 milliseconds after another, this represents a jitter of 3 milliseconds.

If the jitter gets too high the panel will start to experience audio dropouts.

WAN mode panels can deal with larger jitter than LAN mode panels, and Internet higher than WAN mode, as they use larger jitter buffers to smooth out the uneven arrival of audio packets. However the downside of this is that the larger the jitter buffer, the longer the audio delay.

- Average Jitter - the average packet interval in microseconds.
- Max Jitter - the highest packet interval measured in milliseconds.

  LAN mode panels can cope with jitter up to 80 milliseconds without audio dropout.

  WAN mode panels can cope with jitter up to 120 milliseconds

without audio dropout.

Internet mode panels can cope with jitter up to 200 milliseconds without audio dropout.

- Forward Error Correction - this allows the IVC-32 to recover from corruption in audio packets caused by a poor network link, at the cost of slightly increased network traffic and slightly higher audio delay. Forward Error Correction is set to a HIGH level in internet mode, LOW level in WAN mode and is disabled in LAN mode.
- Silence Suppression - this reduces the network traffic generated by a panel by stopping the transmission of packets when there is no audio input (that is, the microphone is turned off). It can cause a slight increase in audio delay. Silence suppression is enabled in WAN and Internet mode, but disabled in LAN mode.
- Rx Packets - this displays a count of the IP packets that a panel has received, and can be used to check the network connection. When Silence Suppression is enabled the numbers may only increase when the panel microphone is enabled.
- Tx Packets - this display a count of the IP packets that a panel has sent, and can be used to check the network connection. When Silence Suppression is enabled the numbers may only increase when the panel microphone is enabled.
- Rx Drops - The number of audio packets that have been lost. This can be due to network quality.

CONCERT USERS

The Concert Users pane obtains details of the Concert users on the specified Concert server. The user list can be obtained for all partitions on the server or for only one partition.

Figure 6-19: Initial Concert User Display

Click on the left hand button to enter or edit the IP address for the Concert server to be searched for users.

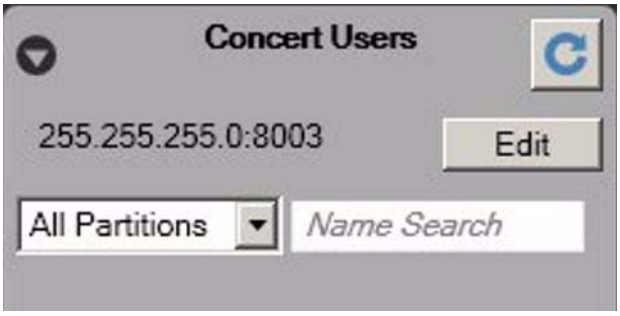


Figure 6-20: Current Concert Server IP Address

Click on the 'Edit' button to enable the Concert server IP address for editing in order to input the correct address.

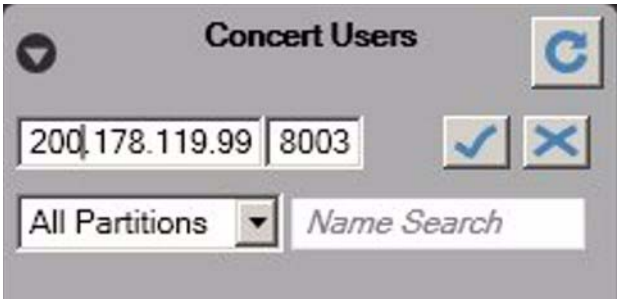


Figure 6-21: Editing the Concert Server Address

Enter the required address and optionally the port to be used. Normally the default port of 8003 should be accepted.

Click on the tick button to accept the edit or the cross button to cancel the edit.

Note: The port would not normally be changed unless there was a specific reason for this and the Concert server setup was also changed. If the port number is changed to an incorrect value IP Manager will not be able to connect to the server for the user information.

CONCERT SERVER DIALOG

Click on the discover button (top right) to obtain the server information. If 'All Partitions' is selected then all the Concert users known to the server will be listed. Clicking on the down arrow next to 'All Partition' will display a list of the partitions and allow a specific partition to be selected.

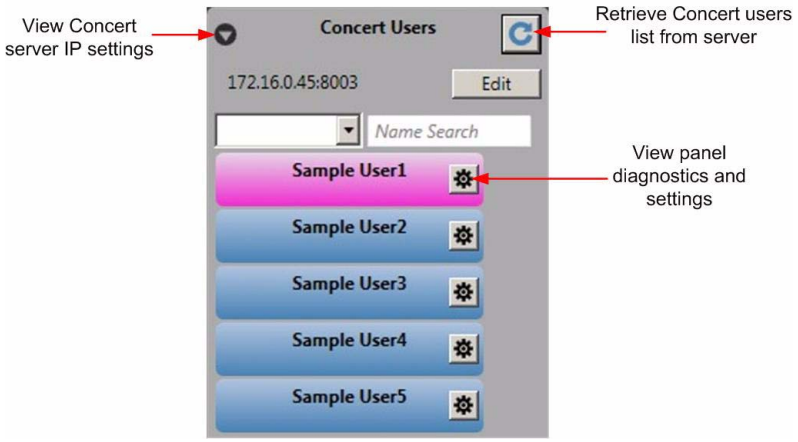


Figure 6-22: Concert Users on a Partition

The Concert users are color coded according to the user status. The possible user codes are described below.

- Blue - Concert user discovered, no configured login IP address or EclipseID or Password.
- Amber - Concert user discovered, configured in ECS to this configuration, but not logged in. This does not indicate whether or not it is configured in the matrix. The configuration of a port using the IP manager screen involves both the drag and drop in the UI and a map download to the matrix.
- Green - Concert user discovered, user is logged in to this configuration.
- Grey - Concert user is discovered, login IP address set to the IP address of another matrix.
- Red - Concert user discovered, user is not in any of the previous categories, may be used by other configuration on same frame IP address or not in use but setup on the current matrix.

Clicking on the arrow button on the right side of a user entry will display the user details and diagnostics.

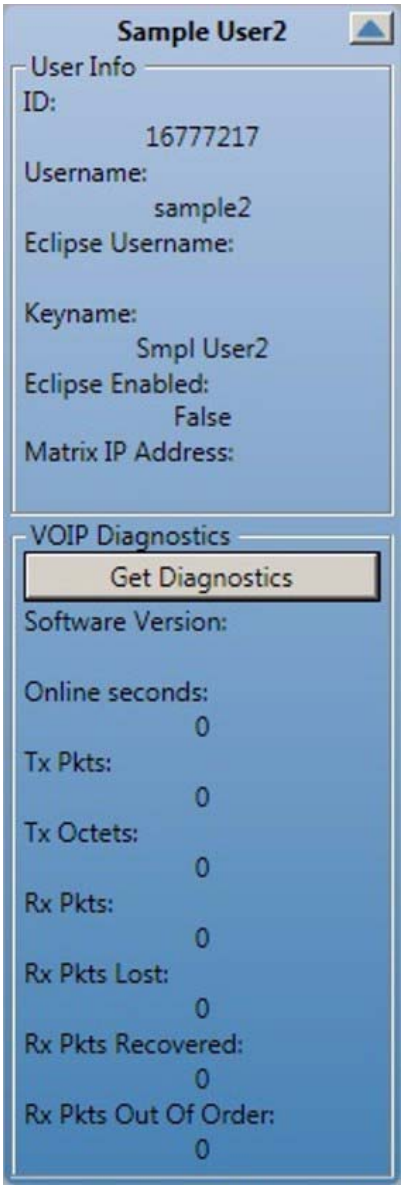


Figure 6-23: Concert User Information

The Concert user information fields provide the following details:

- ID - internal Concert identifier.
- Username - Concert user name.
- Eclipse Username - the name that is used to log in to the Eclipse system over IP. This is used in conjunction with the Concert panel. The Eclipse user name must be set up on the Eclipse system.
- Keyname - the name by which the Concert user is assigned to keys on Eclipse panels.

- Eclipse Enabled - whether the Concert user is allowed to log in to an Eclipse system.
- Matrix IP Address - the IP address of the matrix that the Concert user will be logged in to when communicating with an Eclipse system.

Concert User Diagnostics

The diagnostic display for Concert users indicates user activity.

- Software Version - the version of the Concert client in use. This field can only be displayed if the Concert user is logged in to the Concert server.
- Online seconds - length of time in seconds that the user has been online to the Concert server.
- Tx Pkts - number of ethernet packets transmitted to the user Concert client.
- Tx Octets - number of 8-bit bytes transmitted.
- Rx Pkts - number of ethernet packets received from the user Concert client.
- Rx Pkts Lost - number of ethernet packets from the user client lost.
- Rx Pkts Recovered - number of lost receive packets recovered.
- Rx Pkts Out Of Order - number of ethernet packets received from the user client in the wrong order.

The packet count diagnostics are to help diagnose network problems experienced by Concert clients such as excessive packet loss leading to lower audio quality.

ASSIGNING A CONCERT USER TO AN IVC-32 PORT

A Concert user can be associated with an IVC-32 port by dragging and dropping a Concert user entry onto a port on an IVC-32 card. If the port is already in use the current entry is removed and replace by the Concert user. Concert clients can also be moved between ports on an IVC-32 card by dragging and dropping.

The IVC32 port's talk label, listen label and description fields are updated with the information received from the EMS (Concert) server.

The connection ID is set as follows:

- If the Concert User already has a connection ID this is assigned to that port, otherwise a new unique connection ID is created and used by both concert user and port. One special case is when the eclipse ID is already in use, a new unique ID will be created for both concert user and port.
- By default a connection password is NOT set; a password is only used if the port has a password explicitly set on it in Matrix Hardware for added security. The password can be set in ‘IP Panel Settings’ under ‘Advanced Settings’.
- These changes are sent to the EMS server in real time during the drag and drop operation so no separate action is required to update the Concert server.

7 PANEL PROGRAMMING

From the Panel Programming screen (in the Configuration menu), the ECS operator can assign talk and listen labels to panel keys, assign labels to expansion panel keys, configure assignment panels, stack keys and set key specific functions.

Figure 7-1: Panel Programming Screen

The screen is split into 4 areas.

The top area provides scroll arrows and a drop down list of all intercom panels. The middle area provides a mimic of the intercom panels and is the area where labels are programmed onto the panel selectors. Also this area provides access to configure Expansion Panels to host Panels.

Note: Expansion panels can only be added or removed in the 'Cards and Ports' function.

The bottom left area provides a complete list of all the labels in the system available to programme onto panel selectors.

The bottom right area provides an area where stacked keys can be configured or specific key actions can be set.

The top area also provides access to key Label Options and Local Assignments.

Keys may be configured with a number of talk and listen properties:

The talk and listen properties that may be assigned to a key are:

- TALK sets a talk from the panel to a destination with no automatic listen to the destination.
- LISTEN sets a key to listen to the source without talking to the destination at the same time.
- TALK & LISTEN sets a talk key with listen.
- TALK & FORCED LISTEN sets a talk key with permanently made listen.
- DUAL TALK & LISTEN sets a dual talk and listen key (only on pushbutton panel types). This make the pushbutton activate a TALK on a press and hold and LISTEN with a short press on the same pushbutton.

Note: On i-Stations and ICS-2003 panels, when a port is set as a Global IFB it will appear twice in assignment picklists, with one entry being the original port, and one being the IFB. Controls will appear three times - once for talk, once for listen, and once for talk and listen

The following sections describe in detail how to program various types of panel. The basic method is the same for all panels so the procedures shown can be applied to similar types of panels where they are not specifically covered.

The main panel types covered indicate the various panel specific differences in the programming of these panel types.

V SERIES PANEL PROGRAMMING

The following section overs the programming of the V Series lever key, pushbutton, and rotary panel types and their associated expansion panels.

V SERIES LEVER KEY PANELS

Select ‘Panels’ from the Configuration menu to display the panel options toolbar and select the panel from the drop-down list or the ‘>’ icons to step through the list of panels.

Figure 7-2: V Series Lever Key Panel

Keys are assigned in the normal way by clicking on the required item in the list of available talk and listen labels then dragging the items to the required key and dropping them over the display corresponding to the key and right clicking on the mouse to confirm the assignment.

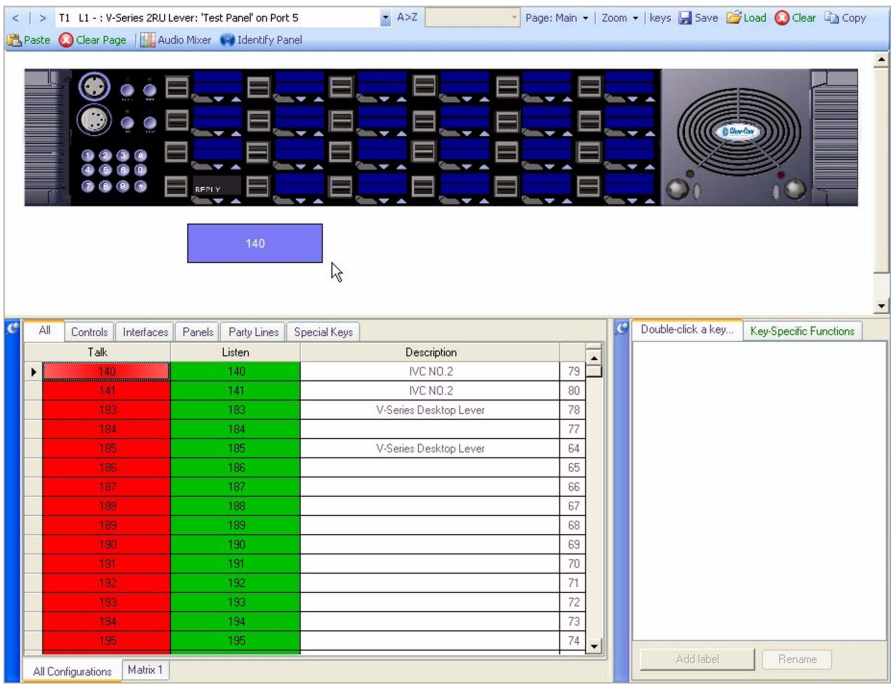


Figure 7-3: Assigning a Label on a Lever Key Panel

Each blue display window is divided into and upper and lower section with the upper section being the listen label and the lower section being the talk label. This corresponds to the lever key action to activate the talk or listen routes (up to listen, down to talk).

If the mouse pointer is positioned over a key display/label the details of the label are displayed.

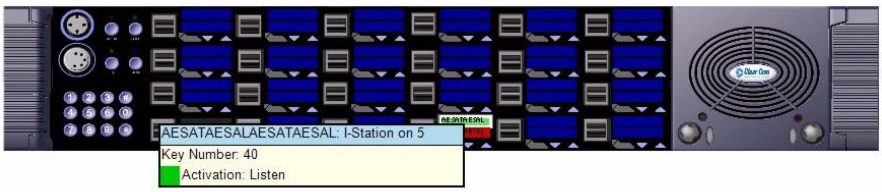


Figure 7-4: V Series Lever Key Assignment

To display the action menu for a key position the pointer over the label and right-click the mouse.

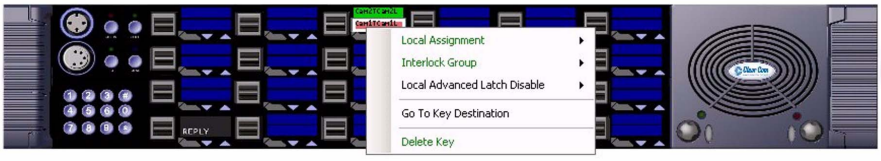


Figure 7-5: Key Properties Menu

Local Assignment

Click on the ‘Local Assignment’ entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into an interlock group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From **Panel Programming**, select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the ‘Interlock Group’ entry to display the interlock group options list.
4. Select the required interlock group or ‘None’ if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

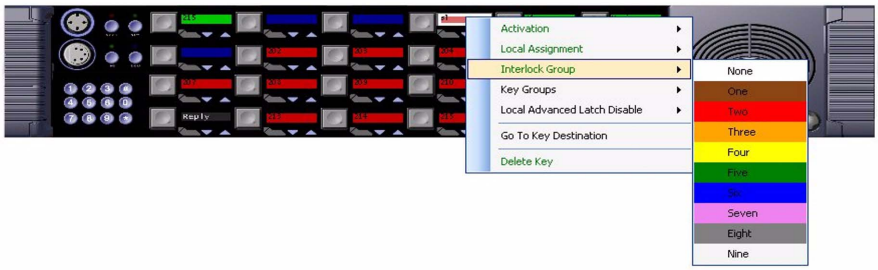


Figure 7-6: Interlock Group Assignment

Lever key panels (1RU and 2RU) can support up to eight lever key expansion panels (not pushbutton or rotary expansion panels). To add an expansion panel use the Advanced Settings options under ‘Cards

and Ports'; to display the expansion panel mimic open the right hand drop-down list (normally displaying 'Main Panel') to show the list of all the expansion panels configured and select the required expansion panel.

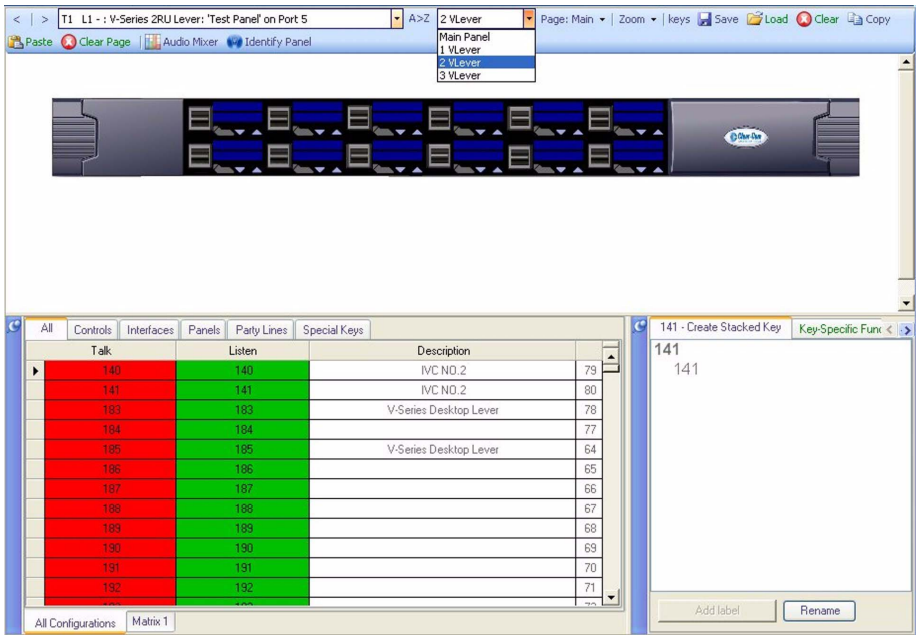


Figure 7-7: V Series Lever Key Expansion Panel

Labels are assigned to keys in the same way as main panels and the option menu is available.

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same function as 'Latch Disable' in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the 'Panels' screen; for a party line key the 'Party Lines' editor will be displayed with the party line highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted; the green listen label for that key will not be deleted.

V SERIES PUSHBUTTON PANELS

Select ‘Panels’ from the Configuration menu to display the panel options toolbar and select the panel from the drop-down list or the ‘>’ icons to step through the list of panels.

Figure 7-8: V Series Pushbutton Panel

Keys are assigned in the normal way by dragging items from the list of available sources and destinations to the required key and dropping them over the display corresponding to the key.

Unlike the lever key panels only one label can be assigned to a key rather than two but key activation can be assigned unlike lever key panels.

If the mouse pointer is positioned over a key display/label the details of the label are displayed.

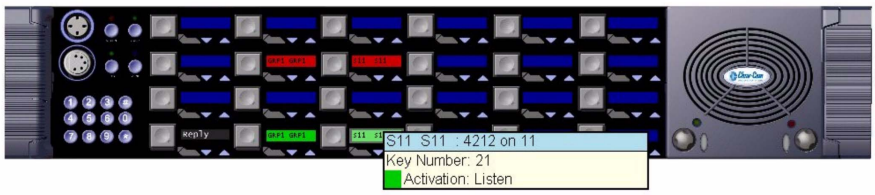


Figure 7-9: V Series Pushbutton Assignment

To display the action menu for a key position the pointer over the label and right-click the mouse.

Figure 7-10: Pushbutton Properties Menu

Local Assignment

Click on the 'Local Assignment' entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into a selector group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From Panel Programming, select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the 'Interlock Group' entry to display the interlock group options list.
4. Select the required interlock group or 'None' if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

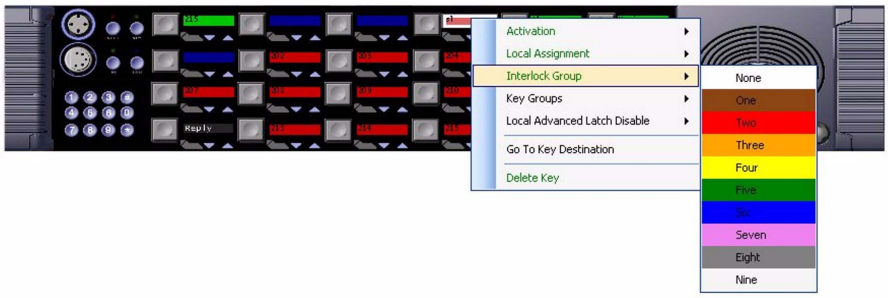


Figure 7-11: Interlock Group Assignment

Activation

The activation option allows the key type to be configured to determine how the key will behave when activated via the pushbutton. To set the key activation type right click over the required key to display the options menu and then select the 'Activation' item to display the activation options.

Figure 7-12: Pushbutton Key Activation

Pushbutton panels (1RU and 2RU) can support up to eight pushbutton expansion panels (not lever key or rotary expansion panels). To add an expansion panel use the panel options under 'Advanced Settings'; to display the expansion panel mimic open the right hand drop-down list (normally displaying 'Main Panel') to show the list of all the expansion panels configured and select the required expansion panel.

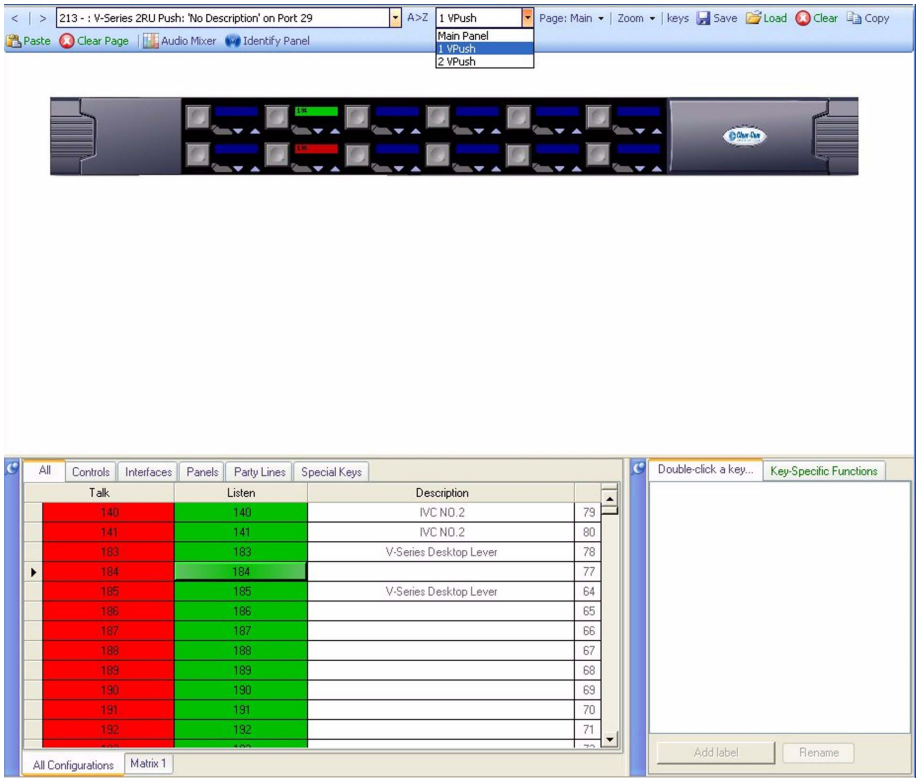


Figure 7-13: V Series Pushbutton Expansion Panel

Labels are assigned to keys in the same way as main panels and the option menu is available.

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same function as 'Latch Disable' in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the 'Panels' screen; for a party line key the 'Party Lines' editor will be displayed with the party line highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted; the green listen label for that key will not be deleted.

V SERIES ROTARY PANELS

Select ‘Panels’ from the Configuration menu to display the panel options toolbar and select the panel from the drop-down list or the ‘>’ icons to step through the list of panels.

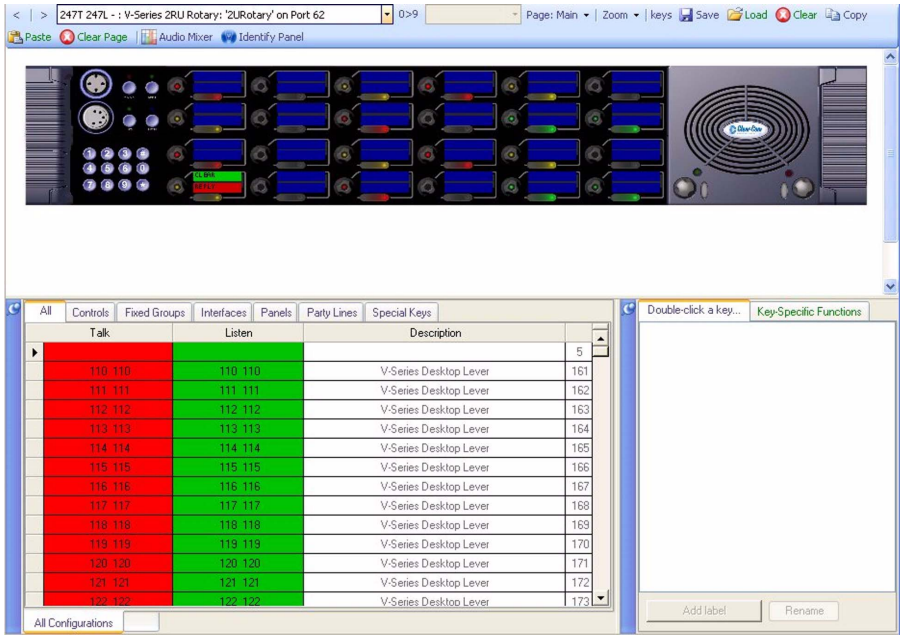


Figure 7-14: V Series Lever Key Panel

Keys are assigned in the normal way by clicking on the required item in the list of available talk and listen labels then dragging the items to the required key and dropping them over the display corresponding to the key and right clicking on the mouse to confirm the assignment.

On rotary panels Listen and Talk are actioned by separate controls (rotary knob for Listen, talk button for Talk) so different paths can be assigned for Talk and Listen on the same key.

It is also possible to assign other keys to the Reply key on rotary panels, unlike other V-Series panels.

Figure 7-15: Assigning a Label on a Rotary Control Panel

Each blue display window is divided into and upper and lower section with the upper section being the listen label and the lower section being the talk label. This corresponds to the rotary push action to activate the listen route and the talk button below the display to activate the talk route.

If the mouse pointer is positioned over a key display/label the details of the label are displayed.

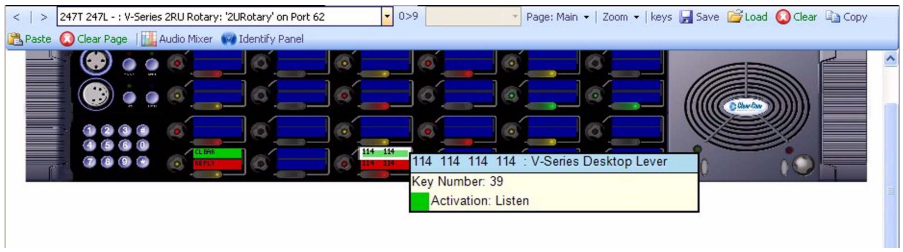


Figure 7-16: V Series Rotary Key Assignment

To display the action menu for a key position the pointer over the label and right-click the mouse.

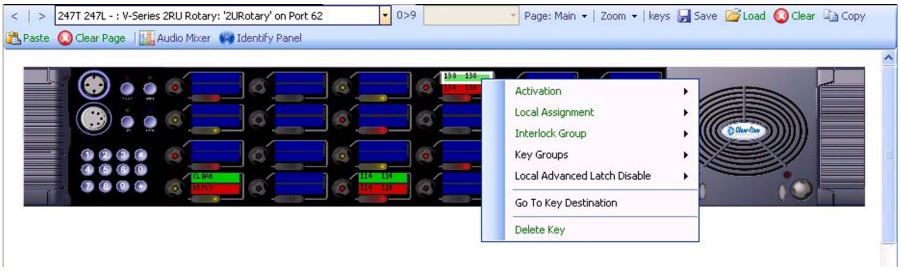


Figure 7-17: Rotary Key Properties Menu

Local Assignment

Click on the 'Local Assignment' entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into an interlock group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From **'Panel'** select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the 'Interlock Group' entry to display the interlock group options list.
4. Select the required interlock group or 'None' if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

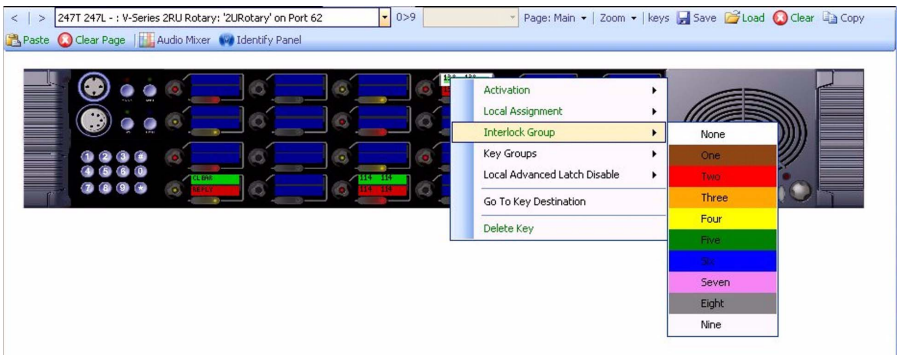


Figure 7-18: Interlock Group Assignment

Rotary key panels (1RU and 2RU) can support up to eight rotary key expansion panels (not pushbutton or lever key expansion panels). To add an expansion panel use the Advanced Settings options under 'Cards and Ports'; to display the expansion panel mimic open the right hand drop-down list (normally displaying 'Main Panel') to show the list of all the expansion panels configured and select the required expansion panel.

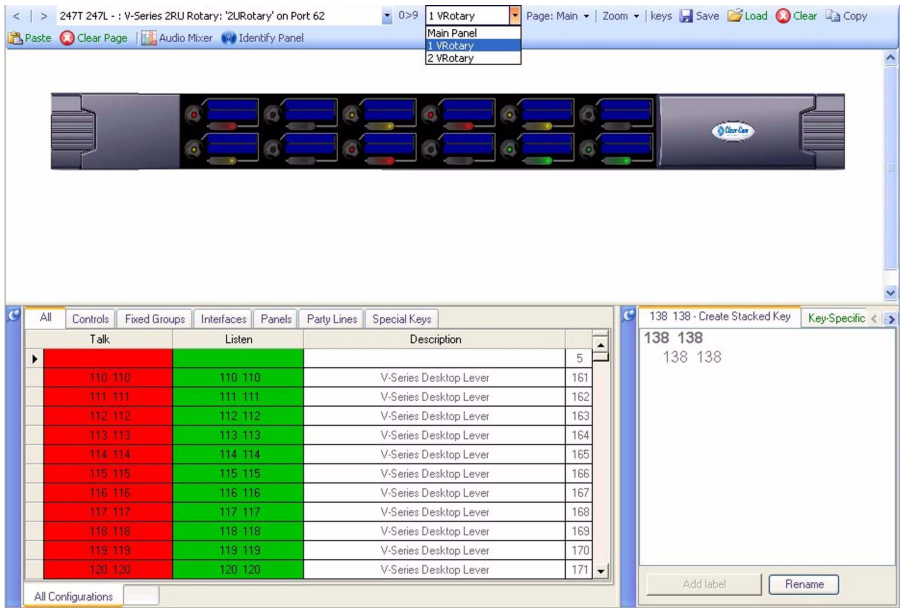


Figure 7-19: V Series Rotary Key Expansion Panel

Labels are assigned to keys in the same way as main panels and the option menu is available.

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same

function as ‘Latch Disable’ in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the ‘Go To Key Destination’ entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the ‘Panels’ screen; for a party line key the ‘Party Lines’ editor will be displayed with the party line highlighted.

Delete Key

Click on the ‘Delete Key’ entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted; the green listen label for that key will not be deleted.

V-SERIES PANEL OPTIONS

This functionality is limited to the current configuration and ‘label sets’ can not be transferred between configurations. The options for panel Save, Load, Copy, Paste and Clear are provided on the panel configuration toolbar above the panel mimic.

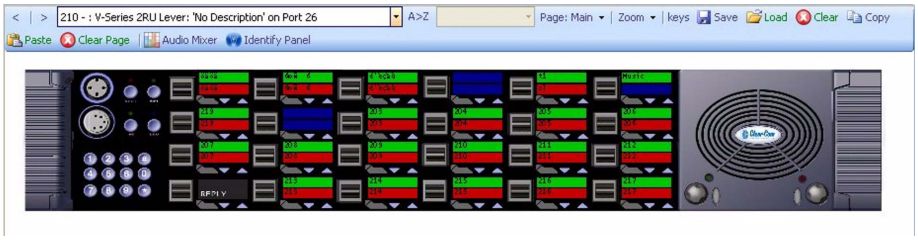


Figure 7-20: Panel Load Options

Page

Displays a list of pages for the panel as a drop-down list. Click on the required page to update the mimic to the page.

Save

Clicking on the ‘Save’ button on the Panel Programming toolbar will display the label file save dialogue.

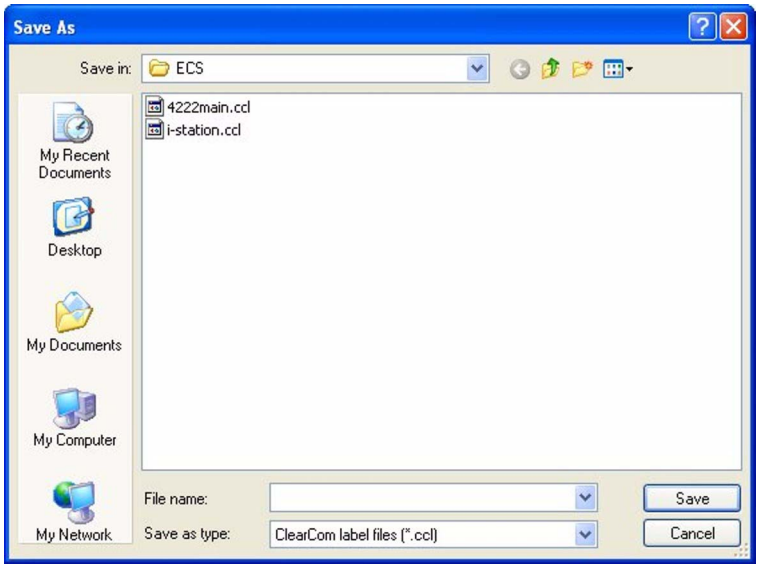


Figure 7-21: Label File Save Dialogue

Enter the name of the file which will default to the .ccl extension. The keys from all pages are saved (including shift pages where supported) but the keys from any expansion panels that may be fitted are not saved in the file. Expansion panel labels must be saved separately.

Load

Clicking on the ‘Load’ button on the Panel Programming toolbar will display the dialogue screen to select and open a panel label (.ccl) file.

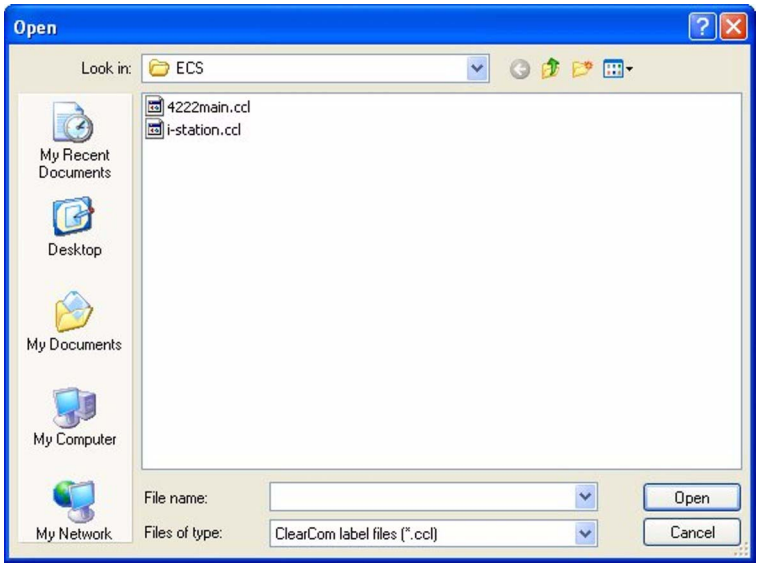


Figure 7-22: Label File Load Dialogue

Select the required file and click on the ‘Open’ button to load the labels from the file. When a label load is performed all the labels on a panel (including shift pages) and cleared before the new labels are applied.

If the type of panel being loaded is not the same as the type of panel the label file was saved from this may result in labels being lost when the panel is loaded.

Copy

Clicking on the ‘Copy’ button on the Panel Programming toolbar will copy the labels of the current panel page only into the scratch pad. It does not copy labels from expansion panels.

Paste

Clicking on the ‘Paste’ button on the Panel Programming toolbar will paste the labels copied to the scratch pad onto the currently selected panel. All the labels currently on the page will be lost. This allows single pages of labels to be pasted on to the panel.

If the type of panel being pasted to is not the same as the type of panel the labels were copied from this may result in labels being lost when the labels are pasted onto the new panel.

Clear

Clicking on the ‘Clear’ button on the Panel Programming toolbar will clear all the labels from the current panel including shift pages but excluding any attached expansion panels.

Audio Mixer

Displays the audio mixer panel that allows the levels of individual crosspoints to be adjusted interactively. This facility can only be used with V-Series panels. See chapter 7 for details of the Audio Mixer.

Identify Panel

Selecting the ‘Identify Panel’ button on the panel programming toolbar will cause the panel currently being edited to flash the panel buttons or LEDs red and display ‘IDENTIFYME’ in the bottom left display. In order to use this facility monitoring must be enabled using the ‘Monitor’ button on the ECS toolbar.

This facility is only available for V-Series panels; the ‘Identify Panel’ button will be greyed out for other panel types.

CONCERT PANEL PROGRAMMING

A Concert panel is a virtual panel (or soft panel) that runs on a PC and provides the same functionality as a normal hardware panel such as a V-Series panel. Concert panels can connect to an Eclipse matrix via a Concert server.

Concert panel keys act as pushbuttons rather than lever keys and are operated using a mouse or other pointing device. Concert panels do not support any expansion panels.

The following section covers the programming of Concert panels.

Select ‘Panels’ from the Configuration menu to display the panel options toolbar and select the panel from the drop-down list or the ‘>’ icons to step through the list of panels.

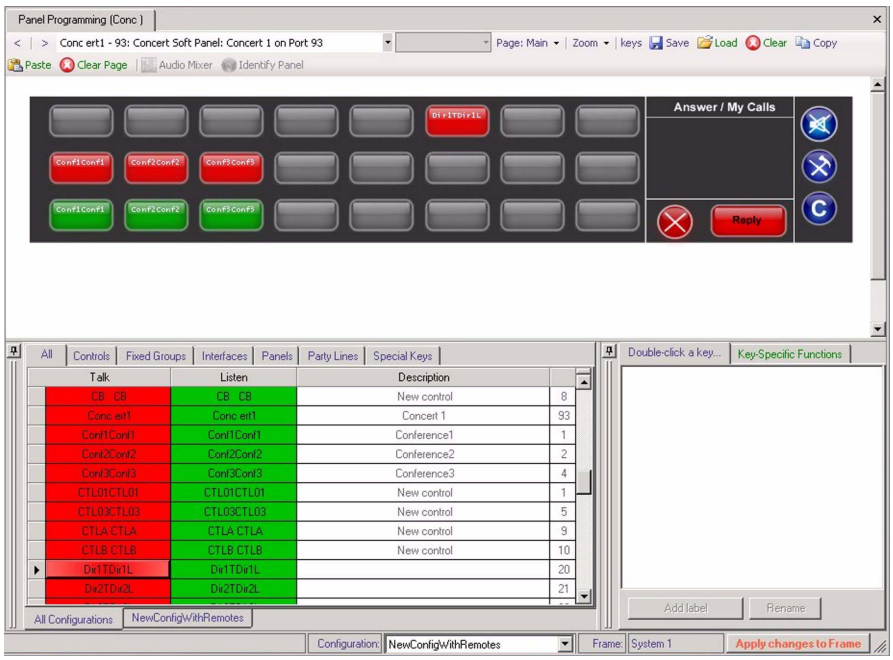


Figure 7-23: Concert Panel

Keys are assigned in the normal way by dragging items from the list of available sources and destinations to the required key and dropping them over the display corresponding to the required key.

As with V-Series pushbutton panels only one label can be assigned to a key and key activation can be assigned.

If the mouse pointer is positioned over a key display/label the details of the label are displayed.

Figure 7-24: Concert Panel Assignment

To display the action menu for a key position the pointer over the label and right-click the mouse.

Figure 7-25: Concert Panel Properties Menu

Local Assignment

Click on the ‘Local Assignment’ entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into a selector group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From Panel Programming, select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the ‘Interlock Group’ entry to display the interlock group options list.
4. Select the required interlock group or ‘None’ if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

Figure 7-26: Concert Interlock Group Assignment

Activation

The activation option allows the key type to be configured to determine how the key will behave when activated via the button. To set the key activation type right click over the required key to display the options menu and then select the 'Activation' item to display the activation options.

Figure 7-27: Concert Panel Key Activation

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same function as 'Latch Disable' in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the 'Panels' screen; for a party line key the 'Party Lines' editor will be displayed with the party line highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted; the green listen label for that key will not be deleted.

CONCERT PANEL OPTIONS

This functionality is limited to the current configuration and 'label sets' can not be transferred between configurations. The options for panel Save, Load, Copy, Paste and Clear are provided on the panel configuration toolbar above the panel mimic.

Figure 7-28: Concert Panel Load Options

Page

Displays a list of pages for the panel as a drop-down list. Click on the required page to update the mimic to the page.

Save

Clicking on the ‘Save’ button on the Panel Programming toolbar will display the label file save dialogue.

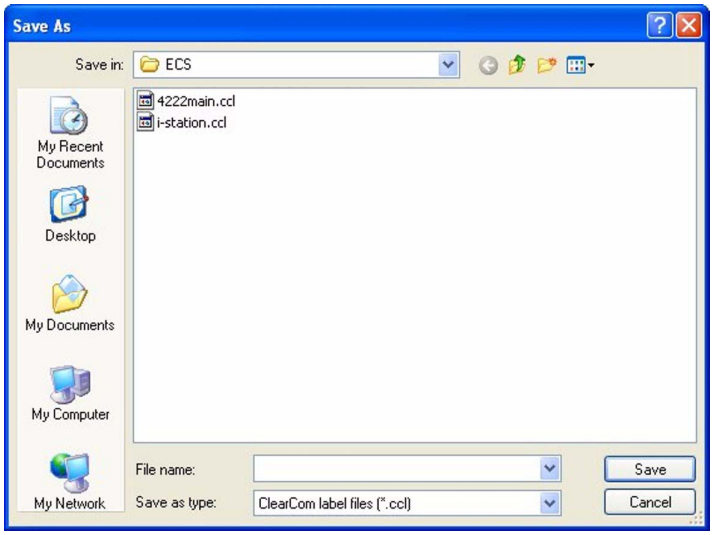


Figure 7-29: Label File Save Dialogue

Enter the name of the file which will default to the .ccl extension. The keys from all pages are saved (including shift pages where supported).

Load

Clicking on the ‘Load’ button on the Panel Programming toolbar will display the dialogue screen to select and open a panel label (.ccl) file.

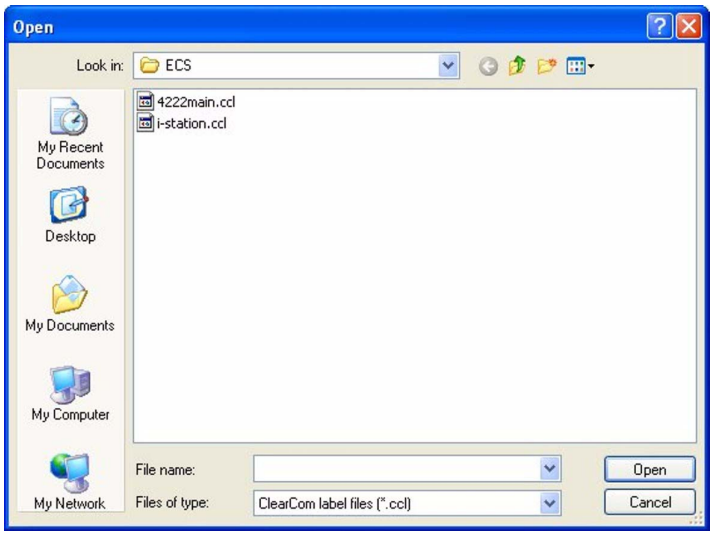


Figure 7-30: Label File Load Dialogue

Select the required file and click on the 'Open' button to load the labels from the file. When a label load is performed all the labels on a panel (including shift pages) and cleared before the new labels are applied.

If the type of panel being loaded is not the same as the type of panel the label file was saved from this may result in labels being lost when the panel is loaded.

Copy

Clicking on the 'Copy' button on the Panel Programming toolbar will copy the labels of the current panel page only into the scratch pad.

Paste

Clicking on the 'Paste' button on the Panel Programming toolbar will paste the labels copied to the scratch pad onto the currently selected panel. All the labels currently on the page will be lost. This allows single pages of labels to be pasted on to the panel.

If the type of panel being pasted to is not the same as the type of panel the labels were copied from this may result in labels being lost when the labels are pasted onto the new panel.

Clear

Clicking on the 'Clear' button on the Panel Programming toolbar will clear all the labels from the current panel including shift pages.

Audio Mixer

Displays the audio mixer panel that allows the levels of individual crosspoints to be adjusted interactively. This facility can only be used with V-Series panels. See chapter 7 for details of the Audio Mixer.

Identify Panel

Selecting the ‘Identify Panel’ button on the panel programming toolbar will cause the panel currently being edited to flash the panel buttons or LEDs red and display ‘IDENTIFYME’ in the bottom left display. This facility is only available for V-Series panels; the ‘Identify Panel’ button will be greyed out for other panel types.

I-STATION PROGRAMMING

This section deals with programming i-Station main panels and i-Station expansions panels which are programmed in exactly the same way. The v-Station panels which may also be attached to i-Stations as expansion panels are non-programmable.

ASSIGNING LABELS

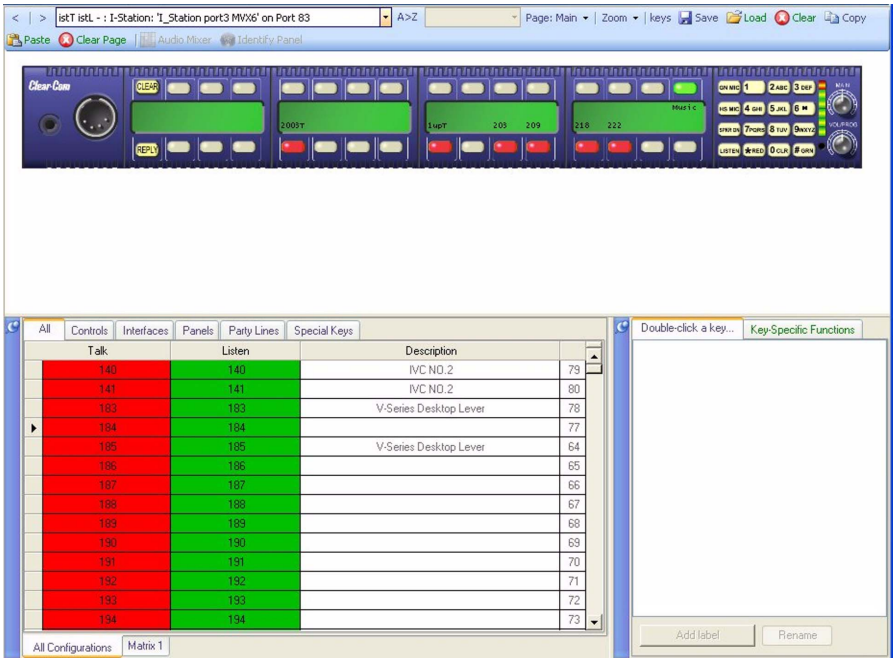


Figure 7-31: Label Assign Screen

To assign a label to a given selector

1. Locate the mimic of the panel to programme by either using the scroll arrows or the drop down list box from the middle area of the screen.
2. Locate the Talk or Listen Label (Red or Green columns) required to be programmed onto the panel from the bottom left area of the screen.
3. To select the required Label, drag the mouse cursor until it is positioned above either the Talk or Listen label. When the mouse is dragged over any Label, the Label highlights to provide the user an indication that this is the current Label.
4. Once the cursor is positioned over the required Label, left click the mouse button to select the Label.

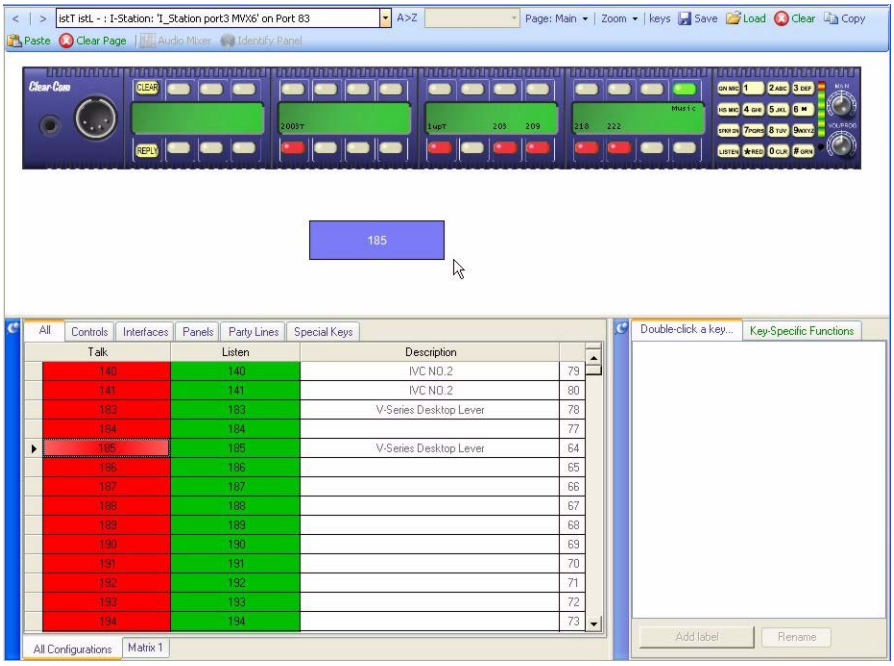


Figure 7-32: Reassign Labels Screen

5. Drag the mouse cursor up the screen into the mimic area and position it over the required key.
6. To place the Label in the required position left click the mouse and the Label will drop into position.
7. Repeat for all required Label programming.

The label to be assigned will show orange and can be placed on a panel key.

To program a Combo key (Talk and Listen key) press and hold the keyboard “Ctrl” key and then select the Talk label and place that onto the panel.

To program a Talk and Forced Listen key press and hold the keyboard “Alt” key and then select the Talk label and place the label onto the panel.

RE-ASSIGNMENT OF LABELS

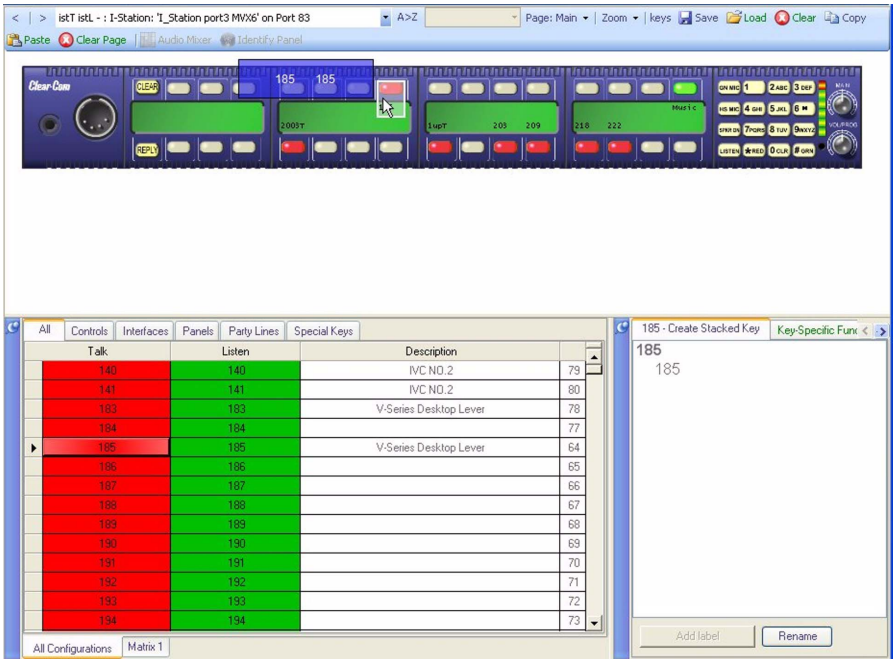


Figure 7-33: Reassign Label Screen

To re-assign a Label

1. Select the required port and locate the Label that is required to be re-assigned.
2. To select the new Label and place the mouse cursor over the Label.
3. Left click and hold down the mouse button.
4. Whilst holding down the mouse button drag slightly down the mouse until the Label is free from the display.
5. Position the Label over the new position and release the mouse button to drop the label into the new position.

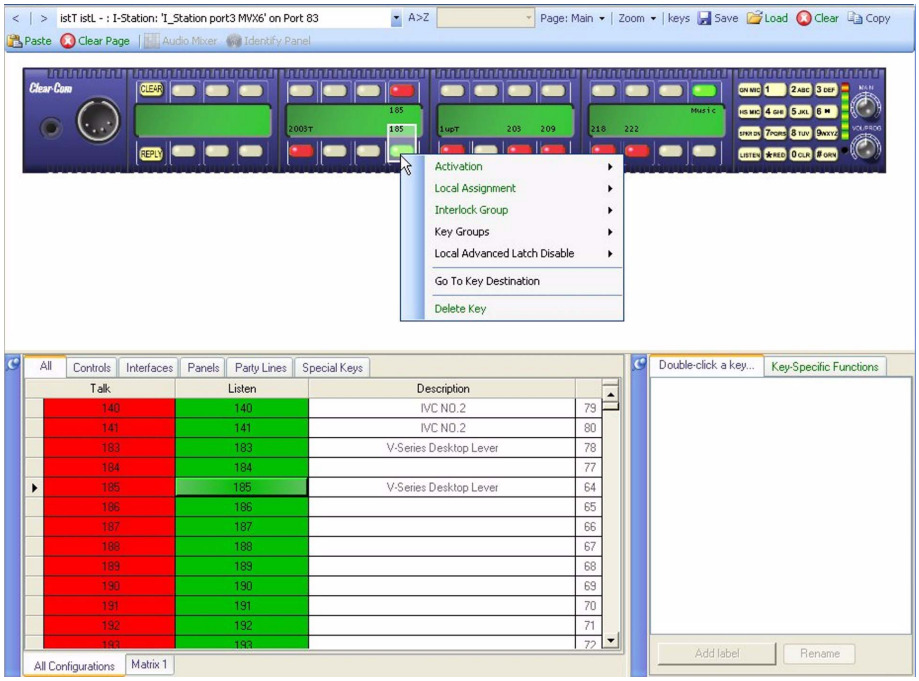


Figure 7-34: Delete Label Screen

Activation

The activation option allows the key type to be configured to determine how the key will behave when activated via the pushbutton. To set the key activation type right click over the required key to display the options menu and then select the 'Activation' item to display the activation options.

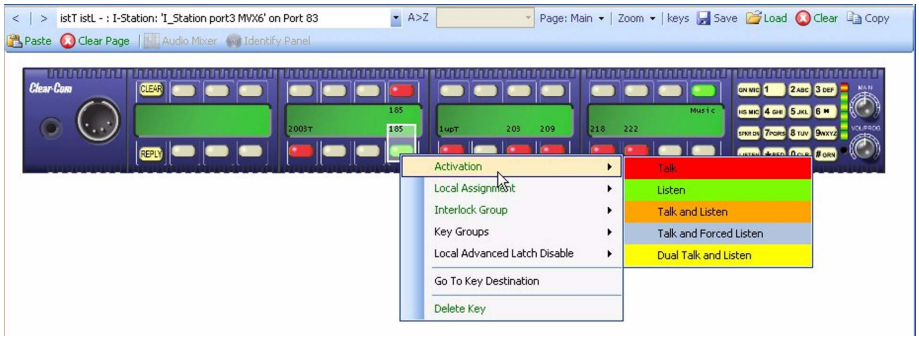


Figure 7-35: Key Assignment Menu

The activation options are: Talk, Listen, Talk and Listen, Talk and Forced Listen or Dual Talk and Listen.

- Talk sets a talk from the i-station to a destination with no automatic listen to the destination.

- Listen sets a key to listen to the source without talking to the destination at the same time. Use as a monitor key. Press the volume level up/down buttons under the display to increase listen level.
- Talk and Listen sets a talk key with listen. Press the volume level up/down buttons under the display to increase or mute the listen level.
- Talk and Forced Listen sets a talk key with permanently made listen. Press the volume level up/down buttons under the display to increase or mute the listen level.
- Dual talk and Listen sets a Dual talk and listen key. This makes the pushbutton activate a Talk and Listen on a press and hold or latch a Listen with a short press and release (less than 200ms) on the same pushbutton.

Local Assignment

Click on the 'Local Assignment' entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into a selector group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From Panel Programming, select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the 'Interlock Group' entry to display the interlock group options list.
4. Select the required interlock group or 'None' if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.

6. The key interlock groups will be displayed in the key information popup.

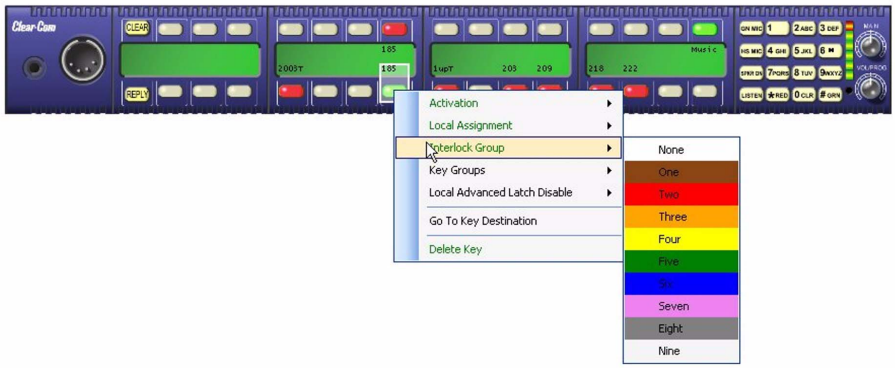


Figure 7-36: I-Station Interlock Group Assignment

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same function as 'Latch Disable' in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the 'Panels' screen; for a party line key the 'Party Lines' editor will be displayed with the party line highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted). Note that only the highlighted label will be deleted.

DISPLAYING NAME, PORT NUMBER AND DESCRIPTION FIELDS

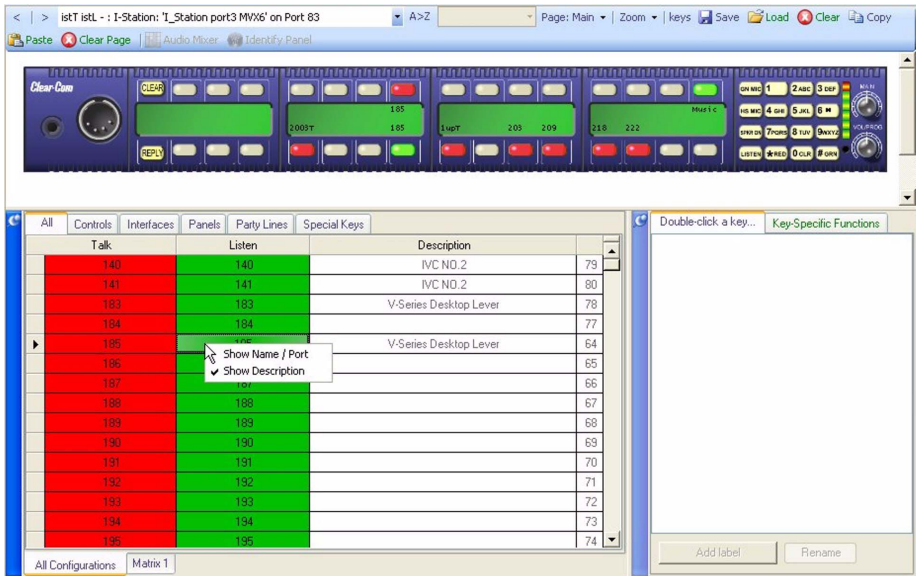


Figure 7-37: Panel Description Display

1. To display the Port Number and Description Fields in the Labels Window right click the mouse button over the Labels window to display the context menu.
2. Left Click the mouse button on Show Name/Port to display these fields.
3. Left Click the mouse button on Show description to display this field.

I-STATION ADVANCED FUNCTIONS

The i-Station operates in one of four modes:

- **COM mode** is the default mode. In this mode the i-Station panel operates as a simple panel. Talk labels are assigned to destinations, and listen labels are assigned to sources.
- **IFB mode** allows the i-Station to assign a program audio source or sources to an IFB Global destination. For example “on-the-air” audio can be assigned to the “talent” or announcer in a television studio application. It is called “IFB mode” because the program audio source that is routed to the IFB destination can be “interrupted” by an incoming intercom call to the IFB destination.
- **PL mode** allows the panel operator to add and delete members of a party line directly from the panel.
- **FG mode** allows the panel operator to add and remove members of a fixed group directly from the panel.

For more details of how to use the i-Station advanced functions please refer to the i-Station user manual (part 810305Z).

USING ECS TO SET UP I-STATION FIXED GROUP MEMBERSHIP OPTIONS

A “fixed group” occurs when one source needs to call many destinations at one time. The panel operator can add and remove members of a fixed group in real time with the i-Station provided that the feature has been enabled in ECS.

To enable the feature in ECS

1. Open the required map configuration in ECS.
2. From the ’Cards and Ports’ screen, select the required panel.
   The Advanced Settings screen opens.
3. From Advanced Settings, select Fixed Group Assignment from AP Panel Options. Click the drop-down box to turn the feature on or off.
   - When the check box reads “true” the feature is on.
   - When the check box reads “false” the feature is off.

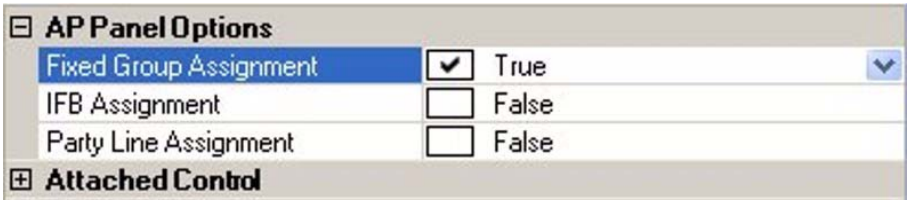


Figure 7-38: AP Panel Options

4. From Panel Programming, select the panel to which the i-Station is connected, and immediately below it, select the i-Station panel.
5. Assign the fixed group source as a “talk” key on the i-Station panel on screen.
6. Assign potential fixed group “members” as “listen” keys on the i-Station panel on the screen.
7. From the Eclipse Downloads menu, click Apply and Reset.
   ECS uploads the information to the i-Station panel.

USING ECS TO SET UP I-STATION IFB OPTIONS

After a program audio source has been attached to a matrix port, the ECS operator can assign the audio source to an IFB destination with the i-Station Assignment Panel in panel programming.

To assign an audio source to an IFB destination

1. In ’Cards and Ports’ select the i-Station panel.

Note: Highlight the entire row when selecting the panel.

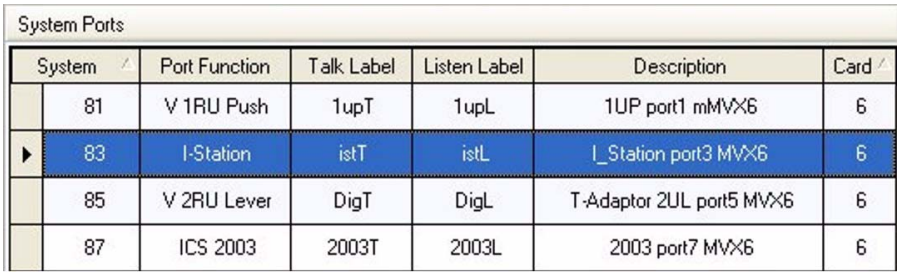


Figure 7-39: Select i-Station

2. From Advanced Settings, select IFB assignment from AP Panel Options, and click the drop-down box until the “True” box is checked.

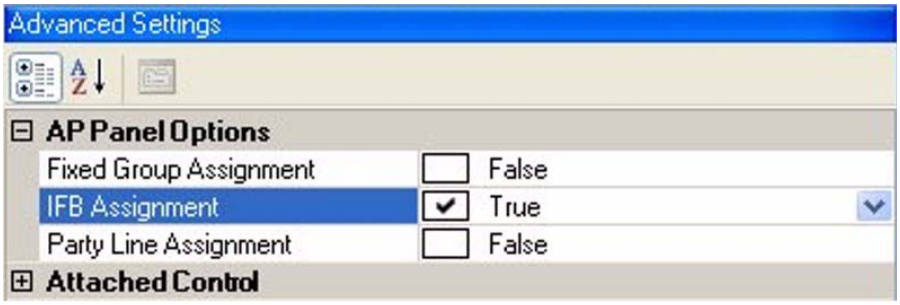


Figure 7-40: Set “IFB Assignment” to True

3. From Panel Programming, select the i-Station panel.

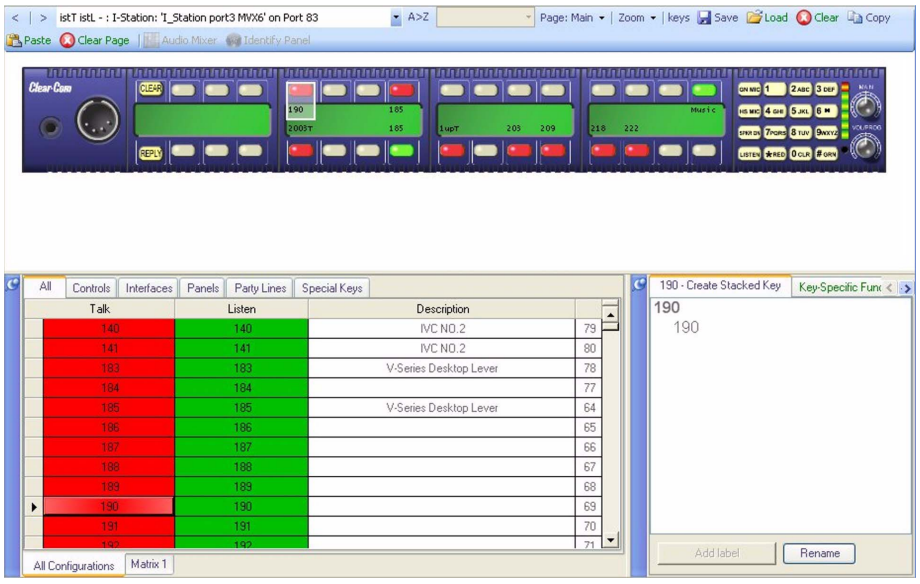


Figure 7-41: Select the i-Station from Panel Programming

4. Assign the IFB “destination” as a “talk” label.
5. Assign the IFB “source” or “sources” as a “listen” label.

6. Click Apply Label Changes from Eclipse Download menu to send information to the matrix.

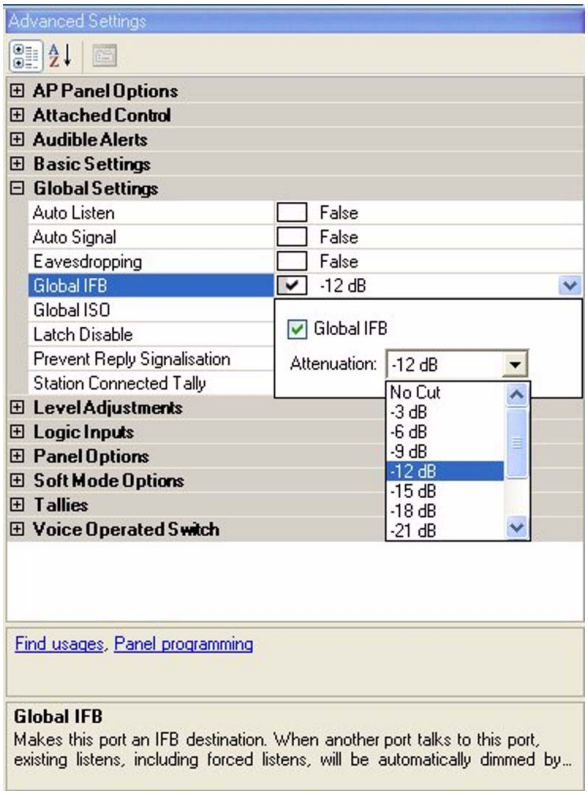


Figure 7-42: IFB Attenuation Set

USING ECS TO SET UP I-STATION PARTY LINE MEMBERSHIP OPTIONS

The panel operator can add and remove members of a party line in real time with the i-Station provided this feature has been enabled in ECS.

To enable the feature in ECS

1. Open the required map configuration in ECS.
2. From the 'Cards and Ports' screen, select the desired panel.
   The Advanced Settings screen opens.
3. From Advanced Settings, select Party Line Assignment from i-Station AP Panel Options. Click the drop-down box to turn the feature on or off.
   - When the check box reads "true" the feature is on.
   - When the check box reads "false" the feature is off.

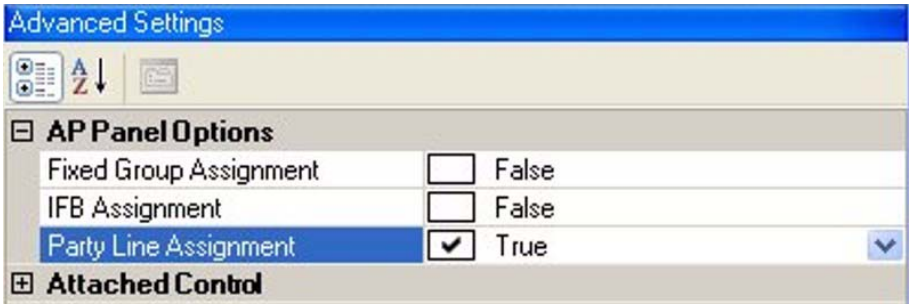


Figure 7-43: AP Panel Options

4. From Panel Programming select the i-Station panel.
5. Assign the party line as a “talk” key on the on screen i-Station panel.
6. Assign potential party line “members” as “listen” keys on the on screen i-Station panel.
7. From the Eclipse Downloads menu, click Apply and Reset.
   ECS uploads the information to the i-Station panel.

I-SERIES PANEL OPTIONS

This functionality is limited to the current configuration and ‘label sets’ can not be transferred between configurations. The options for panel Save, Load, Copy, Paste, Upload and Clear are provided on the panel configuration toolbar above the panel mimic.

Figure 7-44: Panel Load Options

Page

Displays a list of pages for the panel as a drop-down list. Click on the required page to update the mimic to the page.

Save

Clicking on the ‘Save’ button on the Panel Programming toolbar will display the label file save dialogue.

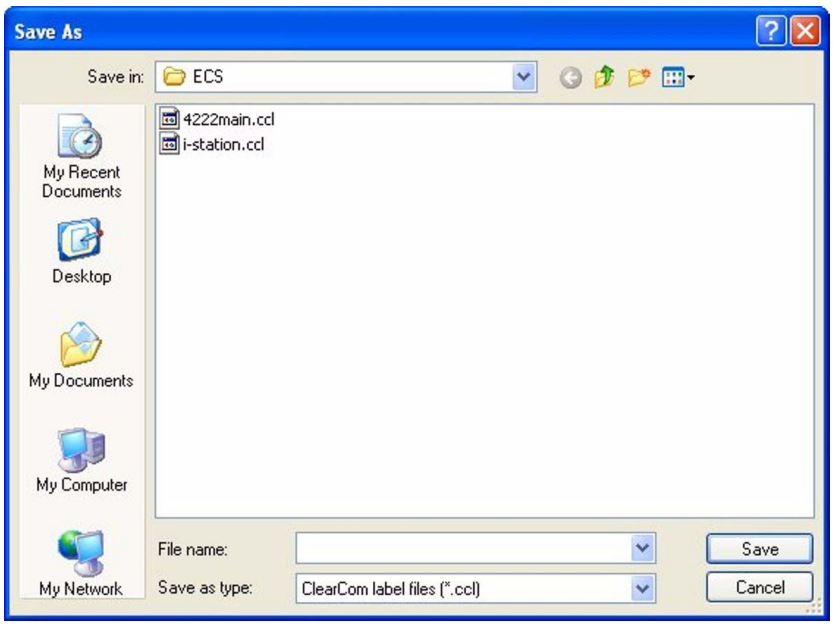


Figure 7-45: Label File Save Dialogue

Enter the name of the file which will default to the .ccl extension. The keys from all pages are saved (including shift pages where supported) but the keys from any expansion panels that may be fitted are not saved in the file. Expansion panel labels must be saved separately.

Load

Clicking on the 'Load' button on the Panel Programming toolbar will display the dialogue screen to select and open a panel label (.ccl) file.

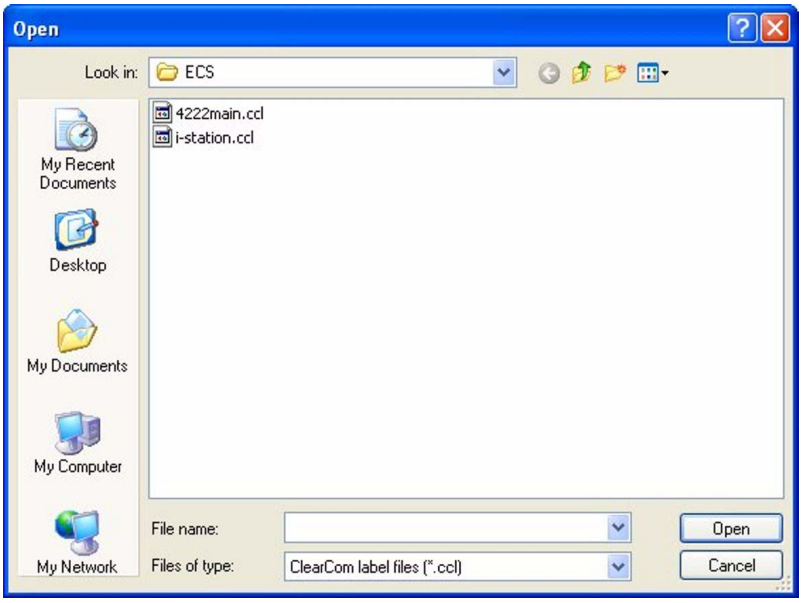


Figure 7-46: Label File Load Dialogue

Select the required file and click on the ‘Open’ button to load the labels from the file. When a label load is performed all the labels on a panel (including shift pages) and cleared before the new labels are applied.

If the type of panel being loaded is not the same as the type of panel the label file was saved from this may result in labels being lost when the panel is loaded.

Copy

Clicking on the ‘Copy’ button on the Panel Programming toolbar will copy the labels of the current panel page only into the scratch pad. It does not copy labels from expansion panels.

Paste

Clicking on the ‘Paste’ button on the Panel Programming toolbar will paste the labels copied to the scratch pad onto the currently selected panel. All the labels currently on the page will be lost. This allows single pages of labels to be pasted on to the panel.

If the type of panel being pasted to is not the same as the type of panel the labels were copied from this may result in labels being lost when the labels are pasted onto the new panel.

Clear

Clicking on the ‘Clear’ button on the Panel Programming toolbar will clear all the labels from the current panel including shift pages but excluding any attached expansion panels.

Audio Mixer

Displays the audio mixer panel that allows the levels of individual crosspoints to be adjusted interactively. This facility can only be used with V-Series panels.

Identify Panel

Selecting the ‘Identify Panel’ button on the panel programming toolbar will cause the panel currently being edited to flash the panel buttons or LEDs red and display ‘IDENTIFYME’ in the bottom left display. This facility is only available for V-Series panels; the ‘Identify Panel’ button will be greyed out for other panel types.

SOFT MENU RESTRICTIONS (I-STATION)

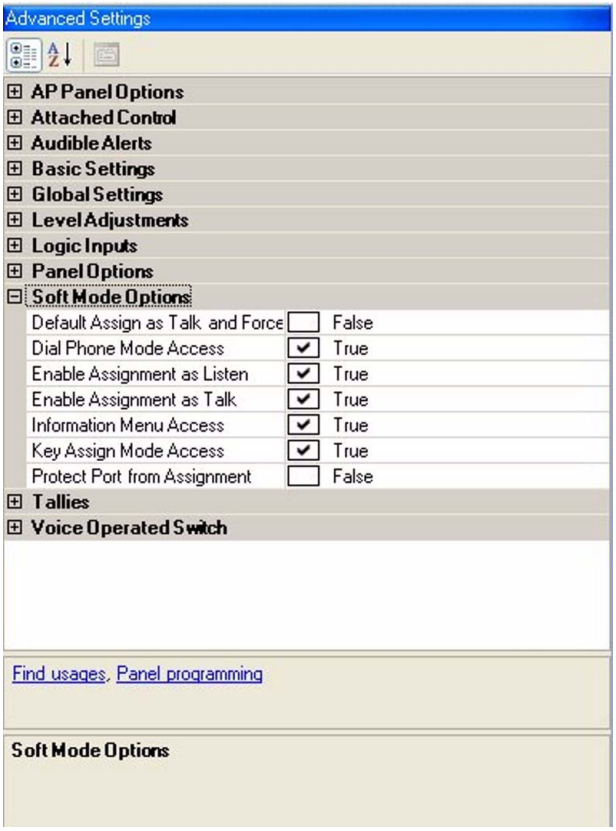


Figure 7-47: Soft Menu Restrictions for i-Station

The i-Station Advanced Settings area, located on the rightmost side of 'Cards and Ports' offers three Soft Menu Restrictions:

- Dial Phone Mode Access
- Information Mode Access
- Key Assign Mode Access

By default the panel operator has access to these options from an i-Station, but if the check box for any of these options is cleared the panel operator will not be able to access that menus from the i-Station front panel.

ICS PANEL PROGRAMMING

The ICS panels (ICS 2003, ICS 1008, ICS 1016, ICS 102, ICS 52, ICS 62) are programmed in the same way as the i-Station by dragging and dropping labels onto keys. In the case of the ICS 2003 up to four labels can be assigned to a key by stacking the labels on the screen above the required key.

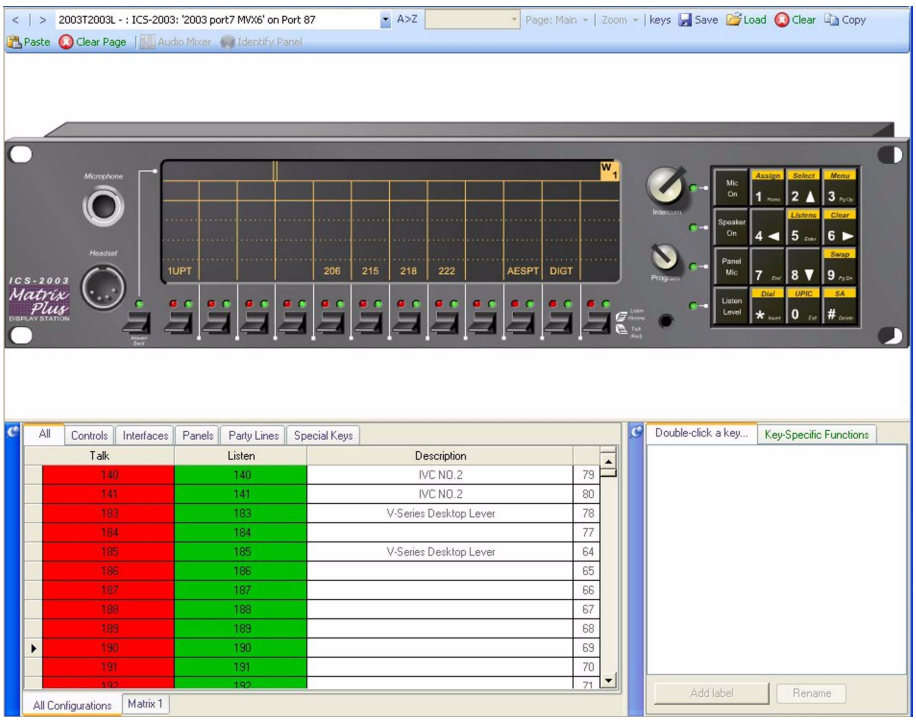


Figure 7-48: ICS 2003 with Labels Assigned

The ICS 2003 panel has the functionality allowing keys to be locally assigned and ECS can retrieve the local assignments and update the mimic of the panel with the latest assignments from the panel.

To remove local assignments from the ICS 2003, an ‘Apply Label Changes’ with the ‘Clear all talk paths and listen levels during reset’ check box set download is required.

ICS 2003 ADVANCED FUNCTIONS

ICS 2003 panels are able to assign keys on other Eclipse panels via the menu functions and to load and view local assignments on other Eclipse panels. However it is not possible to assign key functions to 4000 Series II panels or display key assignments on 4000 Series II panels using an ICS 2003 panel.

ICS EXPANSION PANELS

The ICS 2003, ICS 52, ICS 62, ICS 92 and ICS 102 main panels support the AP22, Xpl12 and Xpl22 expansion panels while the ICS 1008 and ICS 1016 support the Exp1016 expansion panel. All these panels operate in a similar way and can be programmed in the same way in ECS.

To add expansion panels to an ICS main panel select the required ICS main panel and go to Advanced Settings in ’Cards and Ports’, select the Panel Options menu, click the drop-down arrow and select the

appropriate expansion panel. This enables the expansion panel to be programmed from ECS.

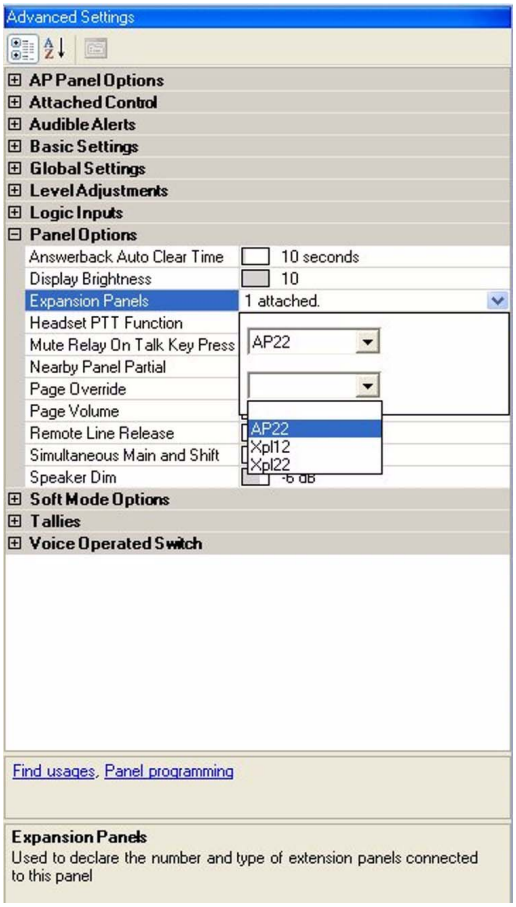


Figure 7-49: From Panel Options Pane select the Expansion Menu

In Panel Programming select the ICS main panel required and then open the menu to the right of the main panel select to display the expansion panels list.

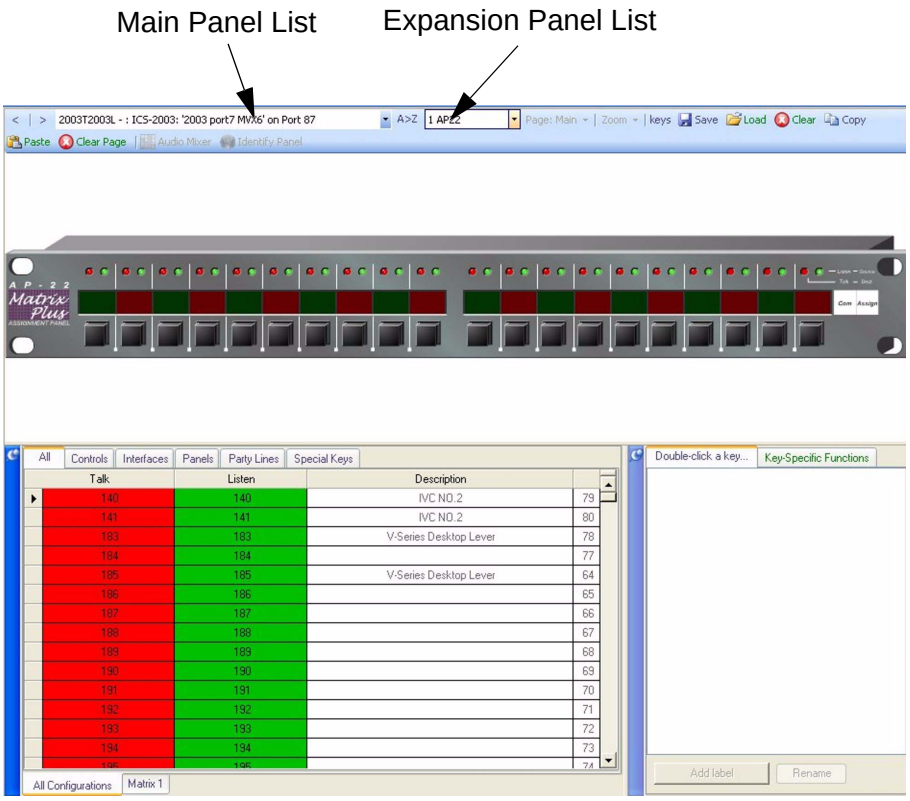


Figure 7-50: Select an expansion panel from the drop-down list

Select the required expansion panel from the expansion panel list.

The expansion panel is displayed on the screen and labels may be assigned to the panel as usual. The AP22, Xpl12 and Xpl22 expansion panels connects to the accessories port of an ICS 2003, ICS 92/52, or ICS 102/62 panel.

When assigning labels to ECS expansion panels in Panel programming note that two labels i.e. Talk and Listen can be assigned to keys on Xpl12 and Xpl22 expansion panels as these are lever key panels.

Note: Expansion panels are deleted using the 'Cards and Ports' editor.

ASSIGNMENT PANEL PROGRAMMING

An assignment panel allows the panel operator to assign a program audio source, or sources, to an IFB destination. The panel operator can also add and remove members from party lines and fixed groups with an assignment panel. ICS assignment panels are ICS 2003, ICS 52, ICS 92 and AP22 expansion panels when connected to a master panel that is an assignment panel. Xpl12 and Xpl22 expansion panels cannot be used as assignment panels.

Assignment panels operate in one of four modes:

- **COM mode** is the default mode. In this mode the assignment panel operates as a simple panel. Talk labels are assigned to destinations, and listen labels are assigned to sources.
- **IFB mode** allows the assignment panel to assign a program audio source or sources to an IFB Global destination. For example the panel operator can assign “on-the-air” audio to the “talent” or announcer in a television studio application. It is called “IFB mode” because the program audio source that is routed to the IFB destination can be “interrupted” by an incoming intercom call to the IFB destination.
  Assignment panels can only add local source ports to local IFB destination ports (local meaning ports on the same matrix).

Note: The ICS 2003 panel treats IFB mode as a Forced Listen.

- **PL mode** allows the panel operator to add and delete members of a party line in real time.
- **FG mode** allows the panel operator to add and remove members of a fixed group in real time.

USING ECS TO SET UP IFB OPTIONS

After the program audio source has been connected to a matrix port, ECS is used to enable the assignment panel to assign the audio source to an IFB destination.

To assign an audio source to an IFB destination:

1. In ‘Cards and Ports’ select the assignment panel or the panel to which the AP22 expansion panel is connected.

Note: Highlight the entire row when selecting the panel.

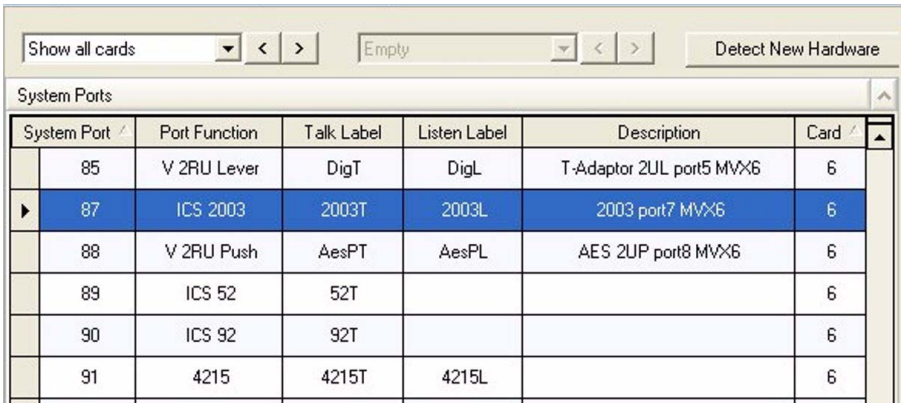


Figure 7-51: Select Host Panel for AP22

2. To add an AP22 expansion panel if required select Expansion Panel from Panel Options, and then select “AP22” from the drop-down list.

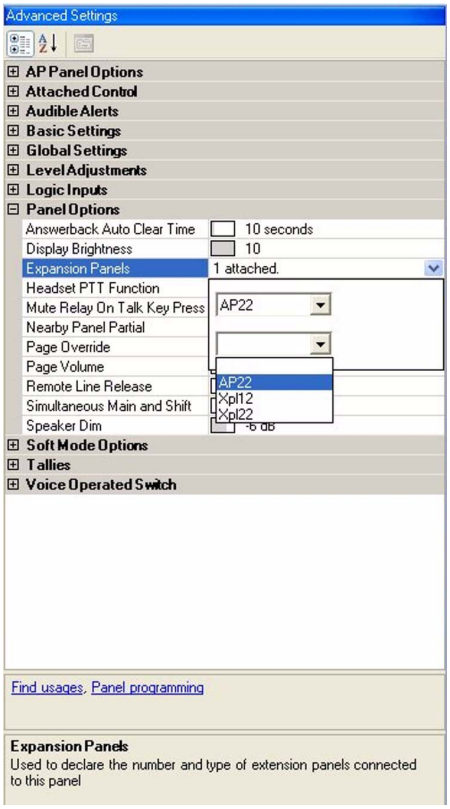


Figure 7-52: Select AP22 from the drop-down list

3. From Advanced Settings, select IFB assignment from AP Panel Options, and click the drop-down box until the “True” box is checked.

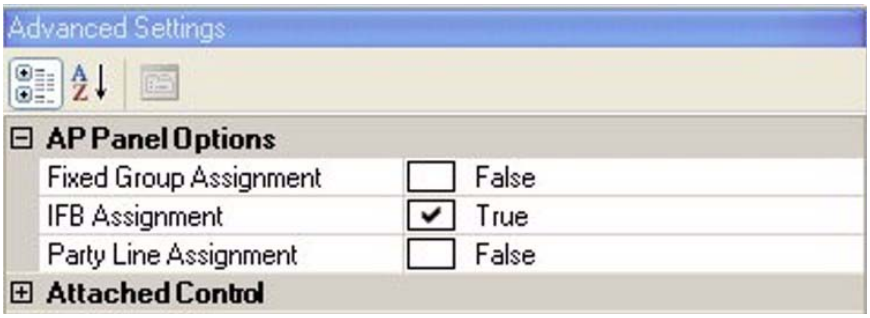


Figure 7-53: Set “IFB Assignment” to True

From ‘Global Settings’ under Advanced Settings select ‘Global IFB’ and open the drop-down list to set the attenuation level to be applied to the audio feed when it is interrupted.

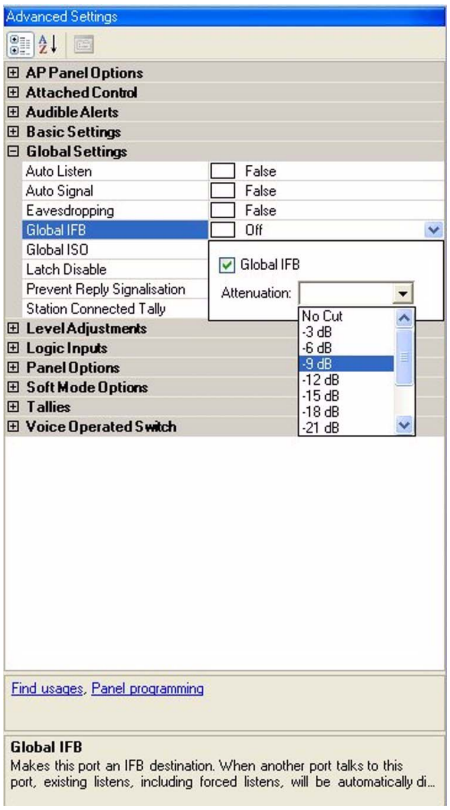


Figure 7-54: IFB Attenuation Set

4. From ‘Panels’ in the Configuration menu select the assignment panel required and if the AP22 expansion panel is to be modified select the AP22 from the expansion panel list to the right of the main panel list.

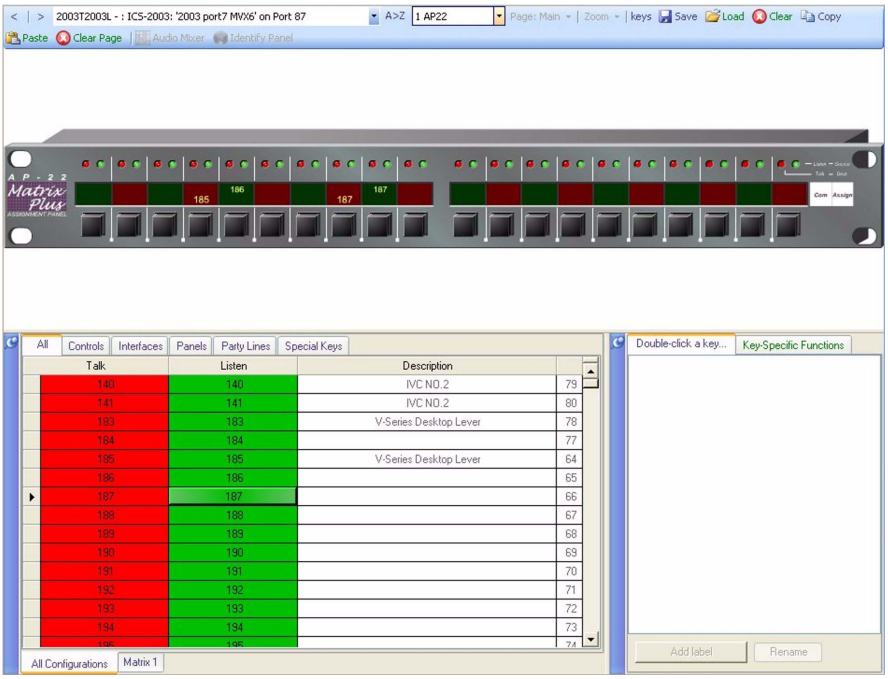


Figure 7-55: Select the AP22 from Panel Programming

5. Assign the IFB “destination” as a “talk” label.
6. Assign the IFB “source” or “sources” as a “listen” label.
7. Click Apply Label Changes from Eclipse Download menu to send information to the matrix.

USING ECS TO SET UP ASSIGNMENT PANEL PARTY LINE MEMBERSHIP OPTIONS

The panel operator can add and remove members of a party line in real time from an assignment panel provided this feature has been enabled for the panel in ECS.

To enable the feature in ECS

1. Open the required map configuration in ECS.
2. From the ‘Cards and Ports’ screen, select the desired panel.

   The Advanced Settings screen opens.
3. From Advanced Settings, select Party Line Assignment from AP Panel Options. Click the drop-down box to turn the feature on or off.
   - When the check box reads “true” the feature is on.
   - When the check box reads “false” the feature is off.

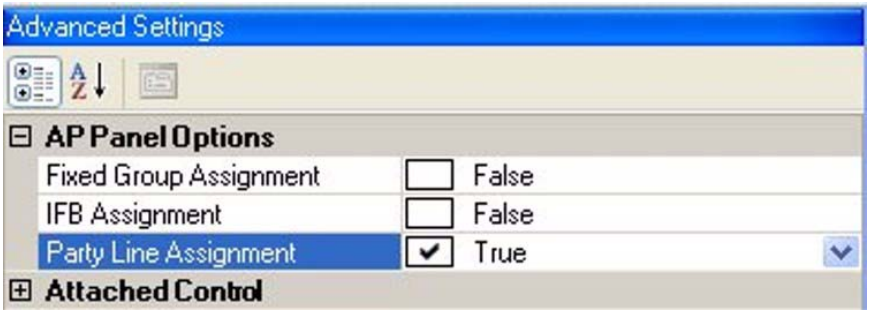


Figure 7-56: AP Panel Options

4. From ‘Panels’ in the Configuration menu select the required panel or the panel to which the AP22 is connected.
5. Assign the party line as a “talk” key on the on panel.
6. Assign potential party line “members” as “listen” keys on the on screen panel.
7. From the Eclipse Downloads menu, click Apply and Reset.

   ECS uploads the information to the panel.

USING ECS TO SET UP ASSIGNMENT PANEL FIXED GROUP MEMBERSHIP OPTIONS

A “fixed group” occurs when one source needs to call many destinations at one time. Members of a fixed group may be added or removed by the panel operator in real time with the assignment panel provided this feature is enabled for the panel in ECS.

To enable the feature in ECS

1. Open the required map configuration in ECS.
2. From the ‘Cards and ports’ screen, select the required panel.
   The Advanced Settings screen opens.
3. From Advanced Settings, select Fixed Group Assignment from AP Panel Options. Click the drop-down box to turn the feature on or off.
   • When the check box reads “true” the feature is on.
   • When the check box reads “false” the feature is off.

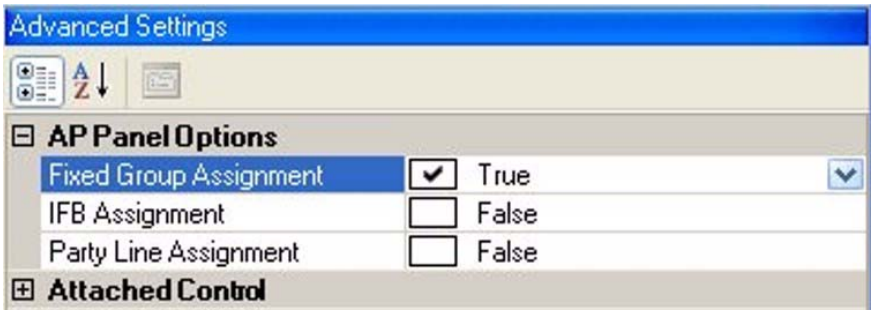


Figure 7-57: AP Panel Options

4. From ‘Panels’ in the Configuration menu select the required panel or the panel to which the AP22 is connected. If the AP22 is to be configured select the AP22 panel in the list of expansion panels to the right of the main panel list.
5. Assign the fixed group source as a “talk” key on the assignment panel on screen.
6. Assign potential fixed group “members” as “listen” keys on the assignment panel on the screen.
7. From the Eclipse Downloads menu, click Apply and Reset.
   ECS uploads the information to the assignment panel.

SIMULTANEOUS MAIN AND SHIFT OPTION (ICS-2003 AND I-STATION PANELS)

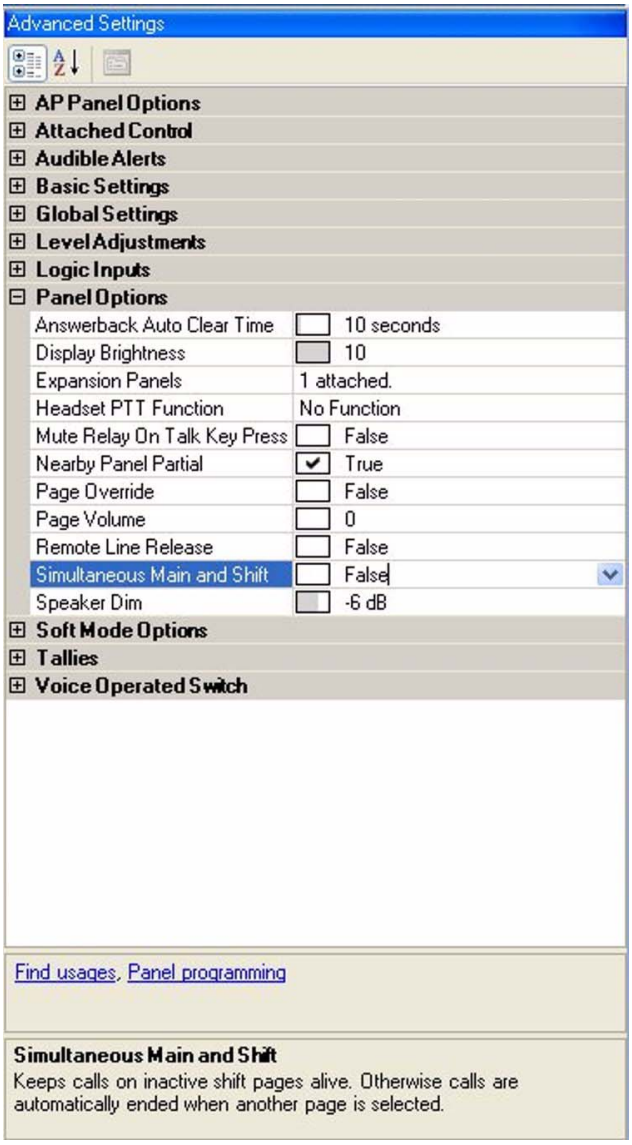


Figure 7-58: Main and Shift Option for ICS 2003

In Advanced Settings for the ICS 2003 and I-Station panels the ECS operator can select the “Simultaneous Main and Shift Option”. When this option is selected, audio paths from an ICS 2003 or I-Station panel’s main page are maintained even when the panel operator switches to the shift (swap) page.

Clear the check box to turn off this option. if this option is disabled the audio paths from the main page are cut when the panel operator switches to the swap page.

This option is not selected by default.

4000 SERIES II PANEL PROGRAMMING

The following section covers the programming of 4000 Series II panels, using the PD4222 panel as an example.

Note: When using 4000 Series II panels with an Eclipse system the panel should be fitted with a PDE45103 isolation card (part number 710685) Please contact Clear-Com support for information.

Select ‘Panels’ from the Configuration menu to display the panel options and select the required panel from the panel list.

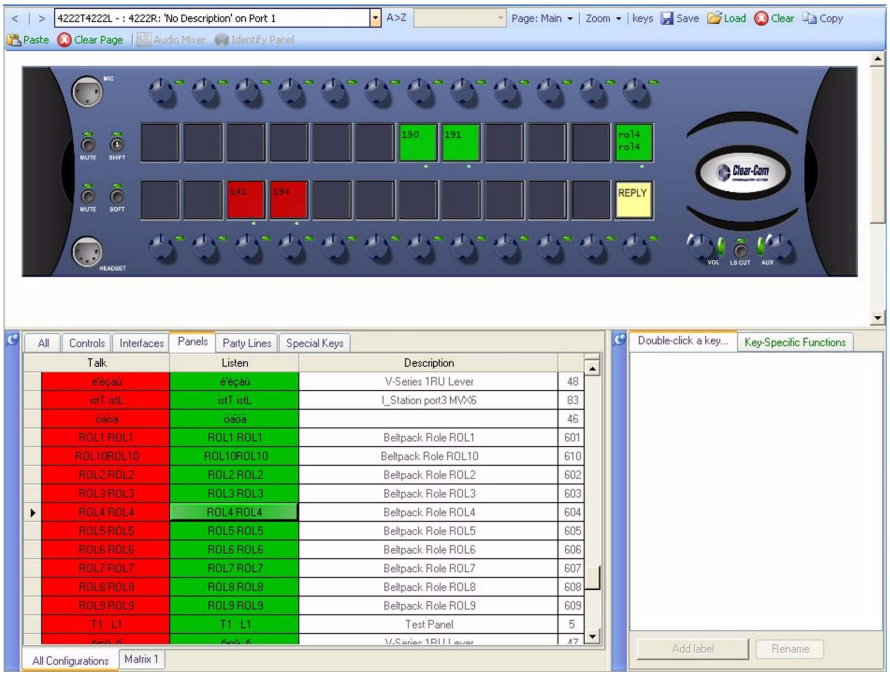


Figure 7-59: Panel Programming

DISPLAYING NAME, PORT NUMBER AND DESCRIPTION FIELDS

To display the Port Number and Description Fields in the Labels Window right click the mouse button over the Labels window to display the context menu.

Figure 7-60: Port Display

Left Click the mouse button on Show Name/Port to display the Talk, Listen, Port Number and hardware type fields and a check symbol will be displayed next to this item. Left Click the mouse button on Show Description to display the description field and a check symbol will be displayed next to this item.

Figure 7-61: Label Window with Port and Name

The labels window will be redisplayed with the port and label information columns added.

ASSIGNING LABELS

To assign a label to a given selector

1. Locate the mimic of the Panel to programme by either using the scroll arrows or the drop down list box from the middle area of the screen.
2. Locate the Talk or Listen Label (Red or Green columns) required to be programmed onto the Panel from the bottom left area of the screen
3. To select the required Label, drag the mouse curser until it is positioned above either the Talk or Listen label. When the mouse is dragged over any Label, the Label highlights to provide the user an indication that this is the current Label.
4. Once the curser is positioned over the required Label, left click the mouse button to select the Label.

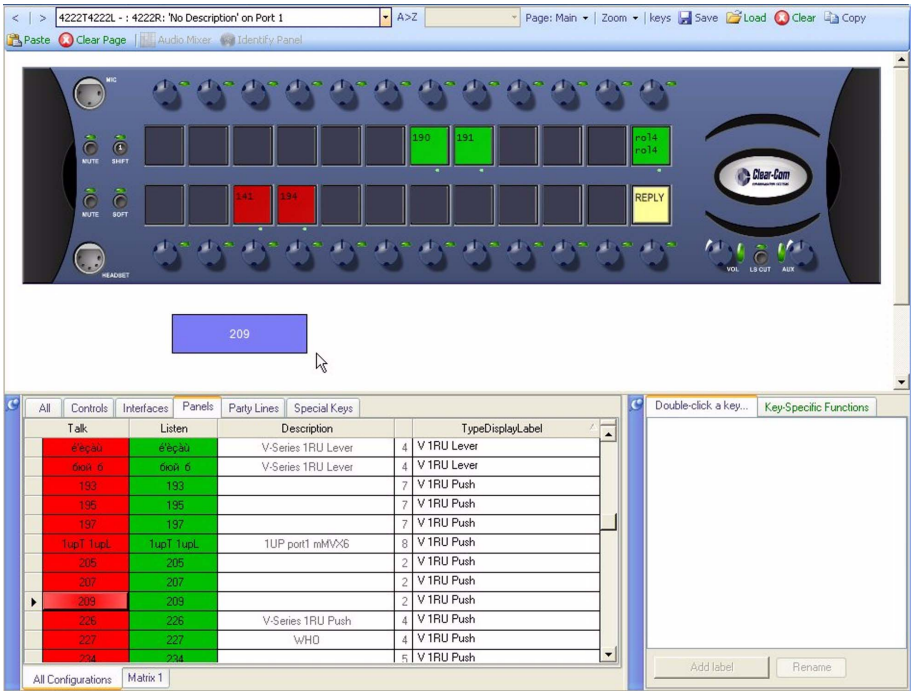


Figure 7-62: Drag Label to Port

5. Drag the mouse curser up the screen into the mimic area and position it over the display area above/below the required selector.
6. To place the Label in the required position left click the mouse and the Label will drop into position.
7. Repeat for all required Label programming.

RE-ASSIGNMENT OF LABELS

To re-assign a Label:

1. Select the required Panel and locate the Label that is required to be re-assigned.
2. To select the Label place the mouse curser over the Label.
3. Left click and hold down the mouse button.

Figure 7-63: Reassignment of Labels

4. Whilst holding down the mouse button drag slightly down the mouse until the Label is free from the display. The mouse button can now be released.
5. Position the Label over the new position and left click the mouse to drop the Label into the display.

To display the action menu for a key position the pointer over the label and right-click the mouse.

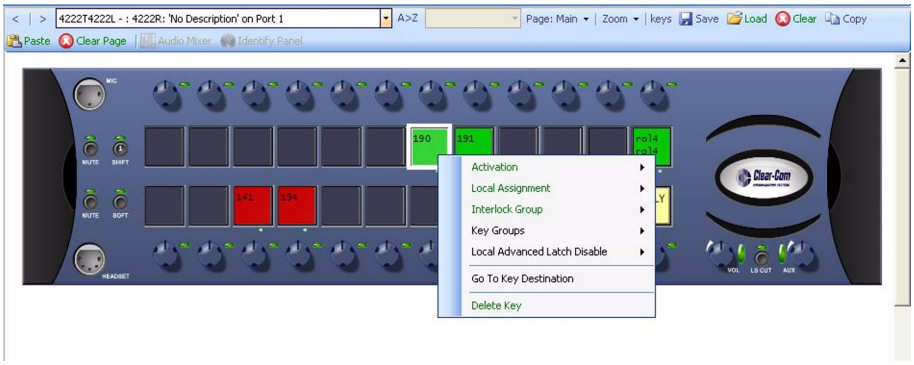


Figure 7-64: Pushbutton Properties Menu

Activation

The activation option allows the key type to be configured to determine how the key will behave when activated via the pushbutton. To set the key activation type right click over the required key to display the

options menu and then select the ‘Activation’ item to display the activation options.

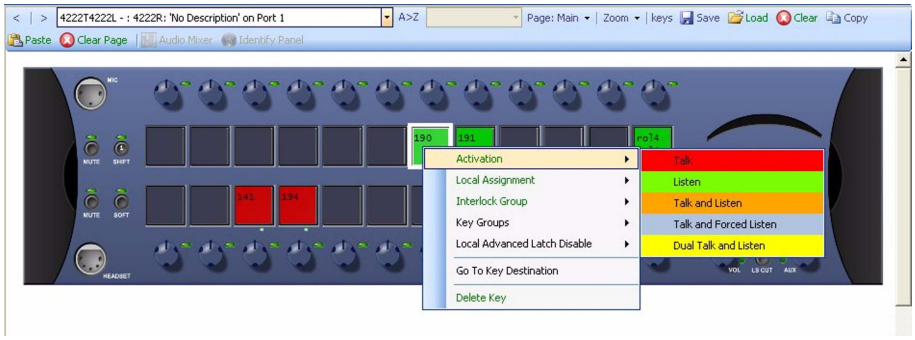


Figure 7-65: Key Assignment Menu

The activation options are: Talk, Listen, Talk and Listen, Talk and Forced Listen or Dual Talk and Listen.

- Talk sets a talk from the i-station to a destination with no automatic listen to the destination.
- Listen sets a key to listen to the source without talking to the destination at the same time. Use as a monitor key. Press the volume level up/down buttons under the display to increase listen level.
- Talk and Listen sets a talk key with listen. Press the volume level up/down buttons under the display to increase or mute the listen level.
- Talk and Forced Listen sets a talk key with permanently made listen. Press the volume level up/down buttons under the display to increase or mute the listen level.
- Dual talk and Listen sets a Dual talk and listen key. This makes the pushbutton activate a Talk and Listen on a press and hold or latch a Listen with a short press and release (less than 200ms) on the same pushbutton.

Local Assignment

Click on the ‘Local Assignment’ entry to display the available options for local key assignment. The options are to allow local key assignment to overwrite the selected key or to disallow local key assignment to overwrite the selected key. This permits the system administrator to limit the keys a panel operator can overwrite when locally assigning keys by Fast Key Assign (V-Series only) or by Local Key Assignment (on panels supporting this facility).

Interlock Group

The ECS user can assign several keys on a panel into a selector group and restrict the group so that only one key of the group can be activate at any one time. This function only refers to talk paths.

For example if a panel had five keys programmed to talk to cameras 1 to 5 then by setting these into an interlocked group only one camera key can be selected at a time.

There are nine available interlocked groups to which the ECS user can assign any or all panel keys.

The interlock groups are specific to the panel they are programmed for and do not affect interlock groups that may be set up on any other panel in the system.

To add a key to an interlocked group

1. From Panel Programming, select the desired panel.
2. Right click on the desired key to display the key options list.
3. Select the ‘Interlock Group’ entry to display the interlock group options list.
4. Select the required interlock group or ‘None’ if the key is not to be in any interlock group.
5. The key may be added to other interlock groups as required.
6. The key interlock groups will be displayed in the key information popup.

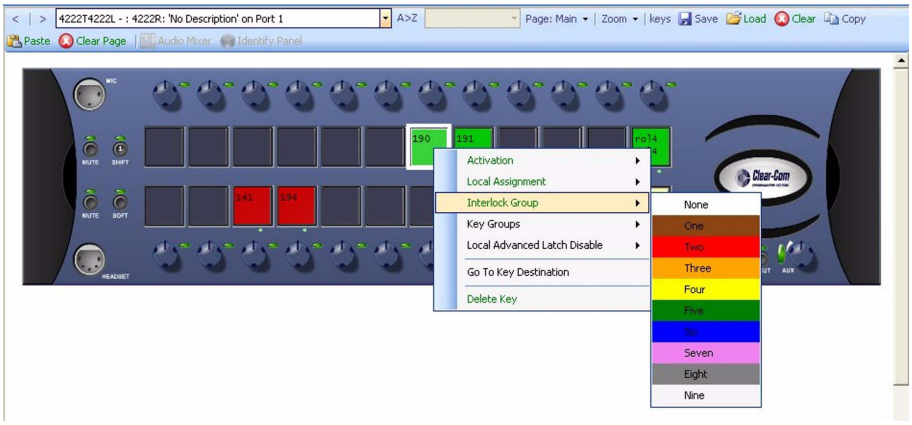


Figure 7-66: 4000 Series Interlock Group Assignment

Local Advanced Latch Disable

When the mouse pointer is over this entry a second menu is displayed giving the options to set Local Advanced Latch Disable to On or Off. Select and click on the required option. This performs the same function as 'Latch Disable' in the Local Advanced facility. It will allow or disallow a panel to latch a key to another device.

Go To Key Destination

Click on the 'Go To Key Destination' entry to display the editor screen for the type of destination the key refers to. For example if the destination is a panel then the panel will be displayed on the 'Panels' screen; for a party line key the 'Party Lines' editor will be displayed with the party line highlighted.

Delete Key

Click on the 'Delete Key' entry in the menu to delete the assigned label (shown highlighted).

Deleting a Label by Drag and Drop

To delete a label by drag and drop:

1. Select the required Panel.
2. Locate the Label, left click and hold down the mouse button.
3. Drag the mouse slightly down until the Label is free from the display. Once the Label is free from the display the mouse button can be released.

Figure 7-67: Deleting a Label

4. Drag the mouse to the top portion of the screen, and with the curser positioned in the middle of the Label, left click to delete the Label.
5. Repeat the steps for each required Label deletion.

Note: Do not delete expansion panels. They are deleted in the 'Cards and Ports' screen.

PANEL LOAD OPTIONS

This functionality is limited to the current configuration and 'label sets' can not be transferred between configurations. The options for panel Save, Load, Copy, Paste and Clear are provided on the panel configuration toolbar above the panel mimic.

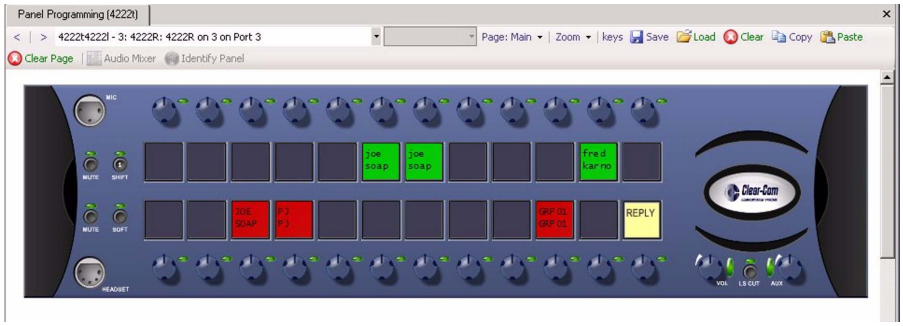


Figure 7-68: Panel Load Options

Page

Displays a list of pages for the panel as a drop-down list. Click on the required page to update the mimic to the page.

Save

Clicking on the ‘Save’ button on the Panel Programming toolbar will display the label file save dialogue.

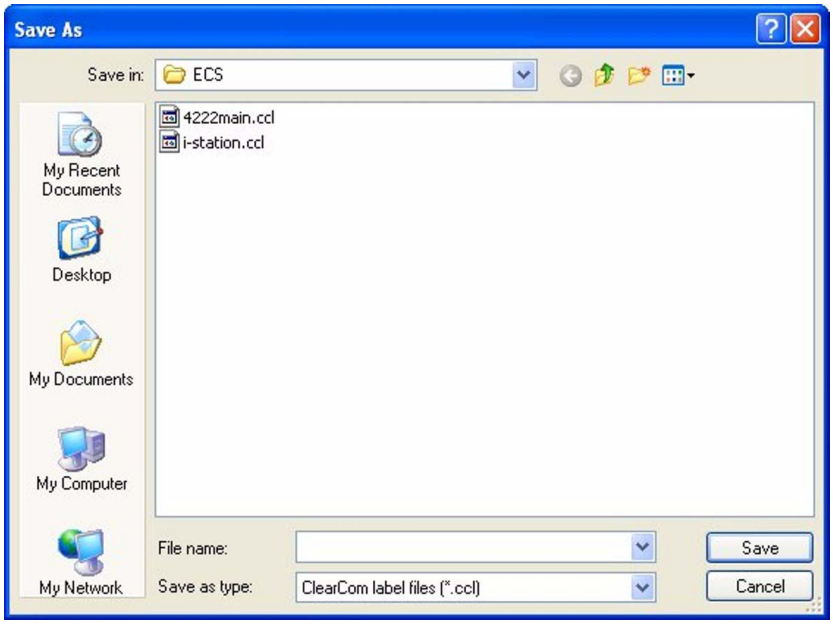


Figure 7-69: Label File Save Dialogue

Enter the name of the file which will default to the .ccl extension. The keys from all pages are saved (including shift pages where supported) but the keys from any expansion panels that may be fitted are not saved in the file. Expansion panel labels must be saved separately.

Load

Clicking on the ‘Load’ button on the Panel Programming toolbar will display the dialogue screen to select and open a panel label (.ccl) file.

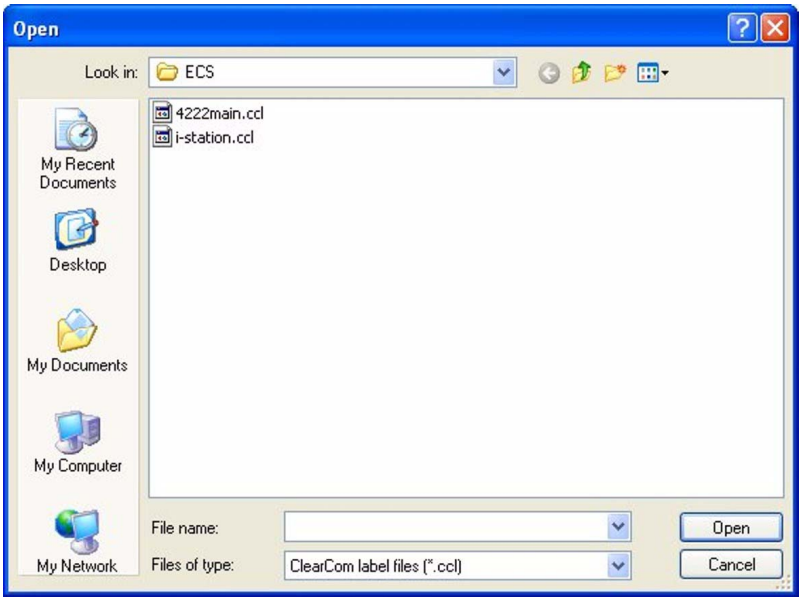


Figure 7-70: Label File Load Dialogue

Select the required file and click on the 'Open' button to load the labels from the file. When a label load is performed all the labels on a panel (including shift pages) and cleared before the new labels are applied.

If the type of panel being loaded is not the same as the type of panel the label file was saved from this may result in labels being lost when the panel is loaded.

Copy

Clicking on the 'Copy' button on the Panel Programming toolbar will copy the labels of the current panel page only into the scratch pad. It does not copy labels from expansion panels.

Paste

Clicking on the 'Paste' button on the Panel Programming toolbar will paste the labels copied to the scratch pad onto the currently selected panel. All the labels currently on the page will be lost. This allows single pages of labels to be pasted on to the panel.

If the type of panel being pasted to is not the same as the type of panel the labels were copied from this may result in labels being lost when the labels are pasted onto the new panel.

Clear

Clicking on the 'Clear' button on the Panel Programming toolbar will clear all the labels from the current panel including shift pages but excluding any attached expansion panels.

Audio Mixer

Displays the audio mixer panel that allows the levels of individual crosspoints to be adjusted interactively. This facility can only be used with V-Series panels.

Identify Panel

Selecting the ‘Identify Panel’ button on the panel programming toolbar will cause the panel currently being edited to flash the panel buttons or LEDs red and display ‘IDENTIFYME’ in the bottom left display. This facility is only available for V-Series panels; the ‘Identify Panel’ button will be greyed out for other panel types.

LOCAL ASSIGNMENTS

The PD4222 panel has the functionality where the panel can assign keys locally; however ECS can retrieve the local assignments and update the mimic of the panel with the latest assignments.

Figure 7-71: PD4222 Assignments

To remove local assignments from the PD4222, an ‘Apply Changes to Frame’ with the ‘Clear all talk paths and listen levels during reset’ check box set download is required.

EXPANSION PANELS

Expansion Panels can be configured onto the Eclipse intercom Panels. This is achieved through the Panel Programming menu. The

Expansion Panels supported with PD4212 and PD4222 panels are PD4230 and PD4230V panels.

To configure a PD4230 or PD4230V expansion panel

1. In 'Cards and Ports' select the panel to which the expansion panel connects.

Figure 7-72: Select the panel to which the expansion panel connects

2. From Advanced Settings, in the Panel Options pane, click the drop-down arrow and select the appropriate expansion panel. This enables the expansion panel from ECS.

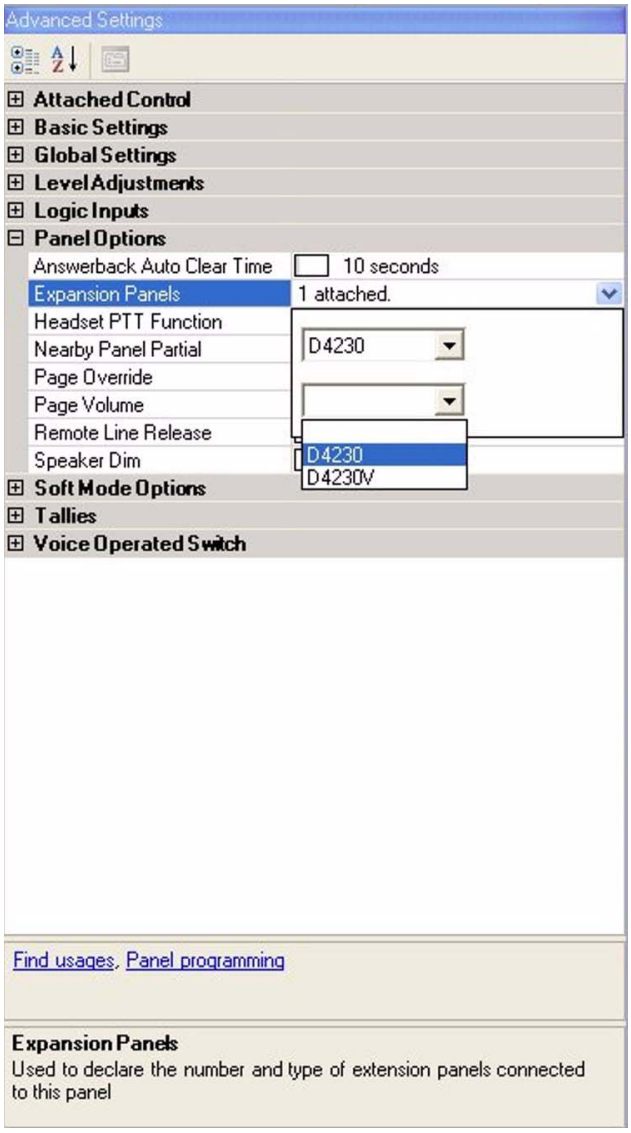


Figure 7-73: Select the Expansion Menu

3. From Panel Programming, select the panel to which the expansion panel is connected.

Figure 7-74: Select an expansion panel from the drop-down list

4. Using the “select panel” buttons *(marked with < and > symbols), select the appropriate expansion panel.

   A virtual expansion panel appears on the screen.

5. Assign labels to the panel as described previously.

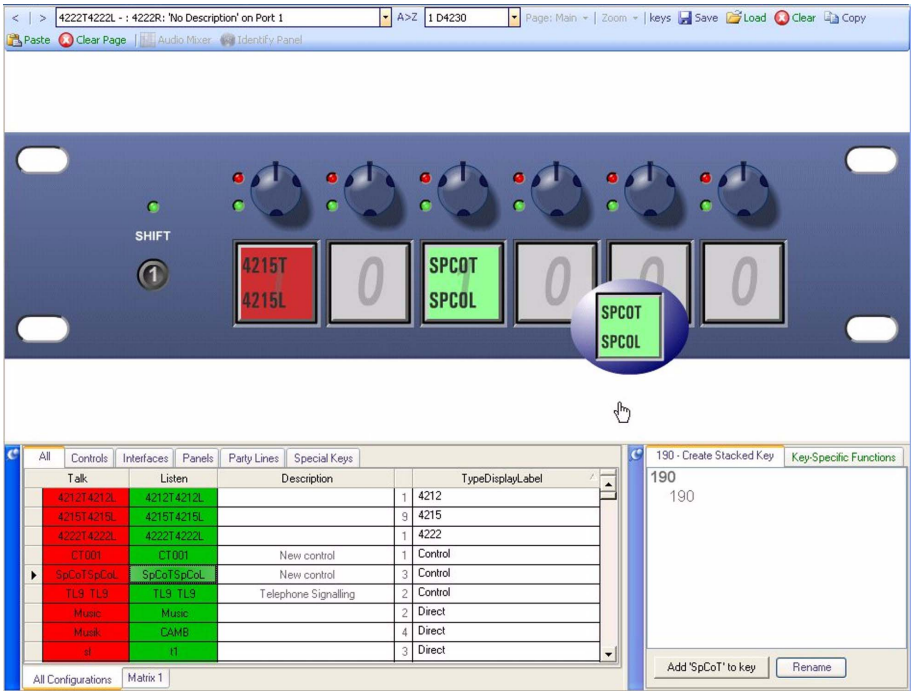


Figure 7-75: PD4230 Expansion Panel

Note: Expansion panels are deleted from the 'Cards and Ports' screen.

CONFIGURING A PD4216 INTERFACE PANEL

The PD4216 Interface panel will drive four PD4230 or PD4230V expansion panels while emulating a PD4222 panel. This allows ECS to configure the expansion panels using the PD4222 configuration procedure; so a port connected to a PD4216 Interface panel should be set up as a PD4222.

In order to define the keys on the PD4230 panels the PD4216 is set up as a PD4222 with the keys divided into four banks of six corresponding to the four PD4230 panels.

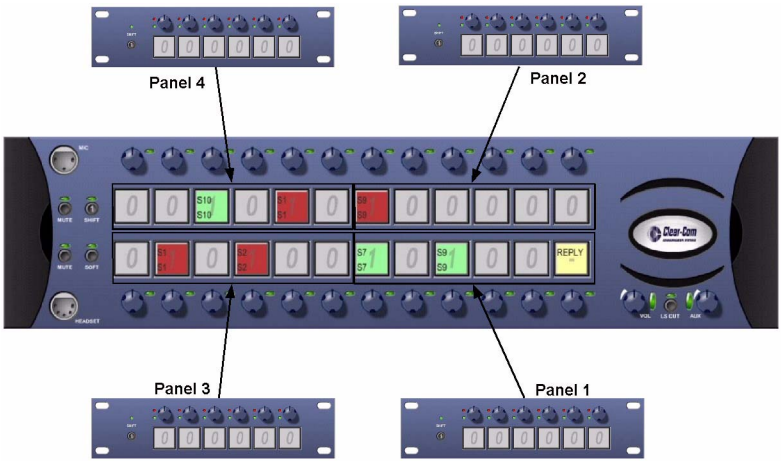


Figure 7-76: Configuring PD4216 Interface Panel

The keys on the main and shift pages on the “PD4222” will correspond to the keys on the main and shift pages of the PD4230 panels. When pressed they will function as if they were on a PD4222 panel.

It should be noted that where PD4230 panels are used in this way they are not considered to be acting as expansion panels and so should not be configured as such in the Advanced Settings Panel Options.

GENERAL PANEL SETUPS

STACKED KEYS

Stacked Keys functionality is the ability to add more than one Talk label to a single selector of an intercom panel.

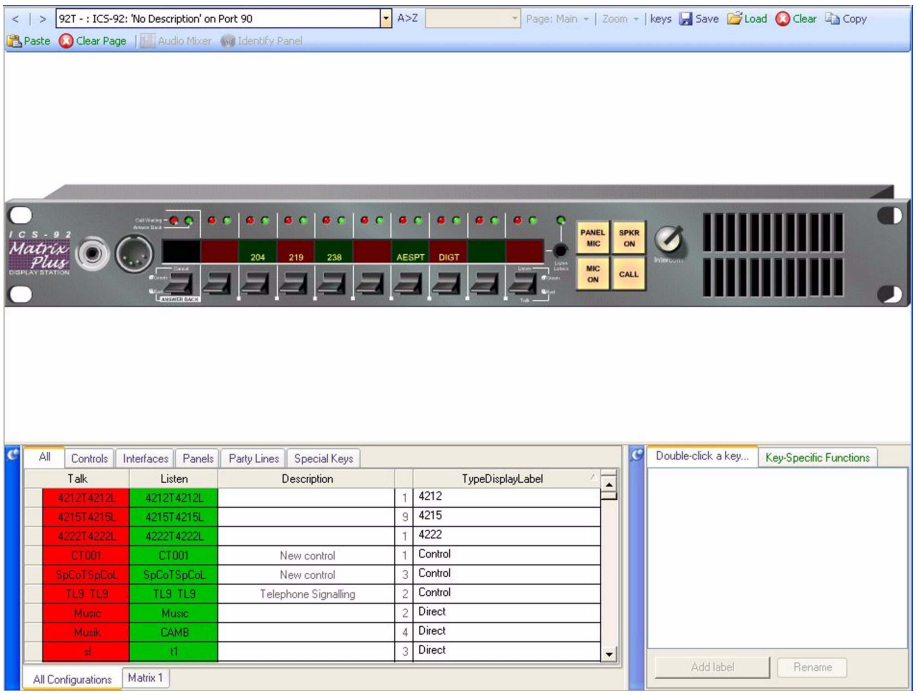


Figure 7-77: Stacked Keys Screen

CREATING A STACKED KEY

1. To create a stacked key, open the Panel Programming screen.
2. Select the panel where the stacked key is to be created
3. Either programme a Talk label to the panel or identify a Talk label that has already been programmed onto the panel.
4. On the mimic of the panel, place the mouse cursor over the required Talk label.
5. Double Click the left mouse button on the Talk label.
6. The Talk Label appears in the Stacked Key area, which is the bottom right window.
7. Drag the mouse cursor over to the Talk Labels window
8. Left Click the mouse button over the required Label
9. In the Stacked Key window, select the 'Add Selected Label' button.
10. Repeat steps 7 to 9 for the required amount of Labels.

Note: On an ICS- 2003 a talk to a stacked key of which a member is a local IFB to the 2003 results in the ICS-2003 reporting that Communications are being monitored by the ICS-2003 and the audio is not cut.

When a stacked key is downloaded to a V-Series or 4000 Series II panel the panel will display the last (bottom) label on the list on the key not the first (top) label.

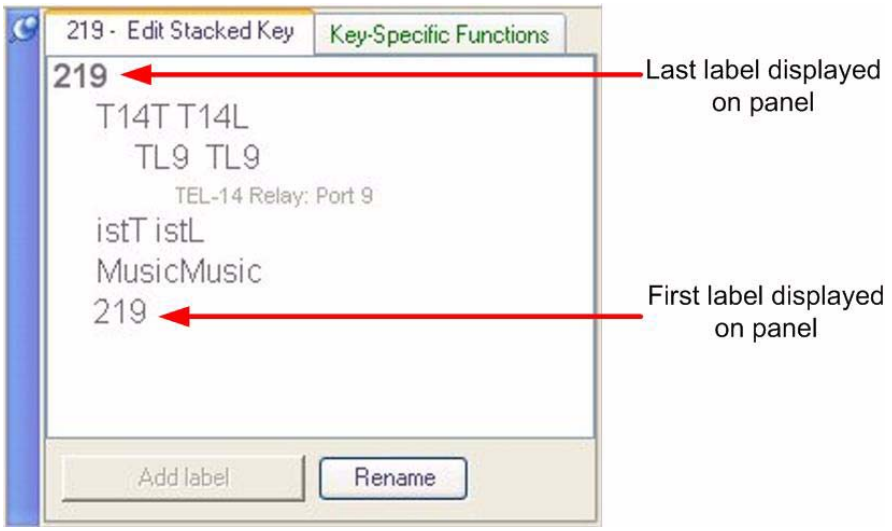


Figure 7-78: Stacked Key Label Order

The order of the labels on the stacked key will run from the last (bottom) key in the list to the first (topmost) key in the list.

REMOVING LABELS FROM A STACKED KEY

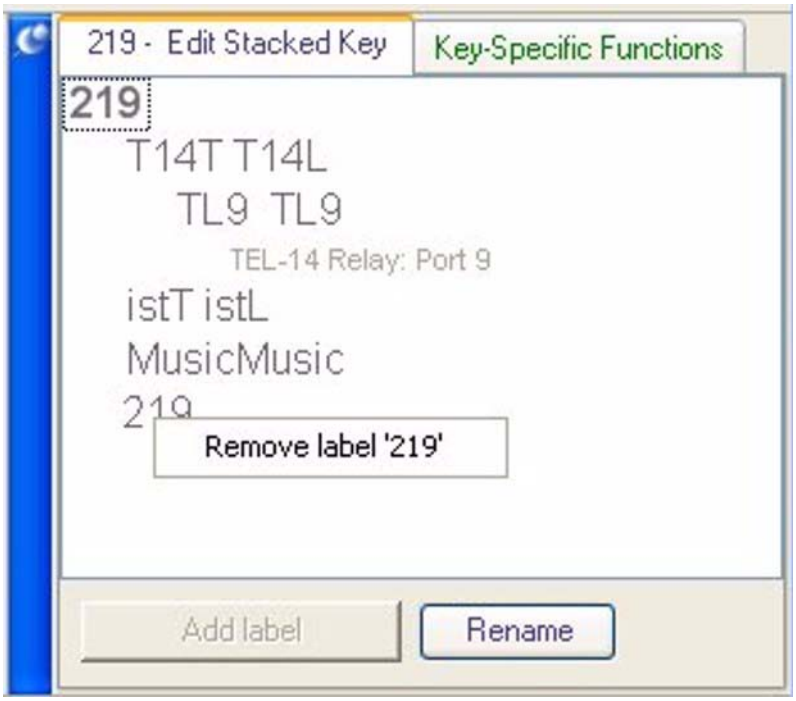


Figure 7-79: Remove Label from Stacked Key

1. Double click the Stacked Key on the mimic of the panel using the left mouse button, The Stacked Key window displays all labels on the stack
2. Locate the label to be removed.
3. Left click the mouse on the Label
4. Right Click the mouse. This brings up remove label context box
5. Left click in the Remove Label context box to remove the label
6. Repeat as required to remove the stacked key completely.

KEY SPECIFIC FUNCTIONS

The Key Specific Functions tab on the panel programming screen allows assigned keys to be modified. On certain panels the rotary encoder can be assigned to set the input or output levels when the key is activated.

The options are available on all panels and allow Activation, Local Programming, Interlock Group and Level Adjustment for assigned keys to be modified.

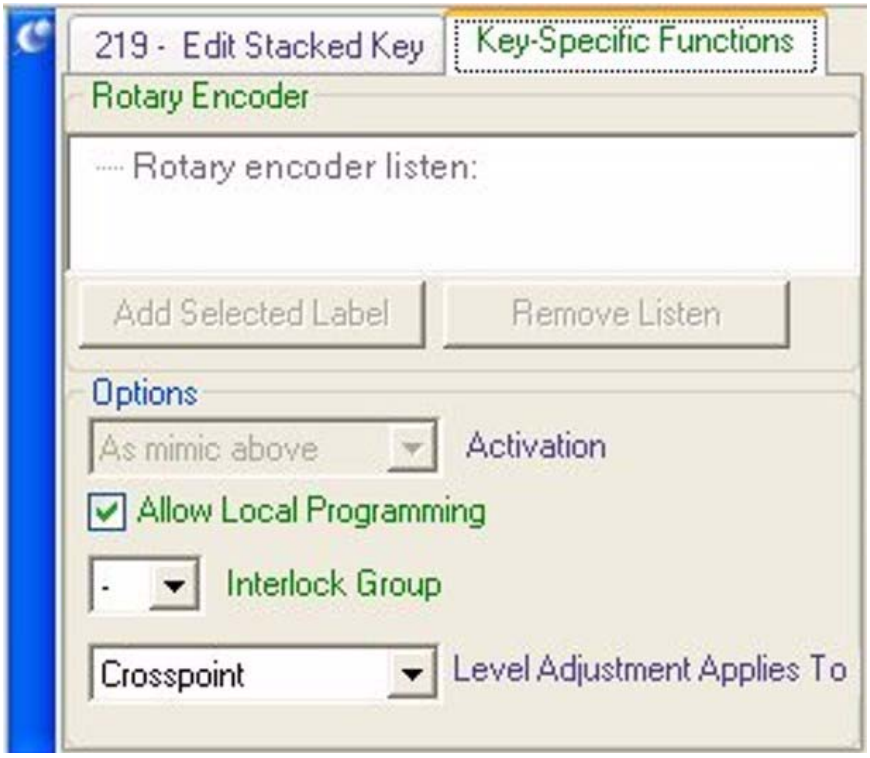


Figure 7-80: Key Specific Functions

Rotary Encoder

This allows labels to be assigned to the rotary encoder on the panel so that the rotary encoder can be used to set the listen level for that label. To assign a label to the rotary encoder select a label on the panel and

click on the ‘Add Selected Label’ key to add it to the list of labels associated with the rotary encoder. The label will be displayed below the rotary encoder. Only one label at a time can be assigned to the rotary encoder. To deassign a label select the label and click on the ‘Remove Listen’ button.

This facility is only available on the 4222E and 4212E panels.

Activation

The activation options allow properties to be added to the key. By default the activation option defaults to the property already assigned to the key on the mimic. To change the key property click on the down arrow to open the drop-down menu and select the required property. Alternative activation properties allowed are Talk & Forced Listen and Dual Talk & Listen.

Allow Local Programming

If this is checked then the key can be programmed locally on the panel or by a supervisor panel. This can be used to override properties set globally.

Interlock Group

This allows the key to be assigned to any one of nine interlock groups. If the key is assigned to an interlock group whenever that key is pressed all other keys on the panel in the same interlock group are disabled.

Note: In the case of lever key panels the Up and Down positions of the lever keys are considered to be separate keys and can therefore be assigned to different interlock groups.

Level Adjustment Applies To

The drop-down menu allows the rotary encoder to set the audio level of the crosspoint the key is assigned to, the output level of the port the key is assigned to or the input level of the port the key is assigned to.

Note: This function is useful for the 4203E expansion panel with sixteen encoders.

LOCAL ADVANCED

The Local Advance screen sets functions that determine how every panel and interface in the system will interact with each other at the device level. For example IFB levels can be set for every individual device or Forced Listen can be enabled or disabled between any two specific system devices.

To open the Local Advanced screen select the ‘Local Advanced’ entry in the Configuration menu.

The configured devices are displayed to form a grid with each square displaying the attributes set for interactions between the devices as a colored dot or empty if the attributes are not set. Tabs on the toolbar allow the specific attributes to be selected. Positioning the mouse pointer over a square will display a tooltip indicating the current status.

A key to the meaning of the colored dots that indicate status is shown in the top left hand corner of the Local Advanced screen. The Sources are listed down the left hand side and the Destinations are listed across the top.

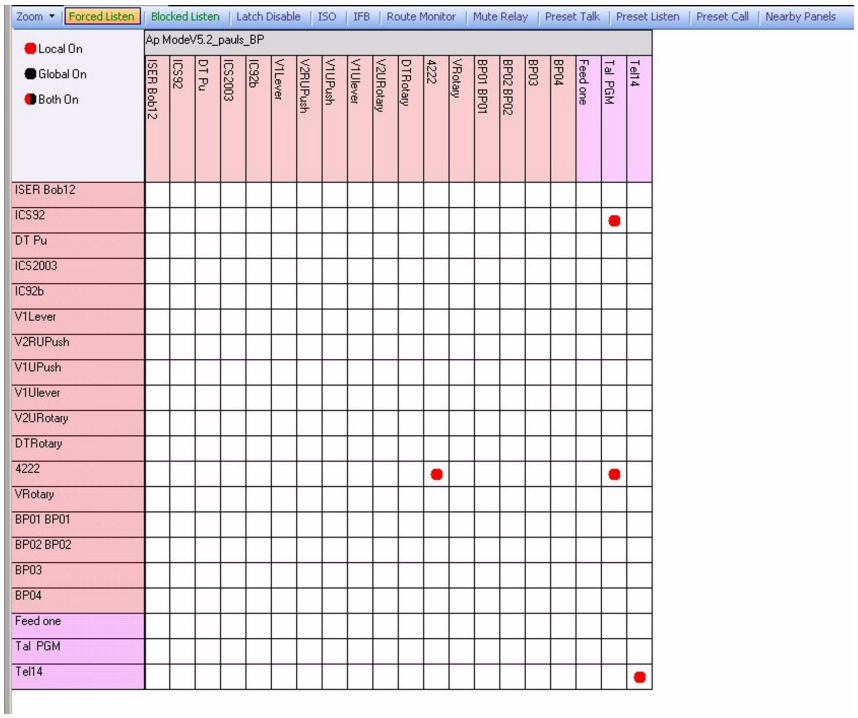


Figure 7-81: Local Advanced Functions

The type of source/destination is denoted by the color of the entry. These are:

- Pink - Panel
- Yellow - Party Line
- Purple - Interface (Direct, FOR-22, Telephone, TEL-14, CCI-22)
- Blue - Fixed Group
- Green - Control

The tabs allow the grid to be displayed for the various properties of the connections such as Forced Listen, Latch Disable etc. Selecting one of the tabs will display a grid with sources and destinations which may have this property and the status of any connection between them. For example, selecting the 'Blocked Listen' tab will only display panels and interfaces to which this property can apply. Where the property is

enabled a colored dot will be displayed in the square; red for local property assignment, black for global property assignment.

The items along the top (destinations) can be filtered by name using the text filter box on the right hand side of the ECS Control Bar.

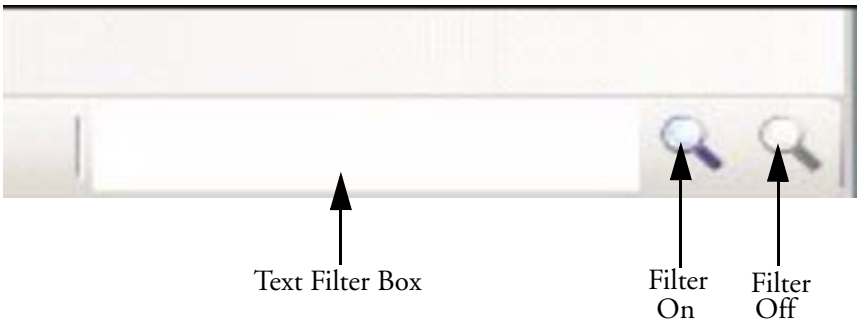


Figure 7-82: Source Filter

Enter the text to filter by and click on the filter icon to the right of the filter box left filter icon). Only the destinations with names containing the filter text will be displayed on the top row. The sources are not filtered. To turn off filtering click on the rightmost of the two filter icons.

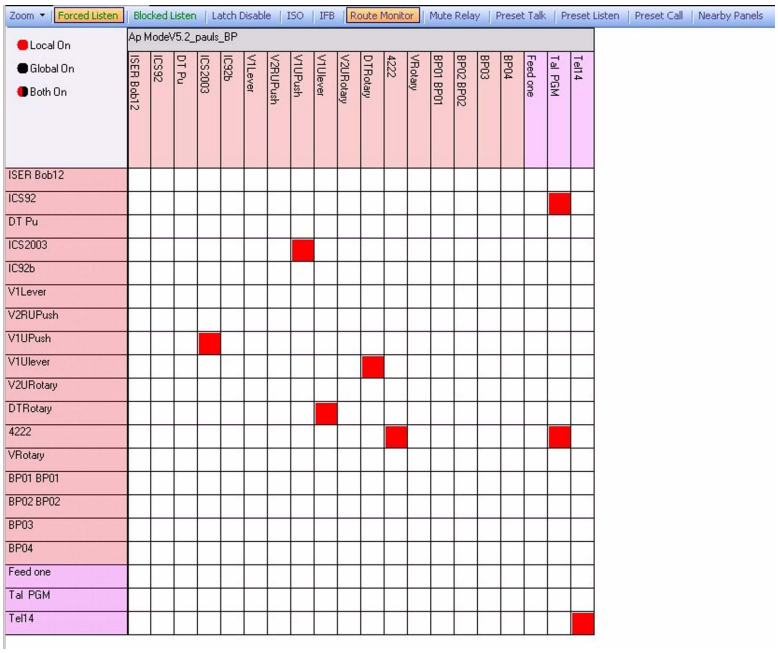


Figure 7-83: Multiple Select Display

By holding down the Control key whilst selecting the tabs, it is possible to select multiple tabs. In this case any squares representing connections will be colored red if any of the select properties are set.

Note: Only local settings are displayed when multiple tabs are selected; global settings are not shown.

When the mouse pointer is positioned over one of the squares of the grid a tooltip will give details of the connection.

Note: By not touching the mouse the tooltip remains on the screen.

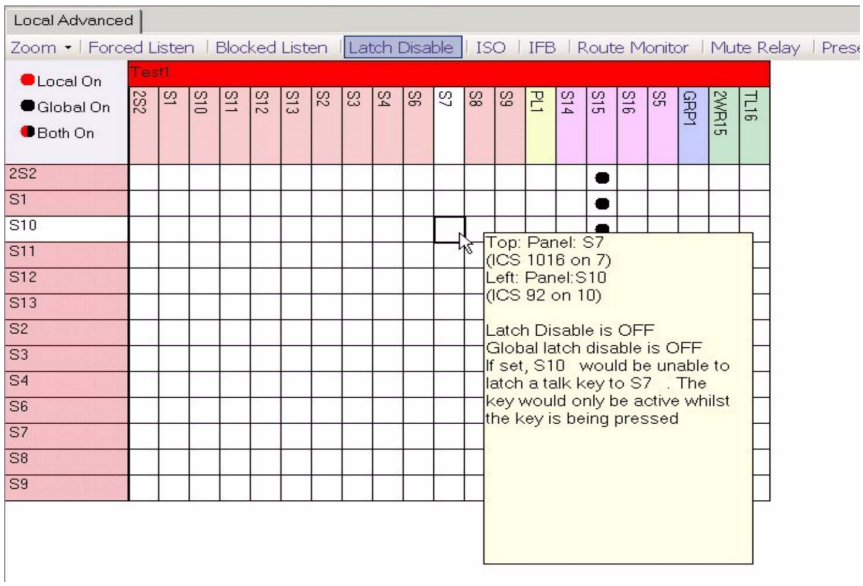


Figure 7-84: Local Advanced Information Display

1. Place the pointer over the square that intersects the required source and destination. The tooltip will display the current properties.
2. Left click on the mouse with the pointer on the square. The square will turn blue and the source and destination label backgrounds will change to white.
3. To set or clear the current property e.g. Latch Disable right-click on the mouse to display the On/Off options. Use the pointer to select the required state and right-click or left-click on it to select it. A red dot will be displayed in the square if the function has been enabled in local mode.

Note: By holding down the Control key when assigning connection properties it is possible to move from square to square and make multiple selections with a single mouse click. If the Shift key is held down a block of connections can be assigned by clicking on limits of the required block selecting all the points between the limits. This allows large numbers of connections to be set very quickly.

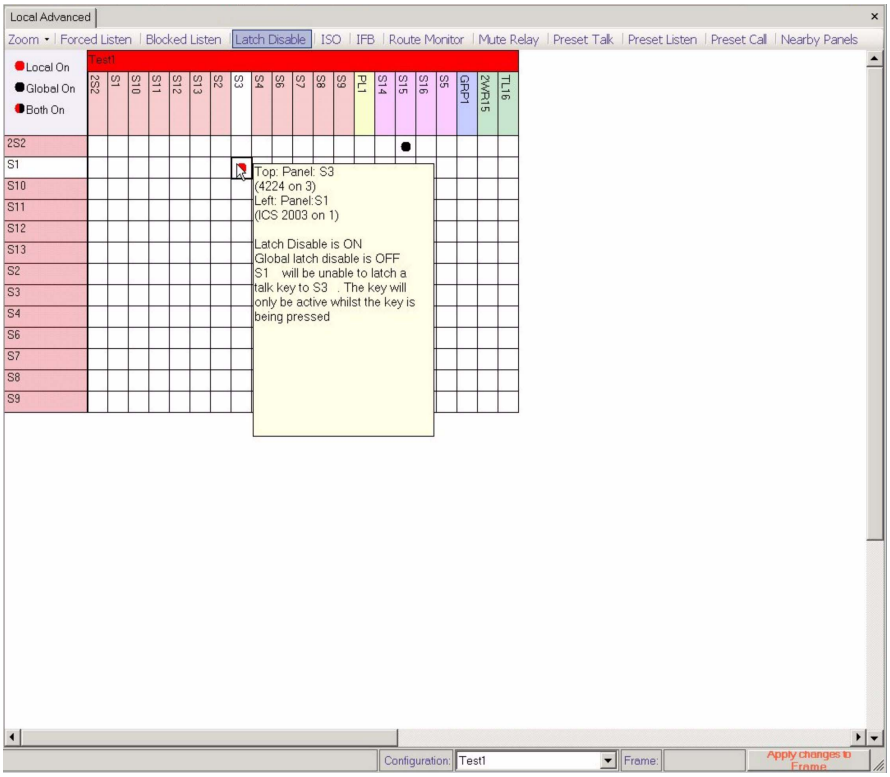


Figure 7-85: Local Advanced with a Property Selected

The following is a description of each option. Every option does not appear for every combination of source and destination. The possible options are described below.

FORCED LISTEN

Top: Panel: S11
(4212 on 11)
Left: Panel:S11
(4212 on 11)

Force listen is OFF
If set, would force S11 to permanently listen to any audio entering the matrix from S11

A forced listen is a permanently enabled audio path between a source and a destination that can only be interrupted by IFB/ISO calls. It doesn't have any association with a selector key.

If panel eavesdropping is disabled for a panel, the forced listen will not be effective until the panel has at least one talk path set. Panel eavesdropping is enabled from the Advanced Settings screen of 'Cards and Ports' for the source port. Forced listen audio is routed from the label on the left to the label on the top.

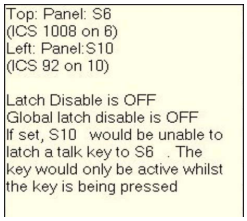
BLOCKED LISTEN

Top: Panel: S7
(ICS 1016 on 7)
Left: Panel:S7
(ICS 1016 on 7)

Block listen is OFF
If set, would prevent S7 from listening to any audio entering the matrix from S7

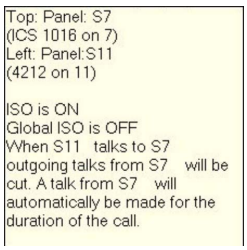
If a listen is blocked between two ports then an audio path from that same source to that destination cannot be set under any circumstances. This is primarily used as a safety feature. For example, to prevent one studio's program feed from being accidentally routed to a destination in another studio.

LATCH DISABLE



This function prevents talks to any label from latching. If a latch-disabled label is assigned to a selector key, the key can only access the label for as long as the operator physically holds down the key. A latch-disabled port's label can be included in a fixed group or party line without automatically latch disabling the entire fixed group or party line.

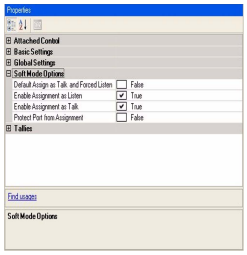
LOCAL ISO



This function enables a panel or interface as a local ISO destination of the source panel or interface. When the source activates a talk to any of its local ISO destinations, that talk is a private, two-way path. All other talk paths from the source are interrupted. All existing talk and listen paths between the source and the destination are interrupted, except for other ISO talk paths. When the source terminates the talk, the destination's audio paths resume; when all ISO paths to the destination are deactivated, the destination's audio paths return to their previous states. If more than one panel activates an ISO path to the destination, both sources can talk and listen to the destination. For ISO talks to also interrupt listens at the source, check the ISO Interrupts All Other Listens box in the Matrix Frame Preferences 'ISO and IFB' tab.

Note: If the destination of an ISO is a panel then 'Eavesdropping' must be enabled in Global Settings (Advanced Settings section) in order to activate the panel microphone if it is not already activated. If the destination is not a panel but a device such as a 4-Wire port Eavesdropping does not need to be enabled for the destination device.

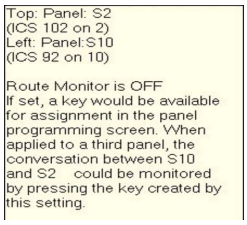
LOCAL IFB



This function enables a panel or interface as a local IFB destination of the source panel or interface. When the source activates a talk to one of its local IFB destinations, that talk is a private, one-way path. All existing talk and listen paths to the destination are interrupted, except for other IFB talk paths. When the source terminates the talk, its audio paths resume; when all IFB talks to the destination are deactivated, the destination's audio paths return to their previous states. If more than one panel activates IFB talks to the same destination, both sources will be heard by the destination. For IFB talks to also interrupt talks at the source, select the IFB Interrupts All Other Talks From Source Panels button in the 'Matrix Frame Preferences' screen from the System screen.

Note: The level of the interrupt can be set using Local Advanced.

ROUTE MONITOR

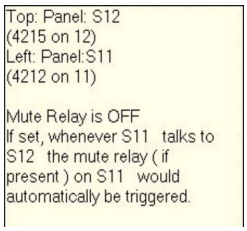


Enable monitoring of an audio route. This creates a key that is available for assignment from Panel Programming. When the key is pressed, audio from the required crosspoint is routed to the panel with the key.

This allows panel C to monitor audio between ports A and B when Route Monitoring between A and B is enabled.

Note: In ECS V4.2 a monitor key can be added to the bottom row on a 2003, just not to a stack of multiple labels. In this way an ICS-2003 panel can be used to monitor a route.

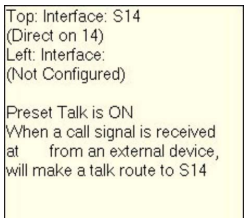
MUTE RELAY



This function enables a specific interface label to activate the source panel's mute relay when the talk key for that interface is activated. The mute relay is a general purpose relay whose contacts are connected to the Miscellaneous DB-15M connector on the panel's rear panel (see the "ICS-2003" section of the Matrix Installation Manual). It is commonly used to mute a control room monitor speaker, but it can also be put to other uses, such as turning on a light or unlocking a door.

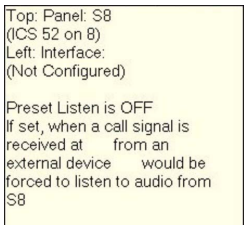
To achieve the same functionality using 4000 Series panels a control should be created containing the mute relay ("Control Manager" for further information on controls).

PRESET TALK



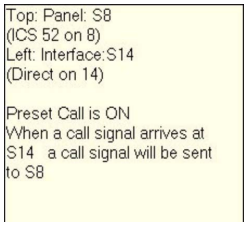
This option enables setting preset talk paths from this port to any other destination in the system. Preset talks are similar to routes, except they can be configured to activate only when a call signal is received at this port from an external device, such as a radio or telephone or external Party Line (CCI-22).

PRESET LISTEN



This options enables setting preset listen paths from this port to any other destination in the system. Preset listens are similar to routes, except they can be configured to activate only when a call signal is received at this port from an external device, such as a radio or telephone.

PRESET CALL



If this box is checked for a given port, the selected interface will send a call signal to the selected destination whenever the interface receives a call signal from its external device. The path from the interface to the destination will be active for the duration of the incoming call signal.

Top: Panel: S13
(4226 on 13)
Left: Panel:S13
(4226 on 13)

Nearby Panels is OFF
Global Nearby Stations is ON
If set, would stop audio to speaker on S13 from S13 . Would route audio to headphones instead. This would prevent feedback (howl-round) on panels that are located close together.

NEARBY PANELS

This function is used to prevent audio feedback ("howlround") between panels located physically nearby each other. When enabled, audio from the source panel is prevented from reaching the destination panel, and signalization is also suppressed. The advanced setting "Nearby Panel Partial" in 'Cards and Ports' can be used to route audio from nearby panels to the headset rather than suppressing it.

Note: On a 4000 panel Nearby Panel Partial only functions when the both the HS and LS cut keys are activated.

ATTACHMENTS

The attachments screen is the area where the type of activation of relays and routes of the Eclipse System and Panels are selected. The types of activation are Activate with Listen or Activate with Talk.

Attachments

Type	Description	Relay Infor	Activate With	Activate Wit	Module N	Output N	Station R	LabelConfigurationID	routeSour	routeDestina	configuratio
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	2	☐				Test1
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	3	☐				Test1
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	4	☐				Test1
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	5	☐				Test1
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	6	☐				Test1
RELAY	Frame Relay: Out	Frame Re	☐	☑	0	7	☐				Test1
RELAY	FW Relay S15 Po	FW Relay	☑	☑			☑				Test1
RELAY	FW Relay S16 Po	FW Relay	☑	☑			☑				Test1
RELAY	AUX: ICS 2003 o	Stn AUX	☐	☑	0	1	☑				Test1
RELAY	Mute: ICS 2003 o	Stn Mute	☐	☑	0	2	☑				Test1
RELAY	AUX: 4222 on 2 -	Stn AUX	☐	☑	1	1	☑				Test1
RELAY	AUX: ICS 102 on	Stn AUX	☐	☑	1	1	☑				Test1
RELAY	Mute: 4222 on 2 -	Stn Mute	☐	☑	1	2	☑				Test1
RELAY	Mute: ICS 102 on	Stn Mute	☐	☑	1	2	☑				Test1
RELAY	AUX: 4224 on 3 -	Stn AUX	☐	☑	2	1	☑				Test1
RELAY	Mute: 4224 on 3 -	Stn Mute	☐	☑	2	2	☑				Test1
RELAY	AUX: I-Station on	Stn AUX	☐	☑	3	1	☑				Test1
RELAY	Mute: I-Station on	Stn Mute	☐	☑	3	2	☑				Test1
RELAY	AUX: ICS 52 on 8	Stn AUX	☐	☑	7	1	☑				Test1
RELAY	Mute: ICS 52 on 8	Stn Mute	☐	☑	7	2	☑				Test1
RELAY	AUX: ICS 62 on 9	Stn AUX	☐	☑	8	1	☑				Test1
RELAY	Mute: ICS 62 on 9	Stn Mute	☐	☑	8	2	☑				Test1
RELAY	AUX: ICS 92 on 1	Stn AUX	☐	☑	9	1	☑				Test1
RELAY	Mute: ICS 92 on 1	Stn Mute	☐	☑	9	2	☑				Test1
RELAY	AUX: 4212 on 11	Stn AUX	☐	☑	10	1	☑				Test1
RELAY	Mute: 4212 on 11	Stn Mute	☐	☑	10	2	☑				Test1
RELAY	AUX: 4215 on 12	Stn AUX	☐	☑	11	1	☑				Test1
RELAY	Mute: 4215 on 12	Stn Mute	☐	☑	11	2	☑				Test1
RELAY	AUX: 4226 on 13	Stn AUX	☐	☑	12	1	☑				Test1
RELAY	Mute: 4226 on 13	Stn Mute	☐	☑	12	2	☑				Test1
SPEED			☑	☑			☐				Test1
SPEED	Tel 1		☑	☑			☐			1S14	Test1

ows.. Configuration: Test1 Frame: Apply changes to Frame

Figure 7-86: Attachments Screen

1. Select Attachments from the Configuration menu
2. Locate the relay or route
3. Place a tick in the required check box

8 AUDIO MIXER

INTRODUCTION TO AUDIO MIXER

The Audio Mixer facility is accessed from panel programming and is only available for V-Series panels. The Audio Mixer allows the audio input, output and crosspoint levels for the panel to be set by the use of the panel controls (main and auxiliary volume controls) or via the panel software. The audio mixer will also allow audio input levels to be modified by means of threshold levels and compressors and for frequency based noise reduction filters to be applied. Crosspoints which are attached to IFB controls can also have the IFB dim levels set by the audio mixer.

The layout of the audio mixer is determined by the panel interface selected; for some types of interface such as the D25 connector more options are available than with the basic RJ45 interface.

When the pointer is moved over the panel tooltips will be displayed whenever it is over an active item such as a button on the toolbar, a filter setting or a crosspoint. The tooltip will display the current setting of any audio processing element.

AUDIO MIXER PANEL

The audio mixer panel is divided into three functional areas, Input, Crosspoint and Output. Each area has separate controls that function idependently of controls in other areas. For example the controls in the input area will act on the input audio stream before it passes to the crosspoints.

The audio mixer areas are shown in Figure 8-1 below.

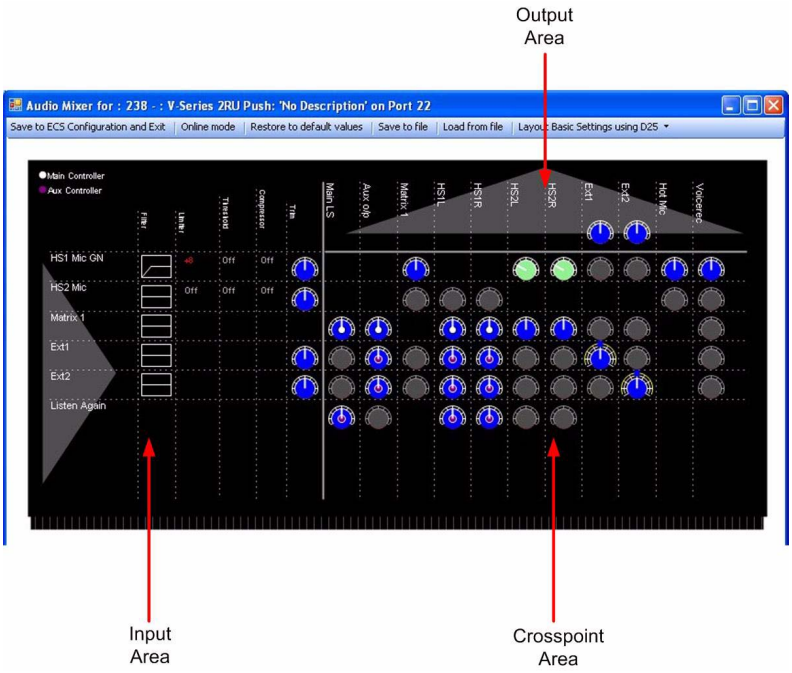


Figure 8-1: Audio Mixer Panel

The audio mixer toolbar provides facilities to apply, save or configure the audio mixer.

SAVE TO ECS CONFIGURATION AND EXIT

Click on this button to save the audio mixer setup to the current ECS configuration. When in Online mode clicking on this button will also save the audio mixer settings into the current ECS configuration. After the setup has been saved the audio mixer will automatically exit back to panel programming.

ONLINE MODE

Clicking on this button allows audio mixer settings to be sent to the panel immediately without the need to save to the configuration and download a new map.

When the Online button is pressed it will flash amber/green and the mixer pane background will change to amber while ECS contacts the matrix and uploads the current audio settings for the selected panel. If the button and audio mixer pane background remain amber (see Figure 8-2 below) this indicates that ECS was unable to obtain the current panel audio settings from the matrix (the panel may not be connected to the matrix).

It may take a few seconds for ECS to obtain the panel details from the matrix.

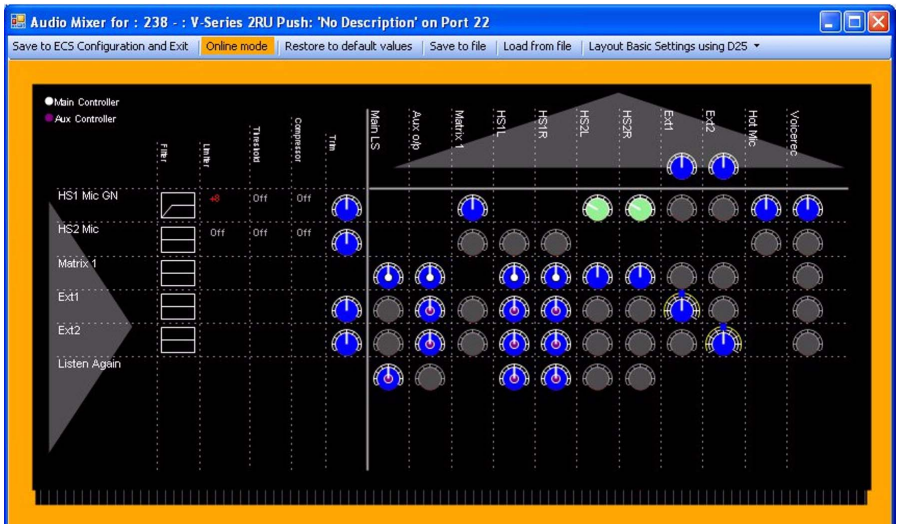


Figure 8-2: Online Mode Waiting for Reply

When the settings have been loaded the button and audio mixer pane background will turn green to indicate that the settings may be adjusted (see Figure 8-3).

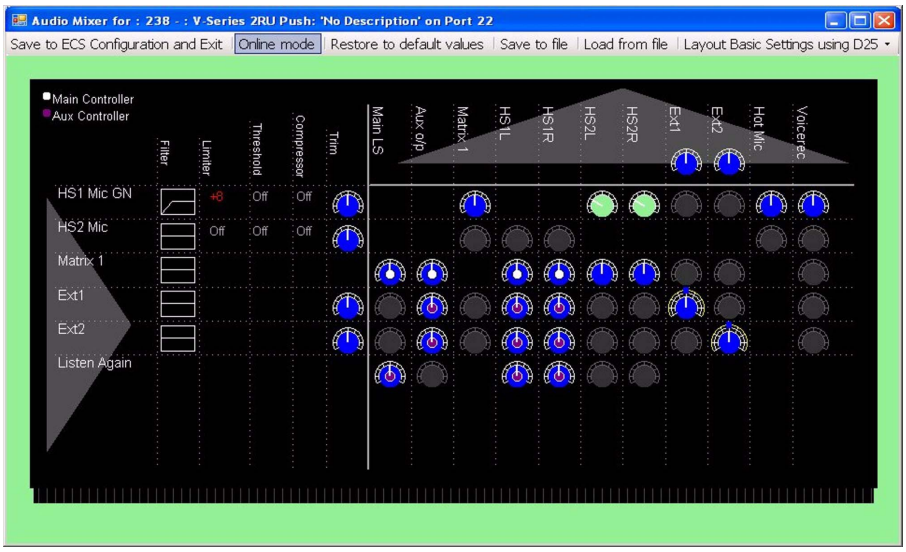


Figure 8-3: Online Mode Connected and Ready

Whenever a setting is changed in Online mode it will be sent to the matrix to be applied to the panel and a confirmation will be returned. While ECS is waiting for confirmation that the change has been applied the online button will change to amber and then to green when confirmation is received.

RESTORE TO DEFAULT VALUES

Click on this button to reset all the mixer settings for the current layout to their default values. The user will be asked to confirm the request. Click on 'Yes' to replace the current settings with the default settings or 'No' to cancel the action. This option can also be used when in online mode.

SAVE TO FILE

Saves the audio mixer settings to a file. The file save dialogue will request a file name. If no filename extension is given it will default to "amc". This feature is available when in online mode.

LOAD FROM FILE

Loads audio mixer settings from a file previously created by the file save function. If this function is used in online mode the settings in the file will be sent straight to the panel.

LAYOUT SETTINGS

Clicking on this button displays a drop-down menu of layout options. These options configure the audio mixer for V-Series panels that have their audio connected in different ways such as the Matrix port, the 25-way D-type auxiliary audio and the AES3 interface.

Note: The layout cannot be changed while in online mode.

Layout Basic Settings

This configures the audio mixer for the panel when using the RJ-45 analogue matrix connection.

Layout Basic Settings using D25

This configures the audio mixer for use with the analogue RJ-45 and auxiliary audio connectors.

Layout Binaural coax/AES

This configures the audio mixer for use with the AES3 digital option card. The AES3 option card has both RJ-45 and coax connectors and will auto-detect which is in use. This option will apply regardless of which connection on the AES3 card is used.

Layout Binaural coax/AES using D25

This configures the audio mixer for use with the AES3 digital option card and the auxiliary audio connector. The AES3 option card has both RJ-45 and coax connectors and will auto-detect which is in use. This option will apply regardless of which connection on the AES3 card is used.

INPUT AREA

This area contains a list of all the available audio sources and five columns for processes that can be applied to the audio before it is sent to the crosspoint audio mixers. Any processing applied at this point will affect the audio supplied to all the downstream mixing.

AUDIO INPUTS

The first column in the input area lists all the inputs that may be available in the configuration. All of the possible inputs are listed below but some inputs may not be available depending on which input/output interface options have been selected.

HS1 Mic GN

This input takes audio from the headset1 microphone or gooseneck microphone.

HS2 Mic

This input takes audio from the headset2 microphone.

Matrix1

This input takes mono audio from the analogue matrix connection if the Basic Layout is being used or one channel of stereo audio from the AES3 digital option card if this is fitted.

Matrix2

This input takes a second channel of stereo audio from the AES3 digital option card. This input is only available if the AES3 digital option is fitted.

Ext1

This input uses the External Input 1 on the auxiliary audio connector.

Ext2

This input uses the External Input 2 on the auxiliary audio connector.

Listen Again

This input uses audio from the listen again facility.

FILTER

The filter column shows a graphic representing the type of audio filtering that is being applied to the audio inputs. The graphic represents the frequency profile of the input filters.

OUTPUT AREA

The top row of the output area lists all the outputs that may be available in the configuration. All of the possible outputs are listed below but some outputs may not be available in specific configurations.

Main LS

This outputs audio to the main panel loudspeaker.

Aux o/p

This outputs audio to the auxiliary loudspeaker via the auxiliary audio connector.

Matrix1

This output sends either mono audio to the matrix via the analogue matrix connection or one channel of stereo audio to the matrix via the AES3 digital connection.

Matrix2

This output sends one channel of stereo audio to the matrix via the AES3 digital matrix connection. This output is only available if the AES3 digital option card is fitted.

HS1L

This output sends audio to the main panel headset left ear.

HS1R

This output sends audio to the main panel headset right ear.

HS2L

This output sends audio to the second headset left ear via the auxiliary audio connector.

HS2R

This output sends audio to the second headset right ear via the auxiliary audio connector.

Ext1

This sends audio output to the first external output via the auxiliary audio connector.

Ext2

This sends audio output to the second external output via the auxiliary audio connector.

Hot Mic

This sends audio output to the hot mic output via the auxiliary audio connector.

Voicerec

This output sends audio to the Listen Again voice recording facility.

FILTER SETTINGS

The filters are applied to input audio streams to remove extraneous noise from the audio before it is sent to the mixer. There are two types of filter; the “Low Pass” filter and the “High Pass” filter.

The Low Pass filter will pass low frequencies and is used to remove high frequency noise such as wind noise while the High Pass filter will pass high frequencies and is used to remove low frequency noise such as machinery.

Each filter has four possible settings; off, filter 1, filter 2 and filter 3.

1. Off - no noise filtering is done.
2. Filter 1 - uses the first noise filtering algorithm.
3. Filter 2 - uses the second noise filtering algorithm.
4. Filter 3 - uses the third noise filtering algorithm

The frequency filters have the following effects:

High Pass 1 - reduces audio volume below 120Hz.

High Pass 2 - reduces audio volume below 250Hz

High Pass 3 - reduces audio volume below 500Hz

Low Pass 1 - reduces audio volume above 8KHz

Low Pass 2 - reduces audio volume above12KHz

Low Pass 3 - reduces audio volume above 15KHz

The filter configuration is shown using a graphic of the frequency against level.

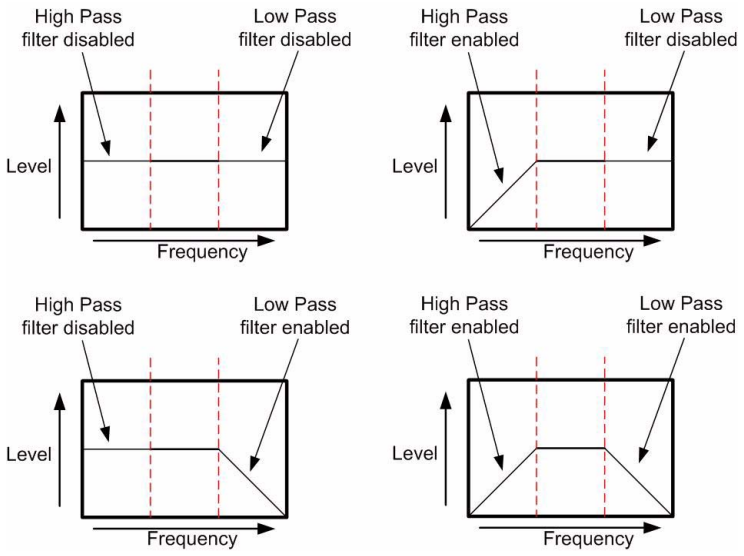


Figure 8-4: Audio Mixer Filter Settings

If the mouse pointer is placed over the filter graphic a tooltip will be display giving additional information on the filter settings.

LIMITER/THRESHOLD/COMPRESSOR

These settings are all linked together and provide a facility for controlling the overall level of the input audio. The settings will allow the audio level to be limited to a maximum and audio above a threshold level to be modified as it approaches the maximum permissable level.

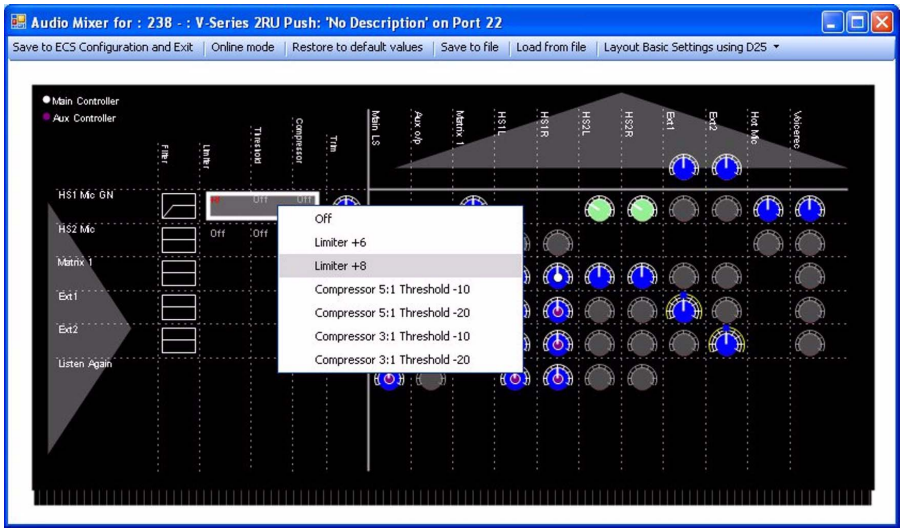


Figure 8-5: Audio Level Compression

Limiter

This sets the maximum audio level on the input that will be passed to further stages of the audio mixer. The limiter settings are:

- Off
- -6dB
- -8db

Threshold

The threshold setting determines the level at which audio compression starts. When the audio input level passes the threshold it begins to be compressed so that the output level from the compressor approaches the audio limit more slowly as the audio input level rises. The threshold settings are:

- Off
- -10dB
- -20dB

Compressor

The audio compressor reduces the audio level by compressing it whenever the audio level exceeds the threshold. Thishas the effect of allowing the audio level to rise but reducing it by a fixed ratio. The compressor settings are:

- Off
- Compression 5:1
- Compression 3:1

For example, if the compressor is set to 5:1 with a threshold of -10dB this will have the effect that for every 5dB increase in the input level above the threshold of -10dB the compressor will output only 1dB of increase. Thus if the input audio is 20dB above the threshold the output from the compressor will only show an increase of 4dB. If the limiter was set to +6dB then a 20dB increase would normally exceed the limiter (-10dB + 20dB = 10dB) so the audio level would be cut off at +6dB. With the compressor the audio level would not reach the limit so the audio would still rise to mimic the input (-10dB + 4dB = -6dB).

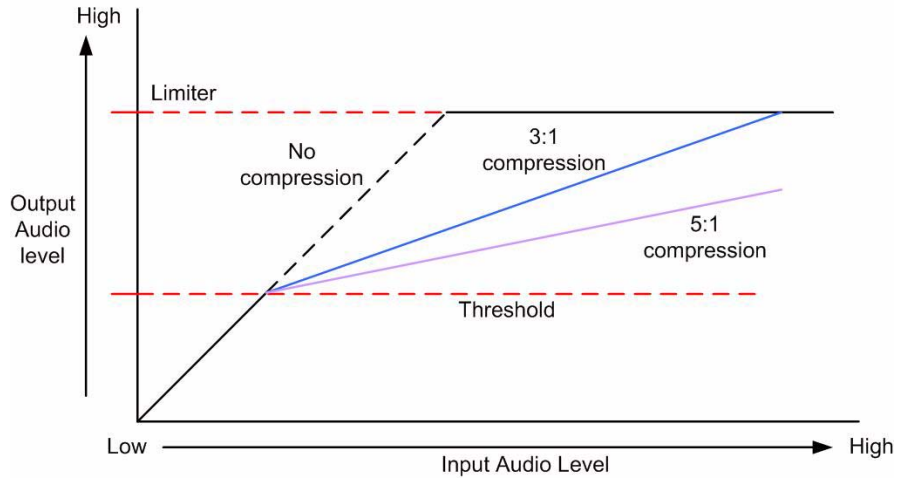


Figure 8-6: Audio Compression

INPUT TRIM

The input trim sets the amount by which the output from the filter and compressor is modified before it is fed to the audio crosspoints. It is displayed as a color coded dial indicating the trim action. To set the trim right click over the dial to display the list of preset trim levels.

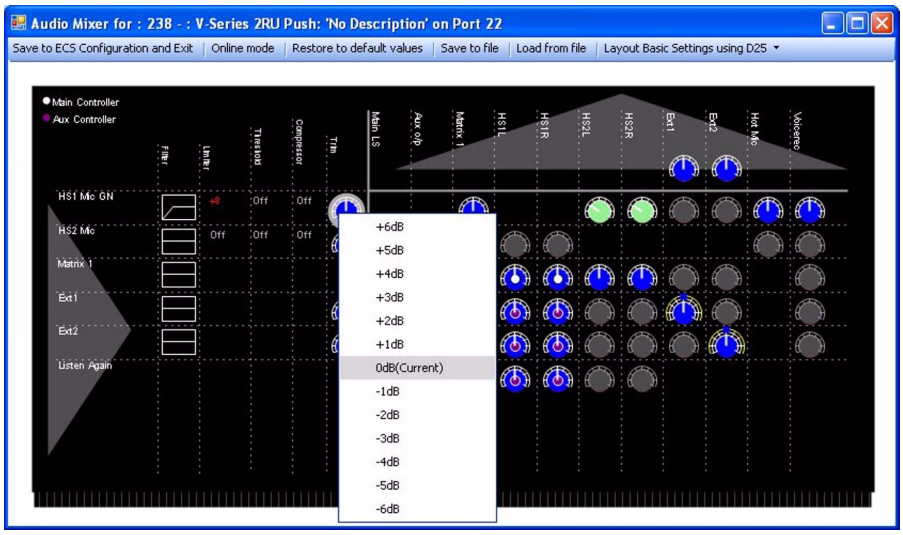


Figure 8-7: Input Trim

If the dial is colored blue then no trim (0dB) is being applied. If the dial is green then a negative trim is being applied to reduce the audio level. If the dial is red then a positive trim is being applied to increase the audio level.

CROSSPOINTS

The crosspoint area of the audio mixer displays all the crosspoints available for the current configuration and the status of the crosspoint.

Each crosspoint allows individual setting of the input and output audio between the audio source in the input section and the Asia destination in the output section. Each crosspoint is displayed as a dial with color coding to show the status of the crosspoint. The color codes are:

- Grey - crosspoint is muted so no audio passes through the crosspoint.
- Blue - audio level gain is set to 0dB or controlled by a volume knob.
- Green - audio level is reduced in the crosspoint (gain level is negative e.g. -3dB).
- Red - audio level is increased in the crosspoint (gain level is positive e.g. +3dB).
- Blank - no crosspoint.

The center of the dial is also color coded when appropriate to indicate whether the audio level is being controlled by software only or by the panel volume controls. The settings are:

No colored center - audio levels are set in software only.

White center - audio level is set by main volume control knob.

Mauve center - audio level is set by auxiliary volume control knob.

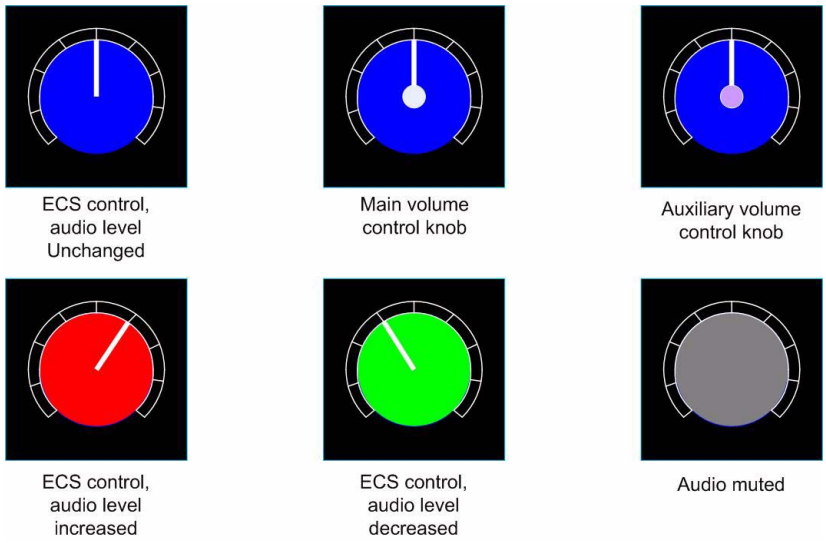


Figure 8-8: Audio Mixer Crosspoint

Right clicking on a crosspoint dial will display a list of options for setting the crosspoint.

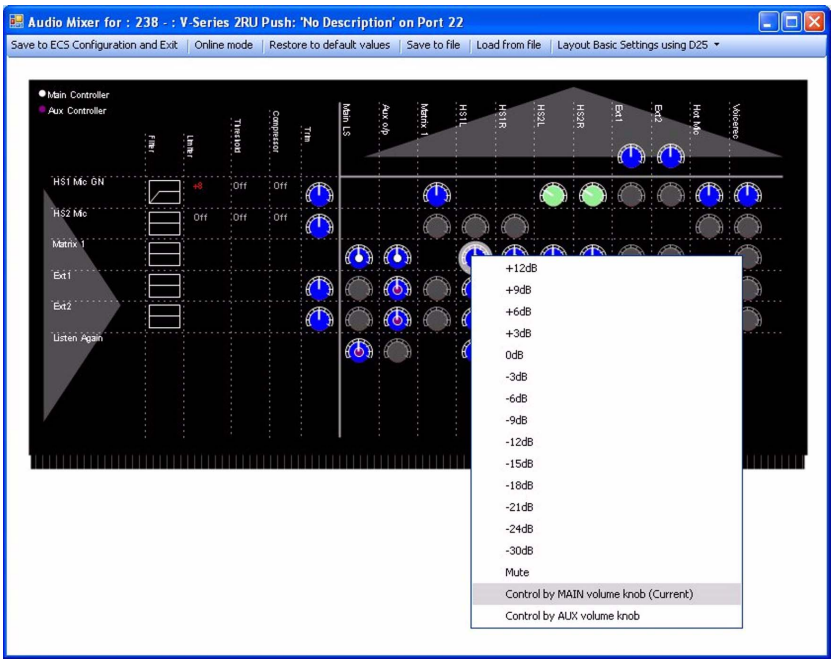


Figure 8-9: Crosspoint Settings

If an additional yellow ring is displayed on the crosspoint dial this indicates that the crosspoint is also used by an IFB. If the IFB is activated the audio output from the crosspoint mixer is reduced (dimmed) by the specified amount.

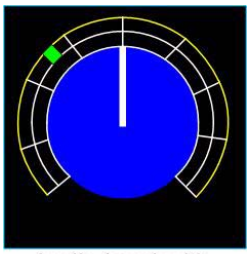


Figure 8-10: Crosspoint with IFB

The colored segment in the outer dial indicates the dim setting for the IFB (the amount by which the source audio is dimmed when the IFB control is activated). This is set by right-clicking on the dial and selecting the required IFB level. The IFB is activated using a control set up in Control Manager.

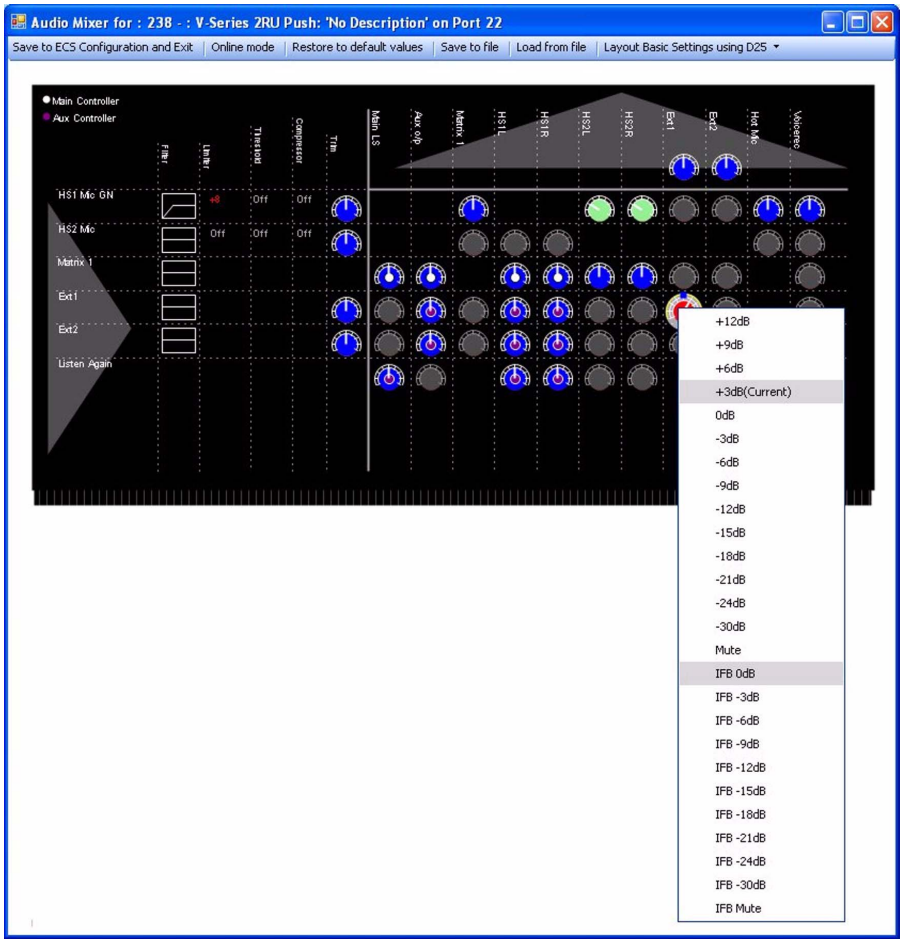


Figure 8-11: Setting IFB Dim on Crosspoint

The level settings from +12dB to -30dB represent the levels set for audio through the crosspoint and Mute will stop all audio through the crosspoint. Below this are the IFB dim levels from 0dB to -30dB and Mute (IFB completely interrupts audio feed).

Setting Up IFBs in Imported Configurations

When a ECS 4.2 map is imported the IFB control information V-Series panels is lost due to changes in the way the configuration data is organized. In order to restore the IFBs and restore the control information the following steps should be carried out.

1. Open Panel Programming from the Configuration menu.
2. Select the V-Series panel that the IFB control was originally attached to.
3. Open the audio mixer.
4. Use the audio mixer to set the IFB dimming for EXT1 and EXT2 crosspoints as required. This action will create Panel IFB relays IFB1 and IFB2 for that panel.
5. Close the audio mixer.

6. Open the Control Manager.
7. Select the ‘Panel IFB relays’ tab. The available IFBs will be displayed.
8. Select a control or create a new control.
9. Use the control manager to attach the IFB to the control.
10. Close the control manager.
11. In panel programming the control is now available under the ‘Controls’ tab to be assigned to a key on the panel in the normal way.

OUTPUT AREA

The output area contains trim controllers for individual outputs displayed as dials. When these are set whatever audio is being sent to the output will be changed by the specified amount. As before right clicking on the dial will display the audio settings available for that output. The dials are color coded to indicate the trim applied as described for the crosspoint.

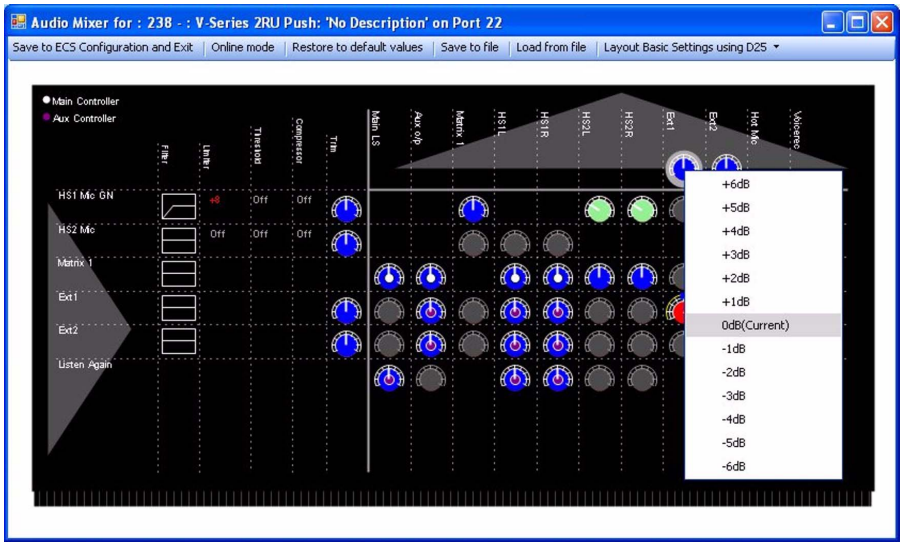


Figure 8-12: Output Settings

9 ONLINE MODE

INTRODUCTION TO ONLINE

Online mode is a mode that allows changes to be made to the configuration of a live system without the need to download a new configuration. The new configuration is held in the matrix and even if the matrix is reset the modified configuration will be preserved rather than defaulting back to the original configuration map.

The changes are not automatically added to the system configuration controlled by ECS until the modified configuration is saved either by clicking on the 'Save' button in the File menu on exiting Online mode, by downloading a map to the matrix or by exiting ECS and selecting 'Yes' to save the configuration.

Note: If the configuration map currently on the matrix is exported by ECS and then imported again without changing the name of the configuration map it should be downloaded to the matrix before entering Online mode. If the imported configuration map is not downloaded to the matrix before entering Online mode panel labels may appear to be changed.

Online mode allows panel labels including beltpacks to be added, deleted or moved in Panel Programming and Forced Listen and Blocked Listens to be updated in Local Advanced. The functions which can be used in Online mode are indicated by the menu entries or button text being colored green. However there is an important limitation when using Online mode on linked systems.

If a label refers to a source or destination on a remote matrix (a matrix linked to the current matrix) it cannot be assigned in Online mode unless it is already present in the current map being modified. In order for such a label to be present in a configuration it must have been assigned at least once and then downloaded as part of a map. In this way it will be recognized by the matrix if it is assigned in Online mode. Local sources and destinations (on the current matrix) can be assigned for the first time in Online mode provided they have already been set up in the current map. For example a local Party Line cannot be created in Online mode but it can be assigned to a key for the first time in Online mode.

If a remote source or destination is assigned to a key for the first time in Online mode the label will initially be displayed in the panel mimic and then disappear as the matrix will reject the assignment request. Further information on this limitation is given later in this chapter.

Online mode operates in a completely live mode so that as soon as a change is made in ECS the configuration in the matrix is updated. If a

panel label is changed for example, the panel affected is updated without any further user intervention. ECS is notified of any changes that are made online, as a consequence of this, if ECS running on any other PC which is also configuring the same matrix and in Online mode it will also be updated with the changes. Therefore it is possible for more than one ECS to be editing a configuration with each change being displayed on all the copies of ECS connected and in Online mode. However this mode of operation is not recommended due to the risk of the different copies of the configuration diverging later if one of the instances of ECS ceases to be online.

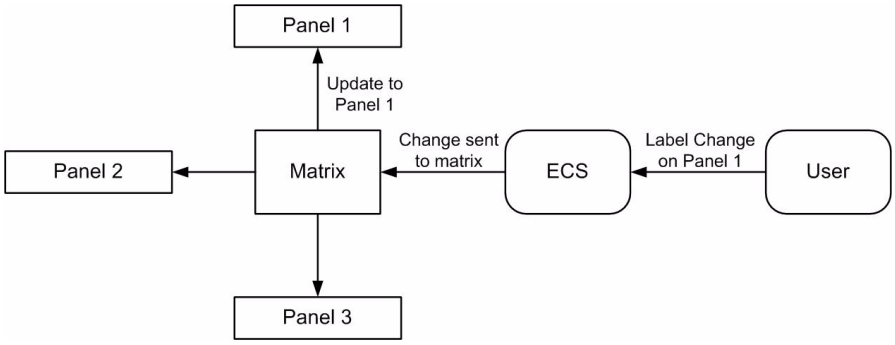


Figure 9-1: Online Update Sequence

ENTERING ONLINE MODE

Select the ‘Online’ link in the ‘System’ menu to open a drop-down menu of online mode options.

To enter Online mode select the ‘Online’ button on the ECS toolbar.

Figure 9-2: Online Mode Options

The online modes have the following effects:

- No Merge - go online without merging the current ECS configuration with the current matrix configuration.

- Merge Down - merge the current ECS configuration down to the matrix; the ECS configuration will take precedence.
- Merge Up - merge the current matrix configuration up to ECS; the matrix configuration will take precedence.
- Visual Merge - merge the configurations and offer the operator the option to decide which configuration takes precedence in the event of a conflict.

The state of Online mode is shown by the background color of the menu panel.

Normally the menu panel background color is charcoal; when the Online button is selected it will initially turn red while ECS contacts the matrix and uploads the current configuration (this phase may be short enough not to be seen). Once the matrix has been contacted the menu panel background will turn amber.

If the name of the configuration map on the matrix is different to the configuration currently open in ECS Online mode will display an error message.

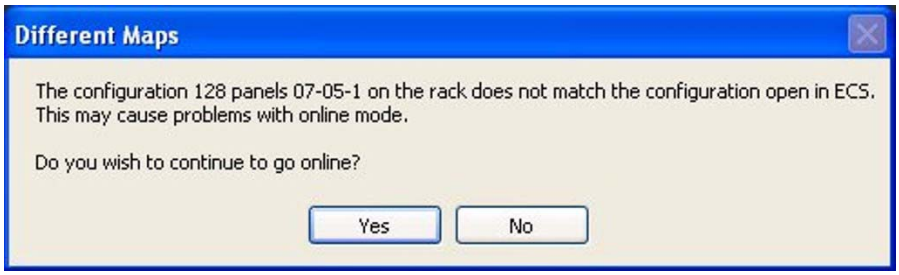


Figure 9-3: Online Configuration Name Error

The user may continue with the operation by clicking on the 'Yes' button but it is generally not advisable. If the user does continue with the operation further errors may be reported.

ECS will then compare the matrix configuration with the current ECS configuration; during this operation the menu background color is amber. If inconsistencies are found between the current configuration in ECS and the information from the matrix informatory messages will be displayed.

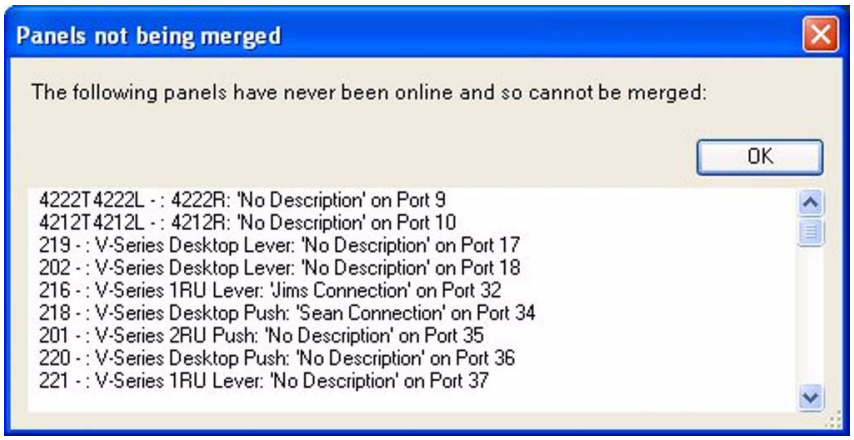


Figure 9-4: Online Merge Error

ECS will display any differences between the current configuration open in ECS and the information from the matrix. For example, if a key is present on a panel in the ECS configuration but not in the matrix configuration then it will be reported as a difference.

The same approach will apply to forced and blocked listens.

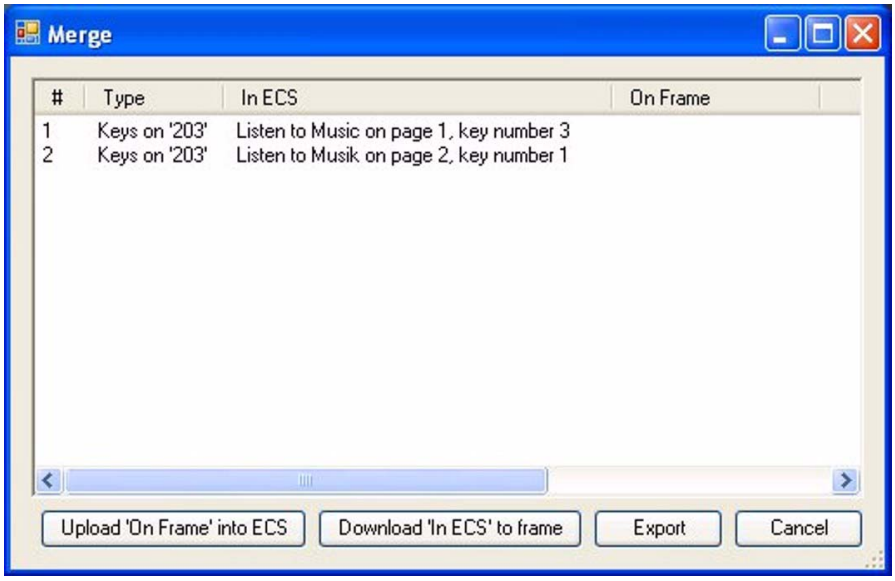


Figure 9-5: Online Merge Errors

Beltpacks and panels attached to the matrix that are offline or disconnected are not considered when ECS is checking for differences between the matrix configuration and the ECS configuration.

The user will be given the following options if the configurations cannot be merged:

- Upload ‘On Frame’ into ECS - overwrite the configuration in ECS with the current matrix configuration.

- Download ‘In ECS’ to frame - overwrite the configuration in the matrix with the current ECS configuration.
- Export - export the Online mode error report as a text file for analysis.
- Cancel - Cancel the Online operation and exit Online mode.

A number of conditions can cause the online merge to report errors. The most common conditions are:

- Panels present in the ECS configuration but not in the matrix configuration.
- Panels present on the matrix but not in the ECS configuration.
- Panels with locally assigned keys that are different to the keys set up in the ECS configuration.

In general merge errors arise when there are mismatches in the configuration through offline assignments in ECS or online assignments through a panel. The online error report that can be exported from ECS should be used to resolve conflicts if it is not desirable to overwrite either the ECS configuration or the matrix configuration.

If the matrix configuration appears to merge without errors being reported but there are apparent changes in areas such as panel programming the user should check whether the map in ECS has been imported but not downloaded before entering Online mode.

Once the configurations have been synchronized the background on the menu pane and the ECS bottom status line will turn green and online editing of panel setups may be carried out. The Online button will now display “Online - Online now”.

USING ONLINE MODE

In the example below keys are assigned to a panel in Online mode to take immediate effect.

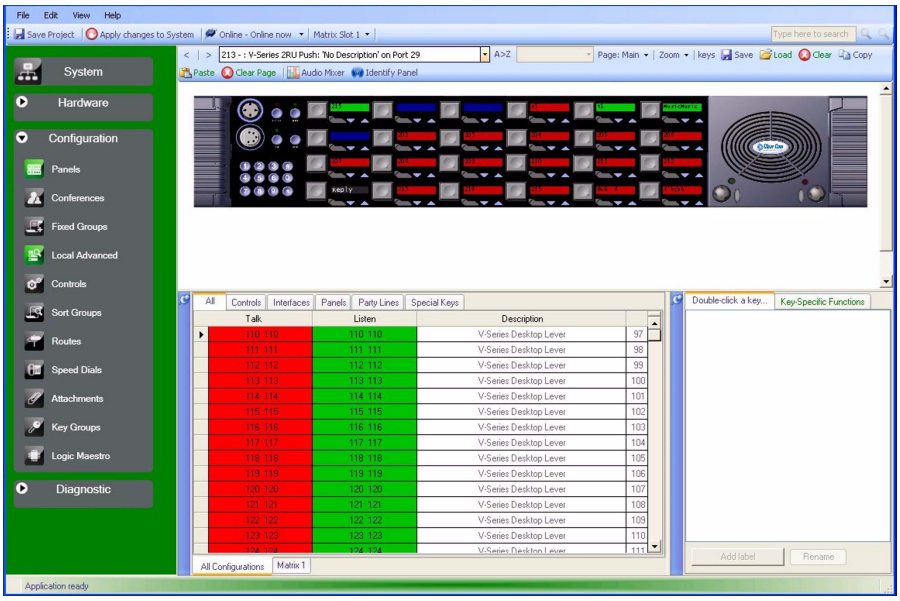


Figure 9-6: Panel Programming Display with Online Active

If the keys are changed on this panel the changes will be sent to the matrix and then on to the panel. The matrix will return a confirmation to ECS that the panel has been updated.

Forced and blocked listens on crosspoints in Local Advanced can also be set or cleared using Online mode. It should be noted that the Forced Listens shown in Local Advanced can be IFB sources.

As with panel labels these changes will take immediate effect.

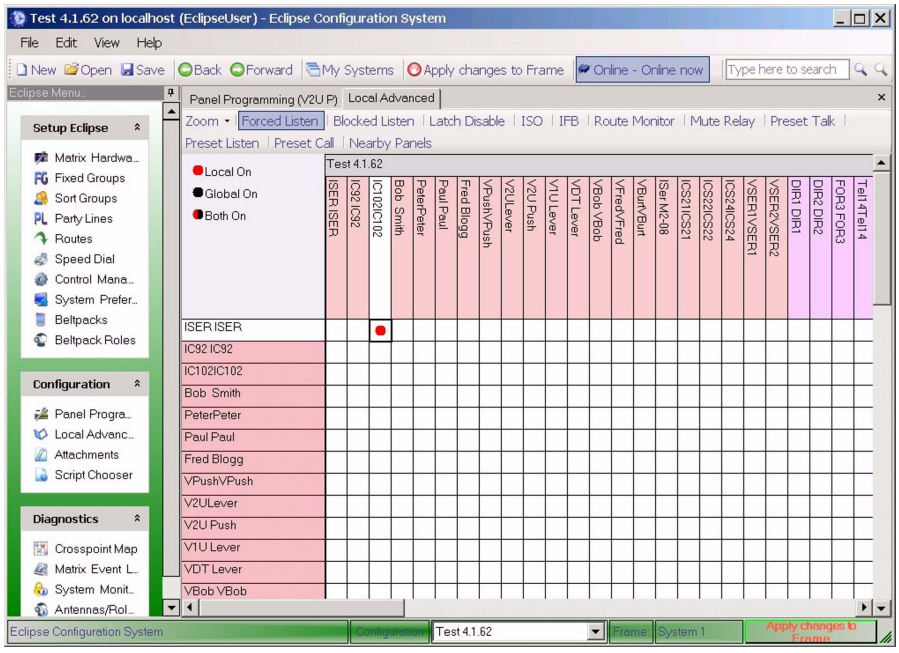


Figure 9-7: Local Advanced Display with Online Active

ONLINE LIMITATIONS

Online mode provides much of the functionality of Panel Programming but it cannot be used to create new entities; this must be done in ECS. Specifically Online mode cannot:

- Create or edit a Party Line.
- Create or edit a Fixed Group.
- Create or edit a Control.
- Create a Talk and Forced Listen key.
- Create the first remote key to a Fixed Group.
- Create the first remote key to a Party Line.
- Create the first remote key to a Control.
- Create a stacked key.

Also, as noted previously Online cannot assign a label that refers to a remote system unless it is already present in the current map. In order for such a label to be present in a configuration it must have been assigned at least once and then downloaded as part of a map. In this way it will be recognized by the matrix if it is assigned in Online mode.

EXITING ONLINE MODE

To exit Online mode click on the highlighted ‘Online’ button. The button will cease to be highlighted and the background color of the menu pane will return to white. The button will return to the inactive display “Online”.

At this point the configuration on ECS and on the matrix should be synchronized but the configuration will not be saved in the database at this point. The configuration on the matrix will be preserved in non-volatile memory in the event of a power failure but it will be lost if a new configuration is downloaded. Therefore it is highly recommended that after a configuration is updated in Online mode it should be saved in ECS either back to the original configuration or to a new configuration as required to ensure that the changes are preserved.

Online mode can also be ended as a result of other actions that force ECS out of this online mode. Some of the possible actions are:

- Changing to a different configuration while online will cause ECS to drop the connection to the matrix.
- Closing the current configuration without exiting online mode first.
- Selecting ‘Apply Changes’ to download a new map to the matrix.
- A physical reset of the matrix. In this case as well as dropping online mode the background of the menu pane will turn red to indicate that the connection to the matrix has been lost.
- Loss of the ethernet connection to the matrix. As with a reset the menu pane background will change to red to indicate that the connection has been lost.

10 NETWORKING

NETWORK SYSTEM CONFIGURATION

To access the networking facilities select the ‘System’ link in the menu pane.

In the System pane the ECS operator can create, delete, or edit matrices for a particular matrix system. From this screen the ECS operator can also allocate configurations to Eclipse matrices, clear configurations and upload active current configurations.

The System screen also allows the management of Intelligent Linking Trunks. This is explained in the Intelligent Linking section of this manual.

The configurations window displays the available configurations and at the bottom is the ‘New Frame’ area to drag and drop a new frame into the Layout window.

CONFIGURATION PASSWORDS

Individual configurations can be password protected to prevent unintended or unauthorized changes to be made or the configuration to be downloaded to a matrix. To set the password on the current configuration select the matrix in ‘System’ and open the Configuration Manager.

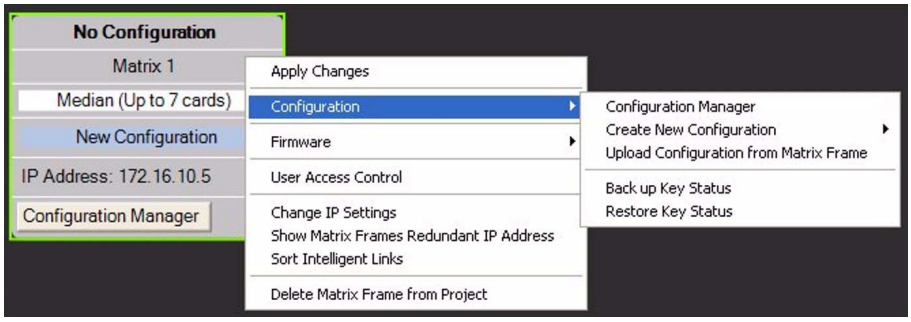


Figure 10-1: Opening the Configuration Manager

Once the Configuration Manager is open the properities of any of the available configurations can be viewed and edited.

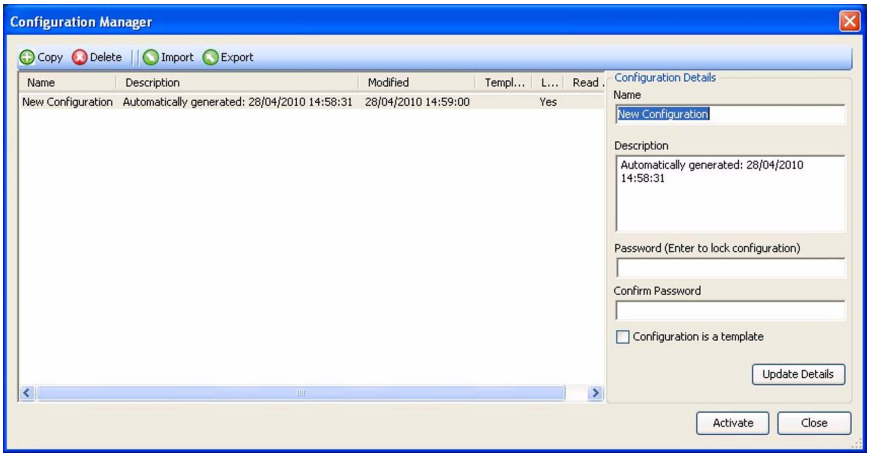


Figure 10-2: Configuration Properties Dialogue

To set or change the password for a configuration type the password into the 'Password' field and then retype in the 'Confirm password' field. Then click on the 'Update Details' to add the password to the configuration. The configuration must be saved and closed before the password becomes operative.

ECS users with Admin rights can always open a configuration regardless of whether a password has been set and reset the password if required. If an ECS user without Admin rights opens a password protected configuration they will be asked for the password.

Figure 10-3: Configuration Password Entry

The correct password must be entered to open the configuration. Once the configuration has been opened by an ECS user with User rights that user may then change or remove the password.

The configuration password may be removed by opening the configuration properties and clearing both the 'Password' and 'Confirm password' fields and then saving the configuration. The next time the configuration is opened it will no longer be password protected.

SYSTEMS LAYOUT

'System' is opened from the ECS menu pane. Below is a description of each option. The commands available to the user will depend on whether the user has Admin rights.

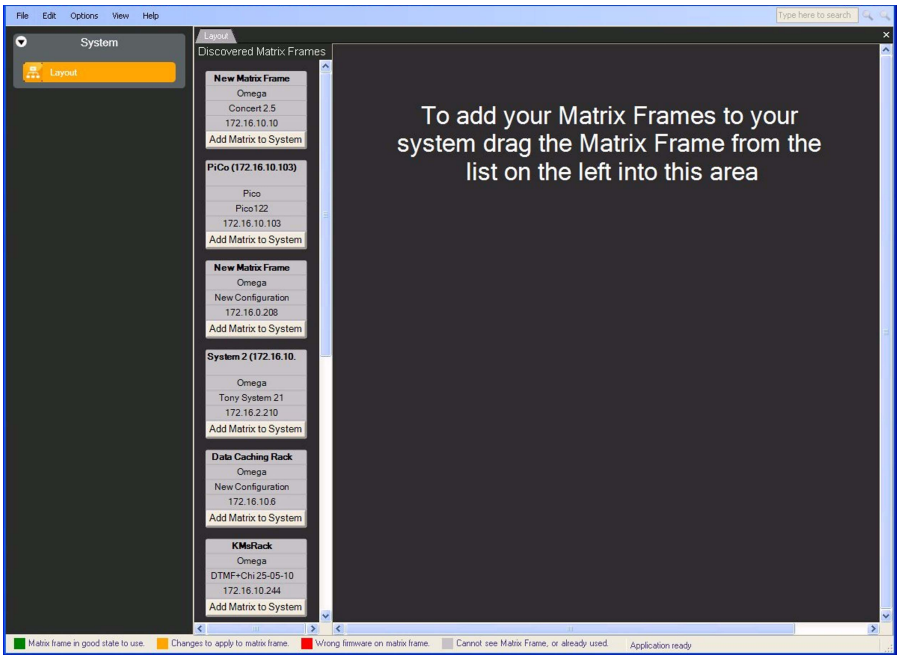


Figure 10-4: System Screen

In order to open the 'System' menu and carry out operations the user must be logged in with Local-Admin rights or above. If the user does not have sufficient privilege an error message is displayed.

Figure 10-5: User Privilege Error

Matrix Status

The matrix icons in the System window are colored according to the status of the matrices:

- Orange - the ECS configuration is not the same as the current matrix configuration.
- Red - wrong firmware on matrix for current version of ECS.

• Grey - matrix unavailable or already connected to ECS.

• Green - matrix is connected and available.

Protocols and Port Numbers

The Eclipse system components (matrix and ECS) communicate using UDP and TCP protocols.

Rack to rack

The volume of traffic both exchanged rack to rack and rack to/from ECS is not large, there are however of course some points when this is at a peak. The racks use both directed and broadcast UDP traffic to communicate.

Broadcast: UDP Port 42001

Directed: UDP Port 42001

Rack to ECS

UDP Port 1300

TCP Port 2048 to TCP Port 2055 inclusive (Lifetime of out of sequence packets 1 sec).

ALLOCATING A CONFIGURATION TO A MATRIX

To allocate a configuration to a matrix select the matrix by clicking over the matrix icon in the ‘System’ pane. The matrix will be highlighted by a green line around the icon.

Click on ‘Matrix Slot’ on the ECS toolbar to open the menu listing the configuration slots available (normally four) and select the slot for the configuration.

Right-click on the matrix icon to open the menu and select ‘Configuration’ and then ‘Configuration Manager’ to open the configuration manager window.

Select the configuration to be applied to the matrix and then click on the ‘Activate’ button to apply the configuration to the matrix.

Close the Configuration Manager and the name of the selected configuration will be displayed on the matrix icon.

CLEARING A CONFIGURATION FROM A MATRIX

To clear a configuration from a matrix select the matrix by clicking on the icon in the ‘System’ pane. The matrix will be highlighted by a green line around the icon.

Click on ‘Matrix Slot’ on the ECS toolbar to open the menu listing the configuration slots available (normally four) and select the slot for the configuration.

Right-click on the matrix icon to open the menu and select ‘Configuration’ and then ‘Clear Configuration’ to delete the configuration from that slot.

The configuration will be deleted from the matrix and the configuration name will be removed from the matrix icon.

DELETING A MATRIX

to delete a matrix from the ‘System’ screen right-click on the matrix icon and select the ‘Delete Matrix Frame from Project’ menu item. The matrix will be deleted from the current project and the icon will be removed from the ‘System’ pane.

UPLOAD ACTIVE CONFIGURATION FROM MATRIX

To upload the active configuration from the matrix right-click on the matrix icon to open the menu and select ‘Configuration’ and then ‘Upload Active Configuration from Live Matrix Frame’. The current live configuration will be uploaded and saved to the currently selected slot on the matrix.

Note: The Upload Active Configuration functionality is not available over a serial connection between the Eclipse matrix and the ECS PC.

INTELLIGENT LINKING (PORT TO PORT)

The process of building up a configuration that has matrices linked together is demonstrated below; the example given builds a configuration that has two matrices, linked together utilizing two trunk lines. The more matrices that are linked together the more steps that are required; however the basic configuration building is as follows:

TRUNKS

Eclipse matrices can be connected by trunk lines either using fiber-optic connections and fiber cards or via four-wire connections and MVX-A16 cards or via E1/T1 and E-QUE cards.

Fiber Trunking

Fiber trunking requires fiber cards (E-FIB) to be installed in the matrices as described in the relevant system manual and then configured in ECS under ‘Matrix Hardware’. Fiber trunked systems are normally connected in a ring configuration as described in the system manual and must be connected in sequence.

For example, if four matrices are to be connected together using fiber trunks the system numbers (specified in ‘My Systems’) must start at 1 and be sequential i.e. 1, 2, 3, and 4. The IP addresses allocated to the

systems must also be sequential and incrementing to match the system numbers. The connection layout is shown below.

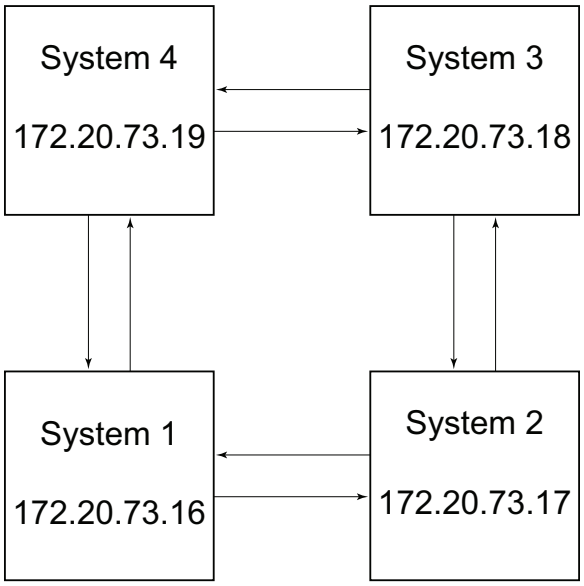


Figure 10-6: Fiber Connections

If any four-wire trunked systems are connected to the fiber systems they should be given higher numbers and their IP addresses should be above the address range of the fiber linked systems.

Four-Wire Trunks

Select one of the Configurations by selecting the down arrow in the configuration field at the bottom of the screen.

Open up the Matrix Hardware screen, then select the MVX card where the trunks are to be configured.

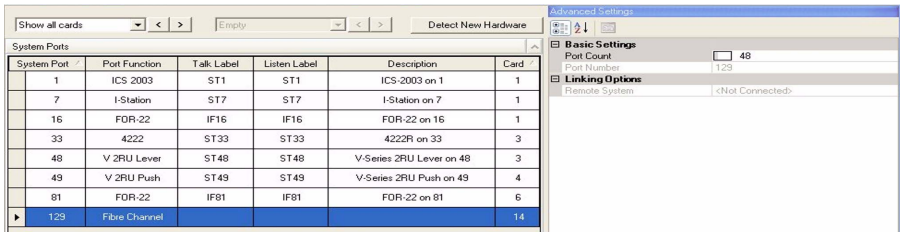


Figure 10-7: Trunk Configuration

- Configure the required ports as Trunks.
- Save the configuration, then switch to the second configuration
- Open Matrix Hardware screen for this configuration and configure the required ports as Trunks.

• Select ‘My Systems’ link and ensure that the required systems layout is open

The systems layout should be automatically updated with the trunk information on both frames. The trunks have been added to the bottom of each frame and the port number should be shown.

Trunking Configuration Mismatches

If there is a mismatch between the configuration specified in ECS and the hardware available a mismatch screen is displayed offering the option to update the configuration.

If the trunking information is changed in any way it may cause a trunking configuration mismatch to occur. For this reason the user should always use ‘Save and Activate’ after any change to trunking to ensure the new configuration information is downloaded to the matrix and a black reset performed.

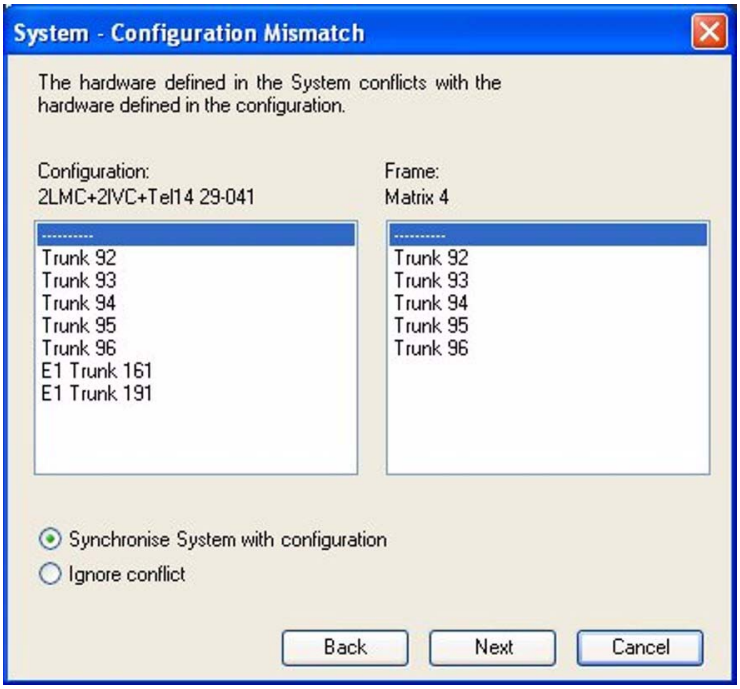


Figure 10-8: Configuration Mismatch Screen

Click on the ‘Next’ button to accept the default option to synchronize the configuration or select the ‘Ignore’ radio button to ignore the conflict and proceed with the configuration.

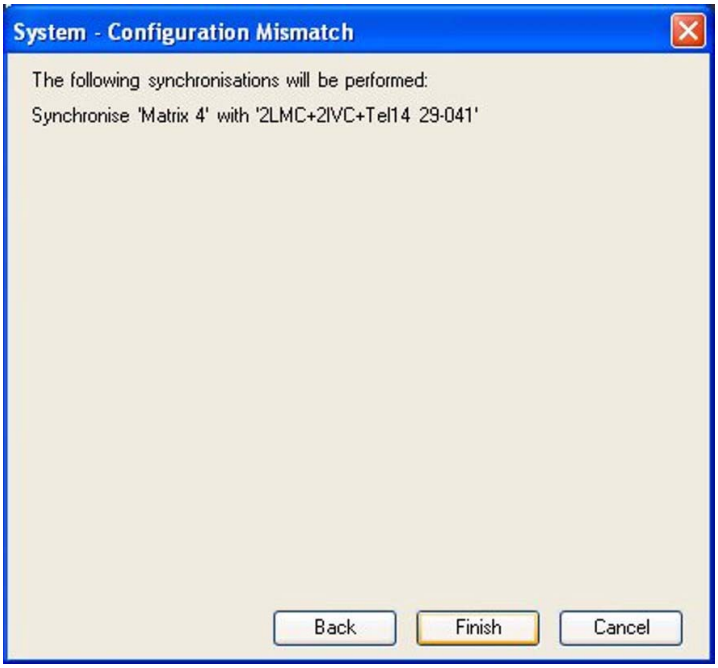


Figure 10-9: Synchronization Display

Click on the 'Finish' button to complete the synchronization between the hardware and the configuration.

Note: The 'Configuration/Hardware Mismatch' screen is not available unless the preceding steps are followed and an attempt is made to allocate a configuration with trunks to a system layout without trunks.

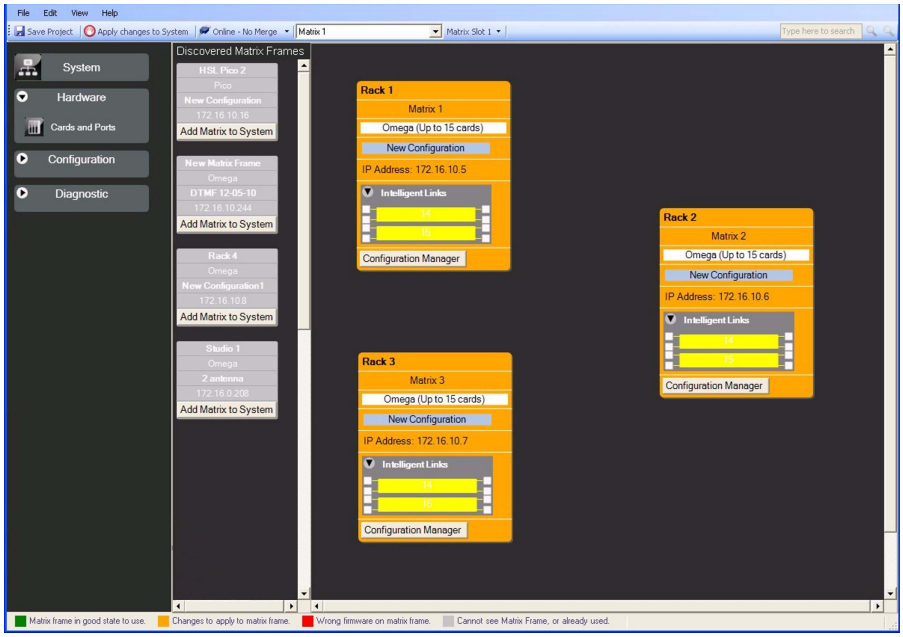


Figure 10-10: Trunked Systems Display

From one frame click and hold down the mouse button in the diamond shape next to the required trunk, drag across to the second frame and drop on the diamond shape next to the required port.

Repeat this procedure for each required trunk.

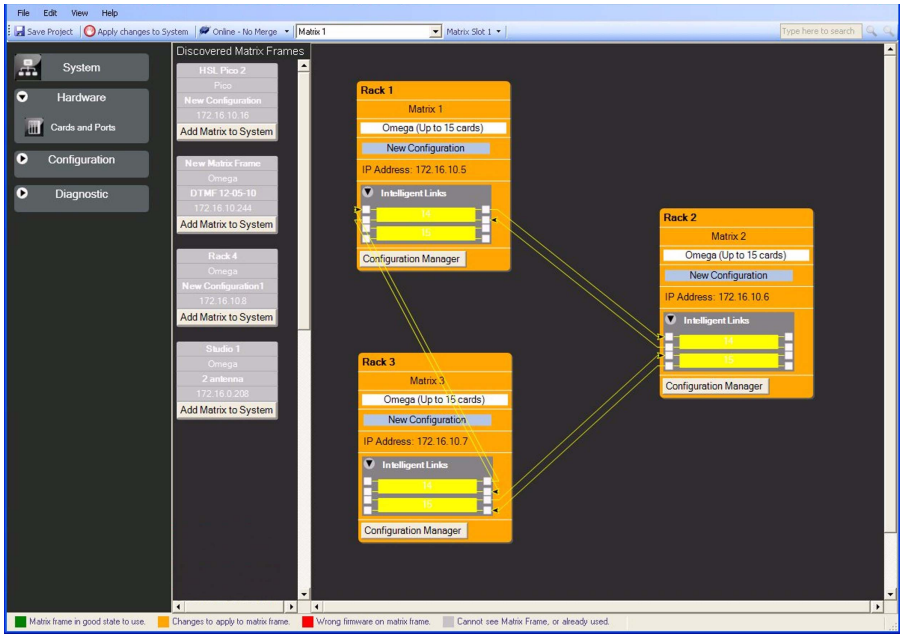


Figure 10-11: Trunk Connections

- Select the ‘Apply changes To System’ link in the System menu to apply the configuration changes.
- Open the File menu and select ‘Save project’ or ‘Save Project As’ to save the new system configuration.
- Select the ‘Hardware’ menu and select ‘Cards and Ports’ to check the configuration and confirm that the corresponding configuration has been allocated to the trunks. This can be seen from the advanced settings for the trunks.

Note: User-configured trunk labels are ignored in online mode and the default labels should be accepted.

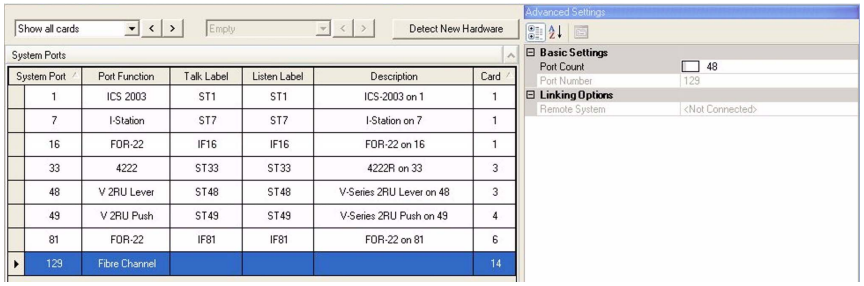


Figure 10-12: Trunk Configuration

Switch configurations and confirm the trunks have been allocated the corresponding configuration.

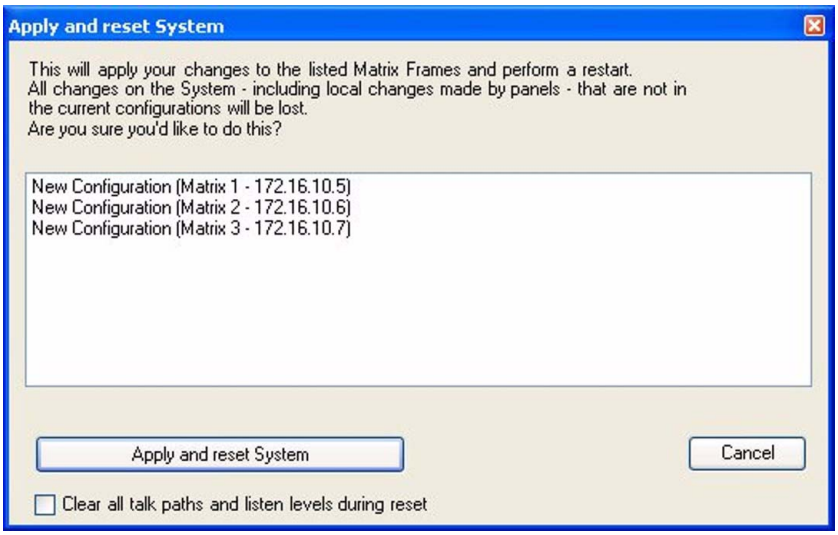


Figure 10-13: Frame Reset

When changing the trunking information between frames all of the frames in the linked set should be reset. The option to reset frames is available from the download dialogue.

PROGRAMMING REMOTE LABELS

Programming remote labels onto Panels is conducted by firstly ensuring that the currently active configuration is the configuration where the programming of the remote labels is required. Next select 'Panels' link from the 'Configuration' menu.

From the Panel Programming area of the screen select the required panel to be programmed by either selecting the panel from the drop down list or cycling through the panels by selecting the left or right arrows.

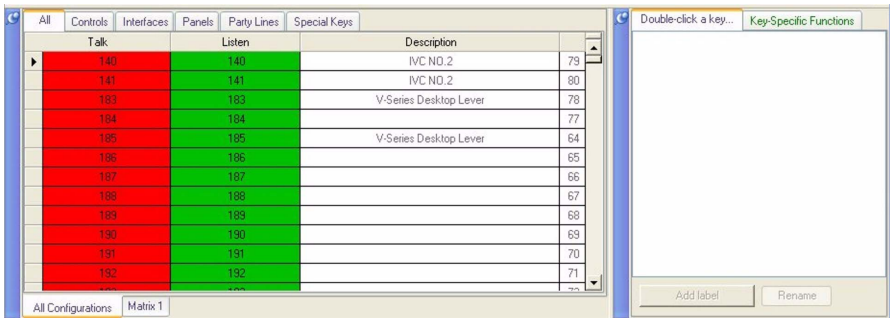


Figure 10-14: Panel Labels

Then from the Destination Labels area of the screen select either Panels or Interfaces depending on the required remote label. Move the mouse pointer over to the required talk or listen label of the Destination Labels area of the screen, single click the left mouse button then move the mouse pointer to the screen area of the required panel, again single click the left mouse pointer to drop the label in the required position.

Once the labels have been programmed onto the required panel or panels, download the changes by selecting the 'Apply Changes To System' link in the System menu. The newly programmed labels should appear in the required positions.

To programme labels onto the next System, switch between the configurations by selecting the required system from the system pane.

REMOTE FIXED GROUPS

Remote Members from one system can be added to a Fixed Group of a local system. To configure a remote member to a local Fixed group the following should be followed:

1. Select 'Fixed Groups' from the 'Configuration' menu.
2. Create a Fixed Group by clicking on the 'New' button.
3. Enter the Talk and Listen labels for the new Fixed Group and a description if required.
4. Set up the properties of the new Fixed Group using the properties dialogue in the 'Properties' pane.

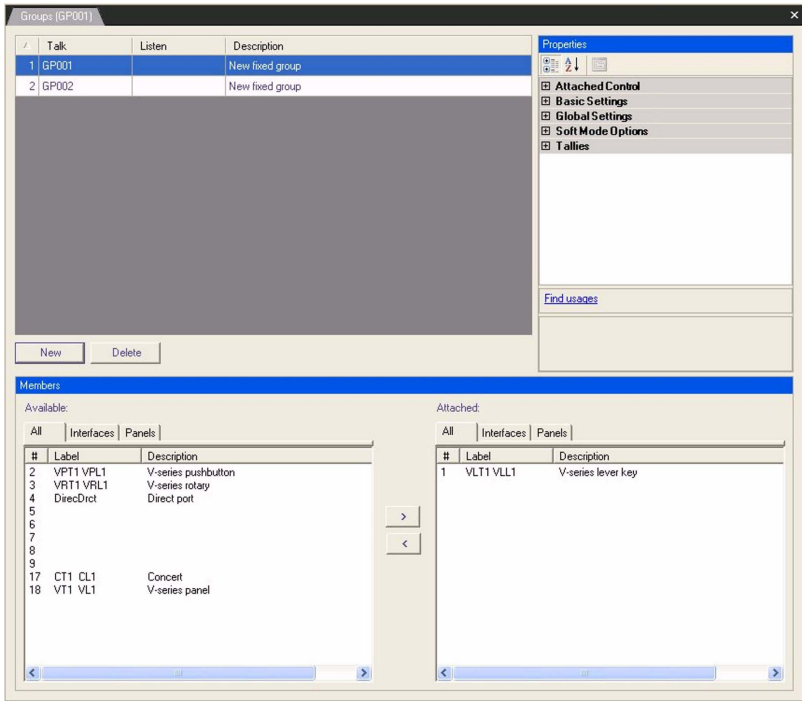


Figure 10-15: Remote Fixed Groups

5. Select the members of the group from the ‘Available’ pane and click on the ‘>’ button to transfer them to the ‘Attached’ pane. They are now members of the group. To remove members from the group select them in the ‘Attached’ pane and click on the ‘<‘ to transfer them back to the ‘Available’ pane.
6. Click on the ‘Apply Changes to Frame’ button to download the new map to the frame immediately or close the ‘Fixed Groups’ dialogue if other changes are to be made.

Note: All the possible members of a group are displayed in the ‘Available’ pane. If more than one frame configuration is open all the labels from that configuration are listed in the ‘Available’ pane and are not specifically listed under a remote tab. The tabs on the bottom of the ‘Available’ and ‘Attached’ panes allow selection of devices by configuration to determine which labels are remote to the local frame.

REMOTE PARTY LINES

Remote Members from one system can be added to a Party Line of a local system. A Party Line that contains a remote member will have a dedicated Trunk Line and as such will not be available in the leased Trunk Lines.

1. Select ‘Party Lines’ from the ‘Configuration’ menu.
2. Create a Party Line by clicking on the ‘New’ button.
3. Enter the Talk and Listen labels for the new Party Line and a description if required.
4. Set up the properties of the new Party Line using the properties dialogue in the ‘Properties’ pane.

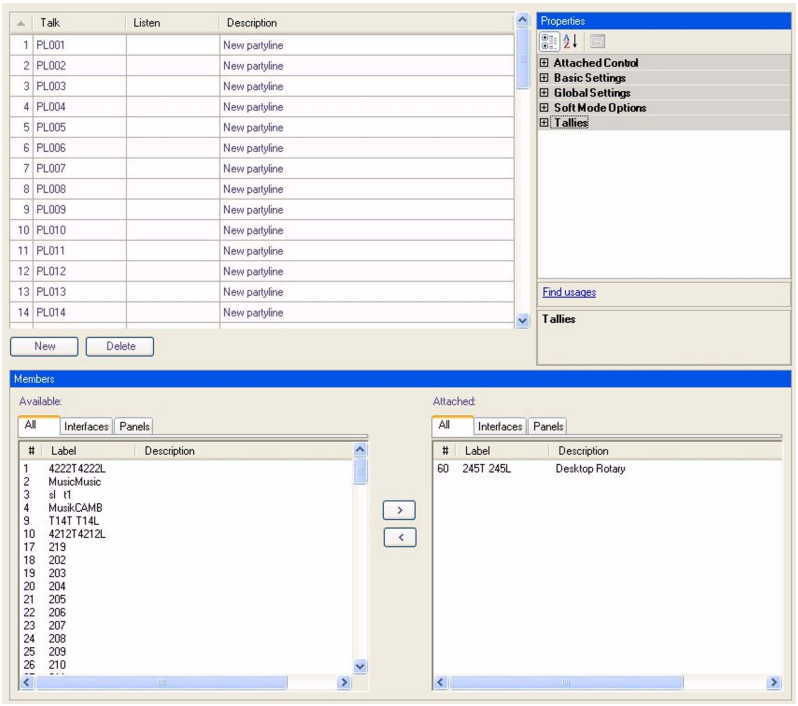


Figure 10-16: Remote Party Line

5. Select the members of the party line from the 'Available' pane and click on the '>' button to transfer them to the 'Attached' pane. They are now members of the party line. To remove members from the party line select them in the 'Attached' pane and click on the '<' to transfer them back to the 'Available' pane.
6. Click on the 'Apply Changes to Frame' button to download the new map to the frame immediately or close the Party Line dialogue if other changes are to be made.

Note: All the possible members of a party line are displayed in the 'Available' pane. If more than one frame configuration is open all the labels from that configuration are listed in the 'Available' pane and are not specifically listed under a remote tab. The tabs on the bottom of the 'Available' and 'Attached' panes allow selection of devices by configuration to determine which labels are remote to the local frame.

REMOTE 2-WAY RADIO

If a 2-way radio system if connected via a FOR-22, the 2-Way Radio can operate over an intelligently linked system. To configure a remote 2-way radio the following steps should be followed:

- Create a control, attach the relay for the FOR-22, and set the control as a secondary action on the FOR-22.
- Apply and reset the frame.
- Switch configurations, and open the panel programming screen.

• Select Remote Interfaces and locate the remote 2-way radio.

• Programme onto a required panel and apply label changes.

REMOTE TELEPHONE

Remote Telephone functionality allows a TEL-14 to be configured on one system and be available for use on another system. However in order for a remote telephone to make a call DTMF tone generation is required. The way that an Eclipse panel can make remote calls is through the use of Speed Dials.

REMOTE TELEPHONE SET-UP

Using a linked system of two frames as an example, on one system configure a telephone interface, then configure a Speed Dial which is then attached to a control.

• Switch configurations then open panel programming screen.

• Select interfaces and locate the telephone interface.

• Programme the telephone interface onto any required panel(s).

• Select the control tab.

• Select the control for the speed dial and programme next to the telephone interface.

• Activate a talk for the telephone.

• Activate the speed dial.

ALTERNATIVE METHOD FOR REMOTE TELEPHONE SET-UP

• Set-up telephone and speed dial as before.

• Switch configurations.

• Programme the telephone interface onto any required panels.

• Double click the talk label to the telephone interface.

• Select controls and click on the speed dial control.

• Add to the stacked key area .

• Download to the frame.

• Activating the talk to the telephone will operate the speed dial and the call will be made.

REMOTE CONTROLS

Controls from one system are made available for use in another system. To configure remote controls:

- Create required controls on a local system.
- Select save linked configurations.

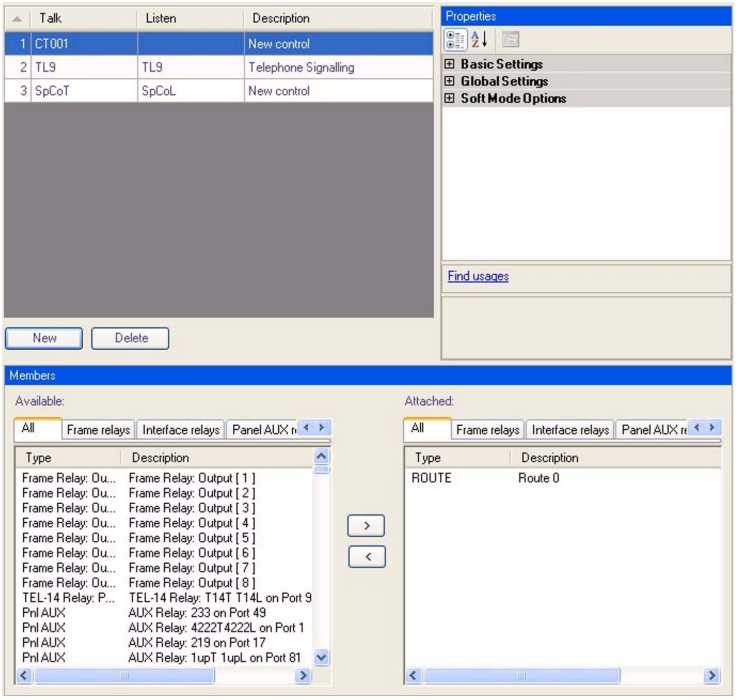


Figure 10-17: Remote Controls

- Switch configurations.
- Open panel programming screen and select the controls tab in the labels section of the window.

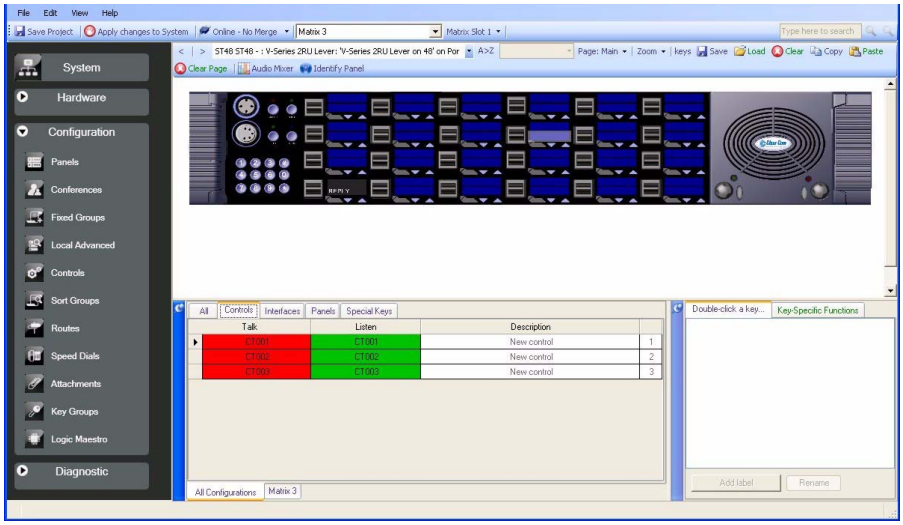


Figure 10-18: Controls on a Panel

- A complete list of controls is displayed.
- Locate the required control.
- Programme onto any required panel by the drag and drop method.
- Download to the frame.
- Operate as normal.

REMOTE SECONDARY ACTIONS

Other functionality implemented is the remote secondary action where a control can be attached to a label as a secondary action.

11 CLIENT SERVER

This option needs to be purchased and provides a client license required to log in to an ECS server from a client (see chapter 2). Client/Server licenses are on a per installation basis so for a single installation only one license would be required for all the clients.

CLIENT/SERVER OPERATION

Client/Server operation is used to allow multiple clients to share and download configurations to one or more matrices via a central server which runs ECS. The application ensures that while a user is editing a configuration, other users are prohibited from also making edits to the same configuration. If client/server operation is being used then all the ECS PCs on the network should be configured to run in this mode.

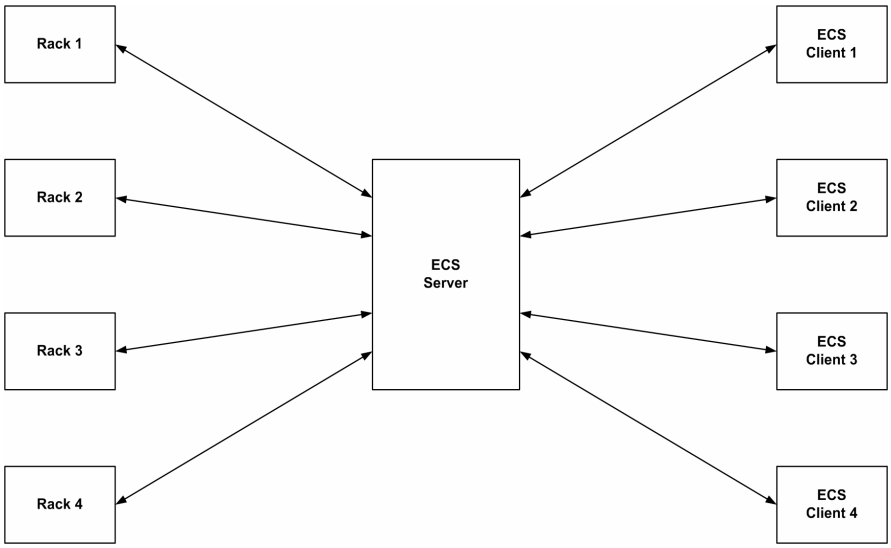


Figure 11-1: ECS Client Server Wiring

Note that the specification of the server PC influences performance. Satisfactory results were obtained using a 3GHz Pentium with 3Gb of RAM.

CLIENT

A complete ECS (including SQL server) must be installed on each client that is used to make edits to configurations or update racks. The user chooses the server to use when logging in as ECS starts up. The server distinguishes between clients by Username.

SERVER

The server runs ECS and the SQL database server and controls all the communications between the clients and the matrices. The database server running on the ECS server holds all the master configurations and ensures that when one configuration is being edited by a client no other client can edit that configuration at the same time. The server must also be running IIS (Internet Information Services - a web server provided by Microsoft). The ECS server provides the 'back-end' services, such as map-building, configuration sharing, and access to the matrices. Clients access the Server using Web-Services over Ethernet.

INITIAL SETUP

The following steps need to be completed:

1. Install and configure IIS on the server system.
2. Install ECS on the server system.
3. Install ECS on each client PC.
4. Configure each client PC to access the server.
5. Login to the Server from a client machine.

Note that the default installation path is assumed to be "C:\Program Files\ClearCom\Eclipse Configuration Software 5.2\".

Install and Configure IIS on the Server Machine Only

Stage 1 - Verify IIS is installed

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Administrative Tools'.
3. Verify 'Internet Information Services' exists and is at version 5.0 or above. If it does not exist complete stage 1b otherwise proceed to stage 2.

Stage 1b - Install IIS

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Add or Remove Programs'.
3. Click the Add/Remove Windows Components tab. The OS installation Disc may be required.
4. Click the 'Internet Information Services' checkbox and complete the install using the wizard.

Stage 2 - install ECS on the server

Install ECS on the server as described in chapter 13. This will install the SQL server database system and ASP.Net. For Windows XP, Windows Vista and Windows 7 systems ASP.Net should automatically be configured in IIS but in the case of Windows 2003 Server additional steps are required as described later in this sequence.

Run the Mode Switcher application, found in <ECS Install Path>\ModeSwitcherApp.exe. Ensure that the Multi User Mode option is selected.

Stage 3 - copy the EclipseServerWS file path

1. Log on to Windows on the server using an account that is a member of the administrators group.
2. Start Windows Explorer.
3. Navigate to the location where ECS is installed.
4. Navigate to \web\EclipseServerWS.
5. Select the file path in the Address textbox at the top of the window, right click it and select copy.

Stage 4 - create the IIS virtual directory

Note: If upgrading from an earlier version of ECS an EclipseServer virtual directory may already exist. If this is the case, it should be deleted.

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Administrative Tools'.
3. Double click 'Internet Information Services'.
4. Expand the top branch (local computer).
5. Expand the 'Websites' branch.
6. Expand the 'Default Web Site' branch.
7. Select the 'Default Web Site' branch and right click it and choose New | Virtual directory…
8. Click on Next.
9. Type EclipseServer in the Alias textbox and click Next.
10. Right click the Directory textbox and select paste (the file path copied in STAGE 2 step 5 should appear) and click Next.
11. Ensure the first two checkboxes are ticked (Read and Run scripts) and the following three checkboxes are not ticked (Execute, Write and Browse).
12. Click Next.
13. Click Finish.

Stage 5 - Verify the directory has been created

1. Open Internet Explorer.
2. Enter 'http://localhost/EclipseServer' and press go.
3. Verify that the text 'Eclipse Server .Net 2.0' is displayed.

Stage 6 - Verify ASP.Net has been registered

1. Open Internet Explorer.
2. Enter 'http://localhost/EclipseServer/Command.asmx' and press go.
3. Verify that the text 'The following operations are supported. For a formal definition, please review the Service Description' is displayed at the top of the page. If this text is displayed ASP.Net is already

registered. If the operating system is WIndows 2003 Server installation should proceed directly to stage 8. If the operating system is Windows XP, Windows Vista or Windows 7 the IIS installation is complete.

4. If text starting "<%@ WebService Language="c#"" is displayed this means ASP.Net has not been registered. In this case complete Stage 7. If the operating system is Windows 2003 Server ASP.Net must also be enabled after registering.

Stage 7 - Register ASP.Net

1. Click the Windows Start button and select Run…
2. In the text box type cmd and press ok.
3. On Windows XP systems at the command prompt type ‘cd C:\Windows\Microsoft.NET\Framework\v2.0.50727’ and press enter.

   On Windows 7 systems at the command prompt type ‘cd C:\WINNT\Microsoft.NET\Framework\v2.0.50727’ and press enter.

   On Windows Vista systems at the command prompt type ‘cd C:\WINNT\Microsoft.NET\Framework\v2.0.50727’ and press enter.

   On Windows 2003 Server systems at the command prompt type ‘cd C:\Windows\Microsoft.NET\Framework\v2.0.50727’ and press enter.
4. At the command prompt type ‘aspnet_regiis -i’ and press enter.
5. If the operating system is Windows 2003 Server, Windows Vista or Windows 7 proceed to Stage 8. If the operating system is Windows XP the IIS installation is complete.

Stage 8 - Enable ASP.Net in IIS

Windows 2003 Server

When running Windows 2003 Server ASP.Net must be enabled under IIS for the ECS Client Server system to function. To check this and enable ASP.Net if required complete the following steps.

1. Click the Windows Start button and open the Control Panel.
2. Open Administrator Tools.
3. Open IIS Manager.
4. Expand the Web Services Extensions in the left pane to display a list of web services extensions known to IIS. ASP. Net should be in this list.
5. If ASP.Net is listed as ‘Allowed’ close the manager. If ASP.Net is not allowed select ASP.Net in the right hand pane. A menu of options will be displayed. Click on the ‘Allow’ entry to allow ASP.Net under IIS.
6. Close the Control Panel.

Windows Vista & Windows 7

When running Windows Vista or Windows 7 ASP.Net must be enabled under IIS for the ECS Client Server system to function. To check this and enable ASP.Net if required complete the following steps.

1. Click the Windows Start button and open the Control Panel.
2. Open Programs & Features.
3. Select “Turn Windows features on or off” from the side bar.
4. Expand the “Internet Information Services” menu.
5. Expand the “World Wide Web Service” menu.
6. Expand the “Application Development Features” menu.
7. If the “ASP.NET” box is checked (enabled) close the manager. If “ASP.NET” box is not checked click on the box to enabled it (checked).
8. Close the Internet Information Services menu.
9. Return to the Control Panel.
10. Close the Control Panel.

IIS Pool Recycling

In order for the ECS server to operate with continuous logging enabled IIS pool recycling must be disabled. If pool recycling is not disabled event logging from the server to clients may stop when the server process is automatically restarted by the IIS Manager. The pool recycling configuration options are only available in IIS manager under Windows Server 2003 and Windows Vista.

Disabling IIS Pool Recycling in Windows 2003 Server

1. Click on the Start icon (bottom left) to open the Start menu.
2. Click on “Programs”, then “Administrative Tools”.

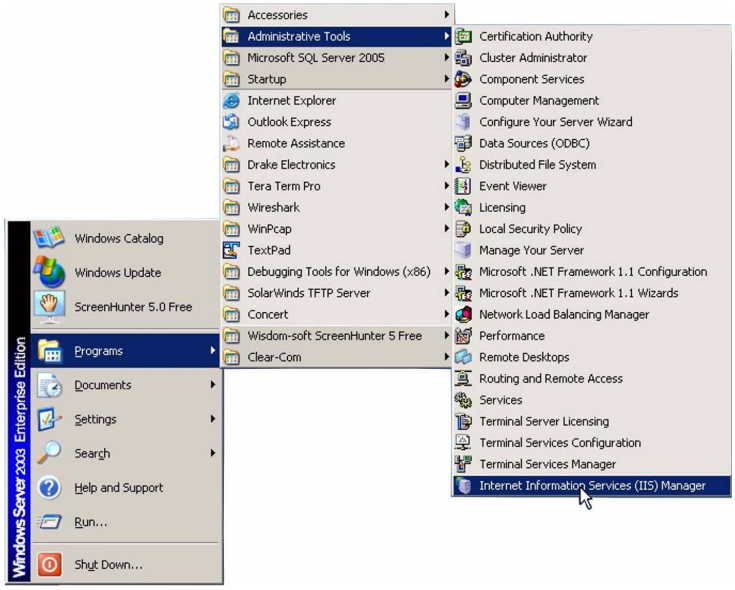


Figure 11-2: Selecting the IIS Manager in Windows 2003 Server

3. Select “Internet Information Services (IIS) Manager” to open the IIS management screen

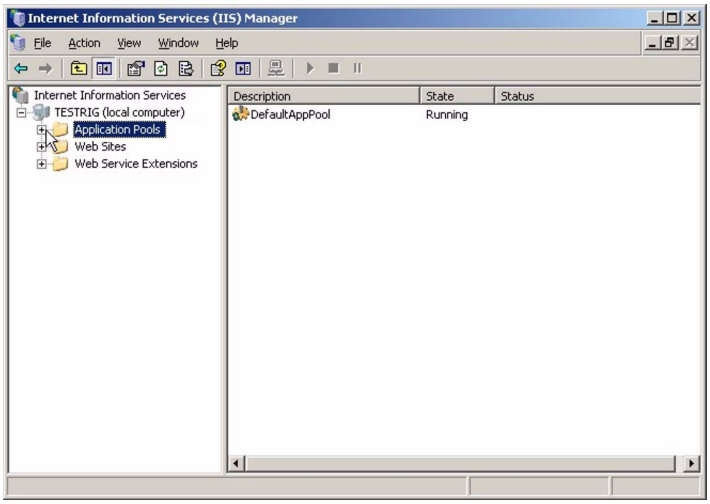


Figure 11-3: IIS Manager in Windows 2003 Server

4. Expand the “Application Pools” list and right-click on the “DefaultAppPool” entry to display the options.

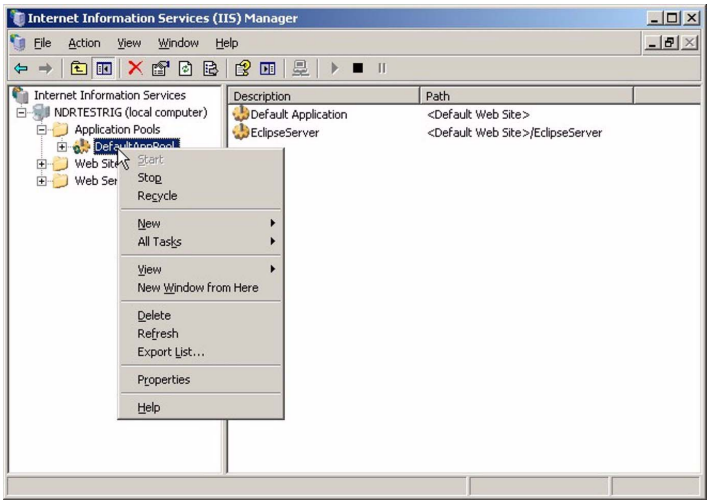


Figure 11-4: Windows 2003 Server IIS Default Pool Options

Click on the “Recycle” option to open the pool recycle options screen.

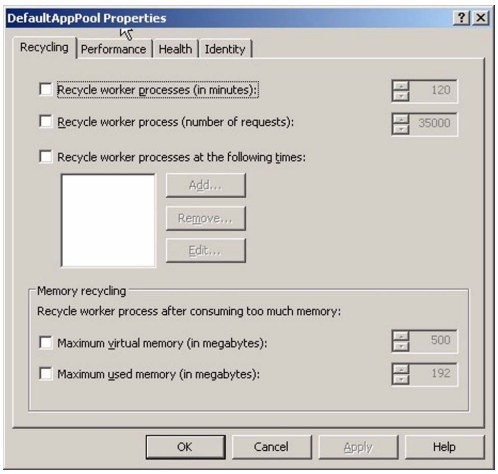


Figure 11-5: Windows 2003 Server IIS Pool Recycling

5. Ensure that all the checkboxes are cleared to disable pool recycling and click on ‘OK’.
6. Close the IIS Manager.

Disabling IIS Pool Recycling in Windows Vista and Windows 7

1. Click on the Start icon (bottom left) to open the Start menu.
2. Click on “IIS Manager” to open the IIS Manager screen.

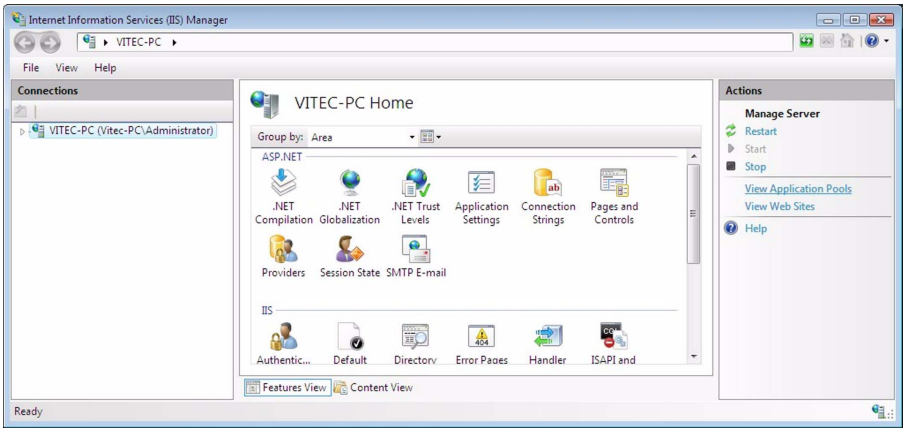


Figure 11-6: IIS Manager in Vista

3. Click on “View Application Pools” in the right hand column to display a list of IIS applications pools.

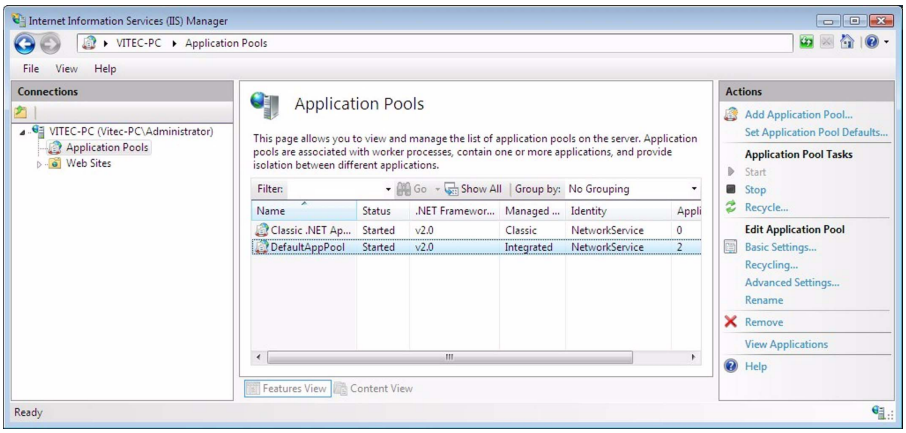


Figure 11-7: IIS Application Pools

4. Select “DefaultAppPool” and the click on “View Application” to check the applications using the pool. The application “EclipseServer” should be listed.

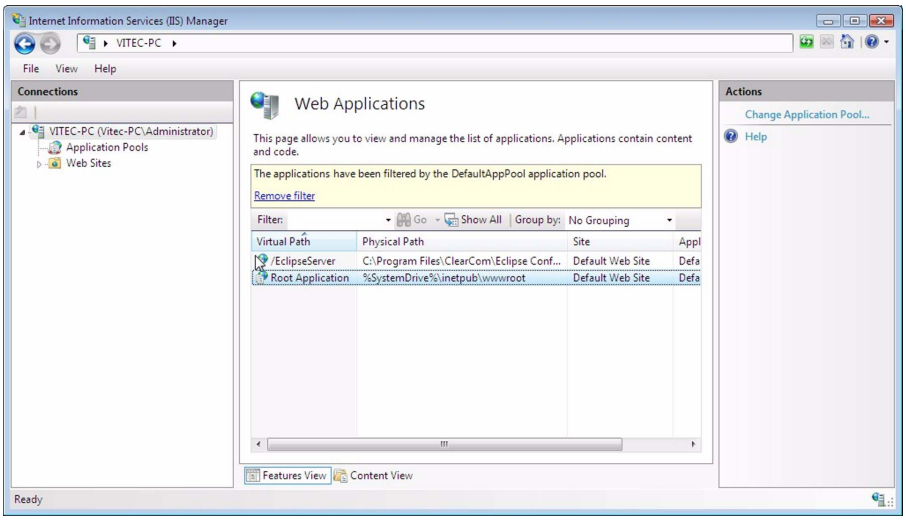


Figure 11-8: IIS Pool Applications List

5. Return to the “Application Pools” list and click on “Recycling...” to display the pool recycling parameters.

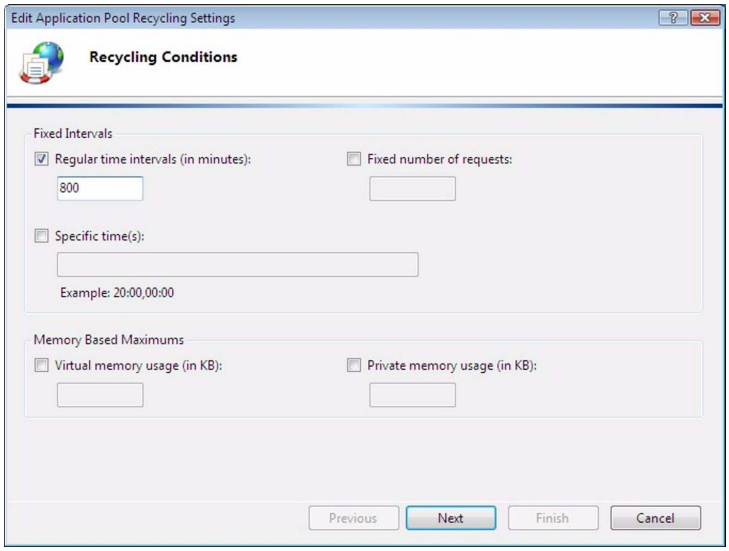


Figure 11-9: Pool Recycling Parameters

6. Disable all recycling by deselecting all the scheduling tick boxes.

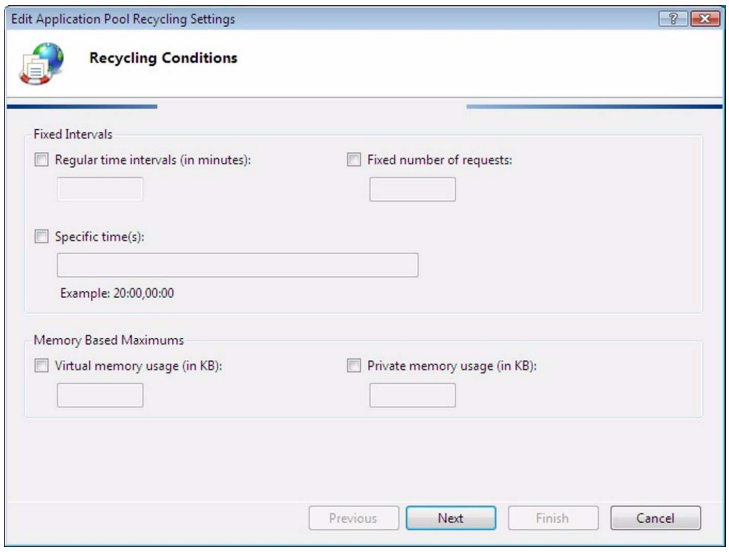


Figure 11-10: Pool Recycling Disabled

7. Click on ‘Next’ to continue

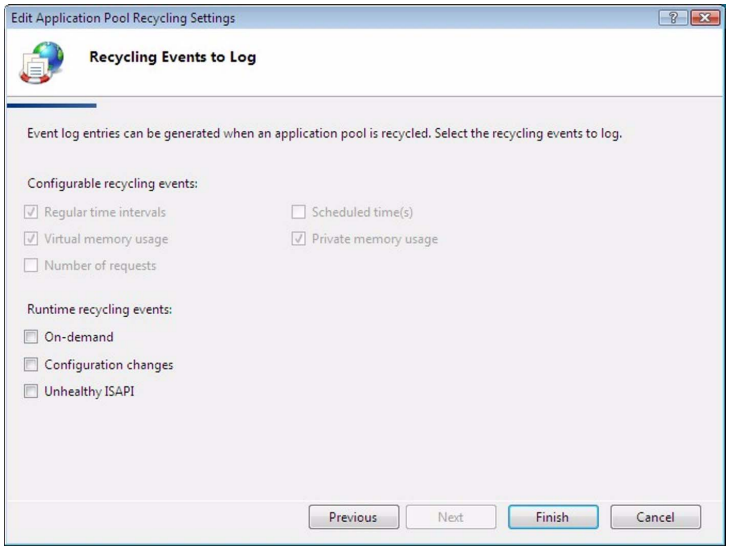


Figure 11-11: Recycling Events

8. The logging setup for recycling should show timed events disabled. Click on ‘Finish’ to completed the configuration change.
9. Check any other IIS application pools to ensure that the server process is not using another pool. If any other pool is being used recycling of this pool should also be disabled.
10. Open the ‘Web Sites’ menu in the ‘Connections’ pane and right click on the ‘EclipseServer’ entry. Ensure that it is classed as an Application and not a Service. If it is classed as a service click on ‘Convert to Application’ to convert it to an application.
11. Close IIS Manager.

Disabling IIS Pool Recycling in Windows XP

Normally Windows XP is supplied with IIS Manager 5.1 which does not support pool management.

Client Configuration

A full ECS installation is required on each client system before it can be used as described in chapter 11.

Login to the Server from a Client machine

1. At the ECS login dialog box click the Options button to display the 'Log on to' field.
2. Type the following string, replacing <Machine Name> with the name of the ECS server: “http://<Machine Name>/EclipseServer/”.

Note - The client must able to connect to the server in order to login. If it cannot connect an appropriate error will be displayed. This problem may even be encountered in the case where the client is on the same machine as the server when the machine is not connected to the network. If the access to the server is required with the machine in this state, setting the ECS server as “http://127.0.0.1/EclipseServer/” will allow this (this is using the network loopback address).

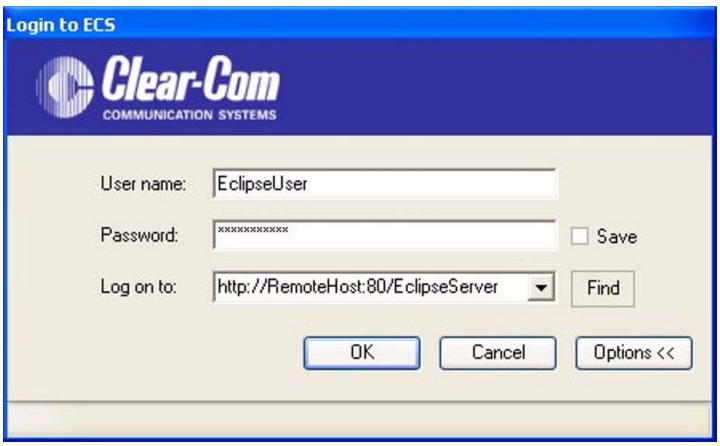


Figure 11-12: ECS Client Logon

When a user logs in to a client for the first time a client license key will be requested if one is not already installed on the client.

Figure 11-13: Client License Key Request

Enter the license key as supplied and click on the 'OK' button. The client/server facility will then be enabled. ECS login will not request the license key again once it has been successfully entered.

Note: To determine the ECS server Machine Name log in to the ECS server. Click Start and then Run. Type 'cmd' into the box and click ok. At the command prompt type 'ipconfig /all'. Use the listed Host Name as the ECS server name.

Using Client/Server

Username

Each user is distinguished by Username and users on different clients should always use different Usernames when logging in to the ECS server.

Usernames on the ECS server are set up by logging in to the ECS server and using the User Management facility as described in chapter 3 to set up and manage users.

If a user on a client attempts to log in to the ECS server with a Username that is already in use a warning is shown. If the new user continues, the existing user session is terminated, and the user who has now been logged out is informed.

Host Name

When logging in to an ECS server running in client/server mode use the 'Options' button to display the server that the user is logging on to and enter the server name explicitly instead of using the default "localhost" name.

Configuration Editing

While a user is editing a configuration, no other user can edit that configuration. To make the configuration available for another user to edit, the configuration must be closed. If ECS is closed in an abnormal manner, e.g. the power to the client is removed, the ECS server will not be aware that the configuration is closed. In this case the Client should log back in to the ECS server, reopen the configuration and close it correctly.

The ECS server applies a 200 minute inactivity timeout to each client and if there is no client activity on the server for that length of time the user is automatically logged out by the server.

Activating a System Layout

A system layout cannot be activated while other users are editing configurations within it. Before activating a system layout users should close all configurations within it. Once the layout is activated the configurations are automatically opened to the operator activating the system layout. Once the operator has closed these configurations the other users can reopen the configurations for editing.

SYNCHRONISE SERVERS

Synchronise Servers function allows the transfer of configurations from one ECS server to another. The operation of the Synchronise Servers is that ECS on the server will firstly search the network for other instances of a running ECS server. When other ECS servers are found the name will appear and the user would select the required server. The next stage is to list the configurations then transfer a required configuration from one server to another.

This may be used as a rapid method of transferring configurations between PCs without exporting the configurations to files, copying the files across and then importing them. It can also be used to transfer configurations from a central server in a client/server setup to one of the clients. To carry out this operation the client should be reconfigured for local operation using the Mode Switcher application, found in <ECS Install Path>\ModeSwitcherApp.exe. Ensure that the LocalHost Mode option is selected.

The synchronize servers operation on the main server will then treat the reconfigured client as a server and copy the configuration data over.

This option could be used if it was intended to take a copy of the configuration data to modify without doing so on the live system. However it should be noted that normally all client PCs in a client/server environment should operate in client server mode to ensure that any configuration changes go through the ECS server rather than directly to the matrix.

SEARCHING FOR ECS SERVERS

To search for other ECS servers that are currently running on the Network, select the Synchronise Server function from the File menu. The Synchronise Servers screen opens.

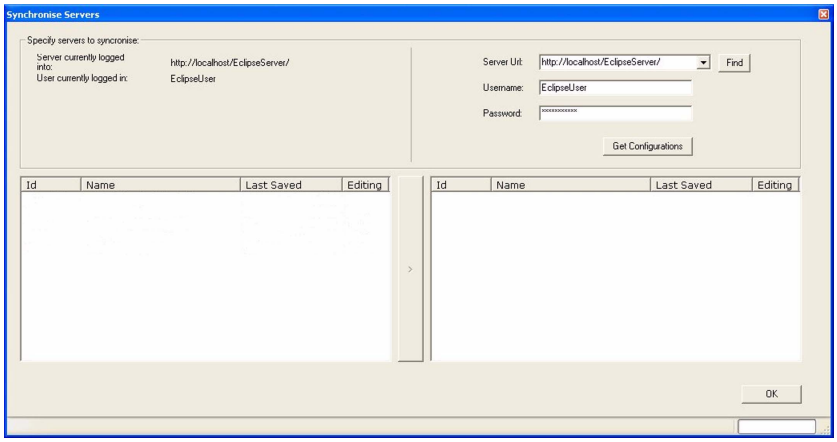


Figure 11-14: Synchronise Servers Screen

The Server URL, Username and Password are required fields. From the left hand side select “find” and ECS will search for all instances of other servers running. Select the required server, and then select “Get Configurations” to retrieve a list of all the configurations on that server.

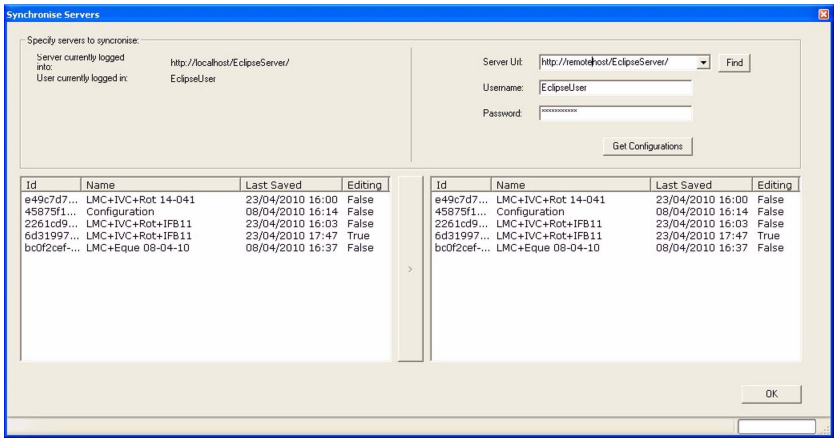


Figure 11-15: Server Search Screen

Repeat the same steps to retrieve a list of configurations from a required server on the right hand side.

TRANSFERRING CONFIGURATIONS

Transferring configurations requires deciding on the required servers and also the required configuration. Once the servers have been found, locate the configuration and highlight this by left clicking the mouse on that configuration. Using the middle arrow left click the mouse to take a copy of the configuration from one server to another.

HELP ON SERVER SEARCH

ECS searches the DNS table for all other hosts connected onto the LAN. Therefore if the computer name is recorded on the DNS table ECS will list the name. However there are instances where the computer name is not on the DNS table and as such ECS will not locate the computer.

When search has failed to find the computer, the machine name or IP address can be input directly into the “Server URL” box, and then pressing “Get Configurations” should allow ECS find it.

The syntax required for this method is to put the IP address in the server URL line:

http://111.111.111.111:8080/EclipseServer

Where 111.111.111.111 is the IP address of the Computer

The Username and Password entered into the server search dialogue will be used to log in to a target server remotely. If that user is already logged in to the target server, for example locally, then a warning message will be displayed on the server making the request. If the requesting server proceeds with the synchronise request the user on the target server will be logged out by the requesting server.

For this reason it is advisable that in systems with multiple servers extra users should be set up on each server for use by remote servers logging in and such remote servers should not use the default local login. This will avoid user identity clashes when carrying out remote operations.

12 ECLIPSE SYSTEM SOFTWARE INSTALLATION

This chapter covers the methods to update ECS and system firmware on Eclipse hardware and panels that support firmware updates.

Before attempting to uninstall or install ECS or any ECS prerequisites the user must be logged in to the PC with administrator rights.

During an ECS installation the PC may need to restart a number of times, depending on which packages need to be installed for ECS. Depending on the PC configuration and resources a full installation of ECS and all updates may take over an hour.

UPDATING ECS

When updating any installation of ECS 1.x, 2.x, 3.x or 4.x to 5.x the existing ECS should normally be completely uninstalled after saving and exporting the system configurations. It is possible to install and run ECS V5.2 alongside a previous version of ECS; however this option is not supported and is not recommended for normal use.

ECS 5.2 stand-alone or client installation no longer requires the SQL server to be installed. To reduce system resource use any existing SQL server installation may be removed as part of the V5.2 upgrade provided it is not being used for any other purpose such as running previous versions of ECS.

If ECS is being installed as a server then the SQL server is required and will be installed if not present. If the correct version of SQL server is already present a new instance will be created.

Note: ECS V5.2 server will create a a new instance of the SQL server with a different name to that used by previous versions of ECS to allow a previous version to operate. The SA password used for the CLEARCOM52 database instance has changed from clearSA (pre-V5.0) to CL34R_com.

In order to uninstall ECS 1.x, 2.x, 3.x the uninstall should be carried out by opening the 'Programs' menu from 'Start' and selecting the ECS entry. The ECS entry should include an Uninstall option.

i.e. Start > Programs > CLEAR-COM > Eclipse Configuration Software > Uninstall Eclipse Configuration Software

Select this to uninstall ECS.

Using the ‘Add/Remove Programs’ in Control Panel to remove ECS 1.x, 2.x or 3.x is not recommended since this option may fail to fully remove ECS.

ECS 4.2 cannot be uninstalled via the Programs menu and must be uninstalled via the Windows Add/Remove facility. To access this open the Windows Control Panel and select ‘Add/Remove Programs’ from the control panel. A list of currently installed programs will be displayed. Scroll down the list to find the entry for ‘Eclipse Configuration Software 4.2’ and click on the ‘Remove’ button. ECS will then be removed.

i.e. Start > Settings > Control Panel > Add/Remove Programs > Remove Eclipse Configuration Software 4.2

Be sure that all previous versions of ECS have been uninstalled before starting the new installation of this version of ECS unless it is required that the previous version of ECS is retained (see above).

If the installation of ECS V5.2 is an update to an existing V5.2 installation, for example because the installation has been damaged by accidental file deletion or corruption, or a patch update is being installed it is not normally required to manually uninstall ECS as the installer will remove ECS.

However, as mentioned in chapter 2 it is still necessary to save all the configurations by exporting them as .ccc files and ensure that all ECS configuration files are copied to a safe place before starting the update.

ECS V5.2 Server requires Microsoft SQL Server Express 2005 SP 3 which is supplied as part of the installation package and will normally be installed automatically if required.

If upgrading from ECS 1.x to 5.x then it will be necessary to totally rebuild the configuration maps. Some ECS upgrades may require additional hardware changes. Please consult the Clear-Com Support Team for more information.

ECS V5.2 CLIENT INSTALLATION

Double click on the Setup.exe file in the ECS section of the DVD to start the installation. The installer will verify the setup file and display the first installation screen.

When installing on Windows XP it is essential that service pack 3 is installed first. This is supplied on the distribution media in the 3rd_Party_Software folder under “XP sp3”. Run the executable in the folder to install XP service pack 3.

When installing on Windows Server 2003 it is essential that service pack 1 is installed first (service pack 2 is recommended). This is supplied on the distribution media in the 3rd_Party_Software folder

under “Windows Server 2003 sp2”. Run the executable in the folder to install Server 2003 service pack 2.

When installing on Windows Vista it is essential that service pack 1 is installed first. This is supplied on the distribution media in the 3rd_Party_Software folder under “Vista sp1 all language”. Run the executable in the folder to install Vista service pack 1.

If the ECS server installation fails it will be necessary to install the SQL server manually as described in “Stand-Alone SQL Server Install” on page 12-17.

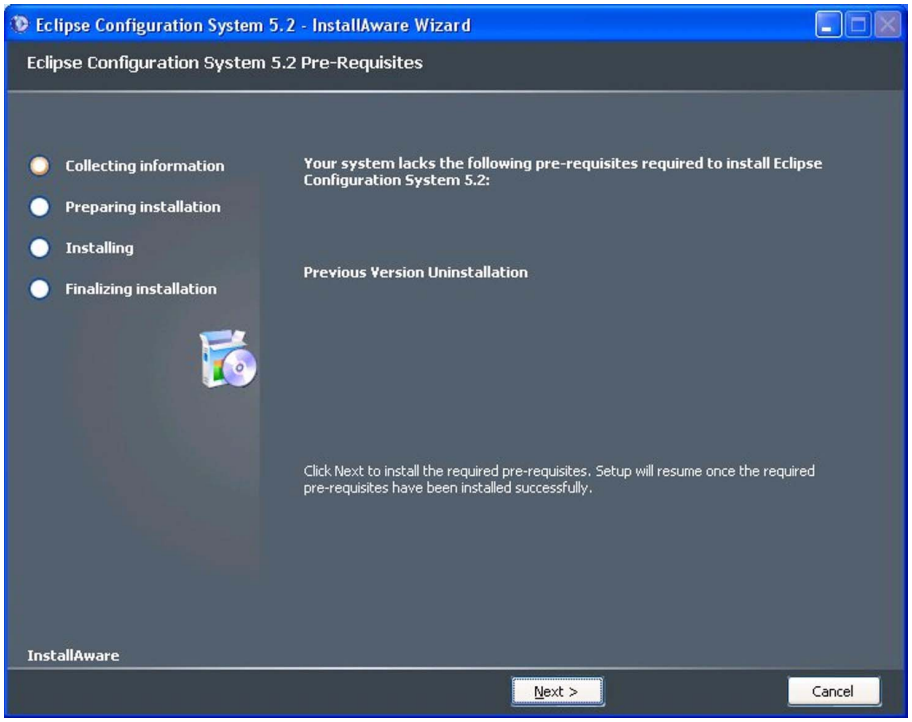


Figure 12-1: ECS Install First Stage

When the installer has completed collecting the required information click on the ‘Next’ button to prepare for installation.

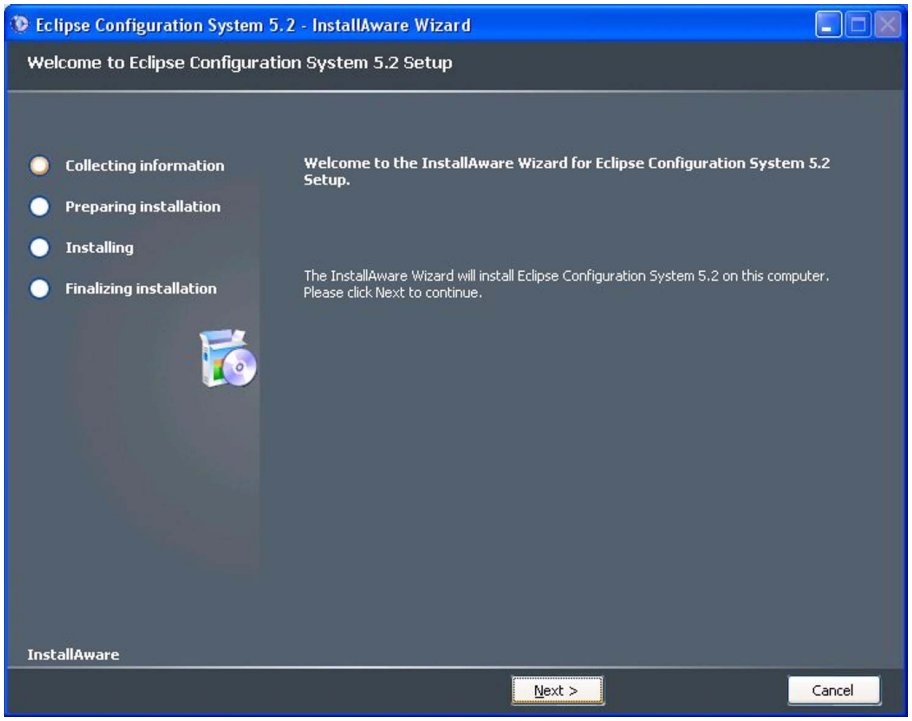


Figure 12-2: Installer Prerequisites Setup

When the prerequisites have been set up the installer allows the user to proceed to the next stage or go back to review the installation settings.

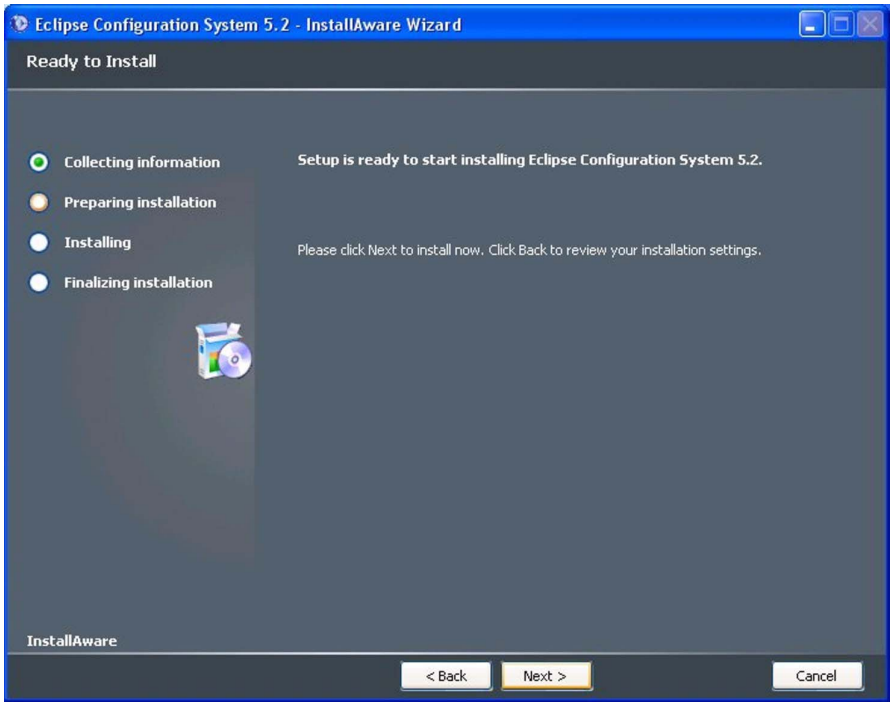


Figure 12-3: Install Prerequisites Complete

When the installer has completed the prerequisites the user should click on the ‘Next’ button to start the installation of ECS.

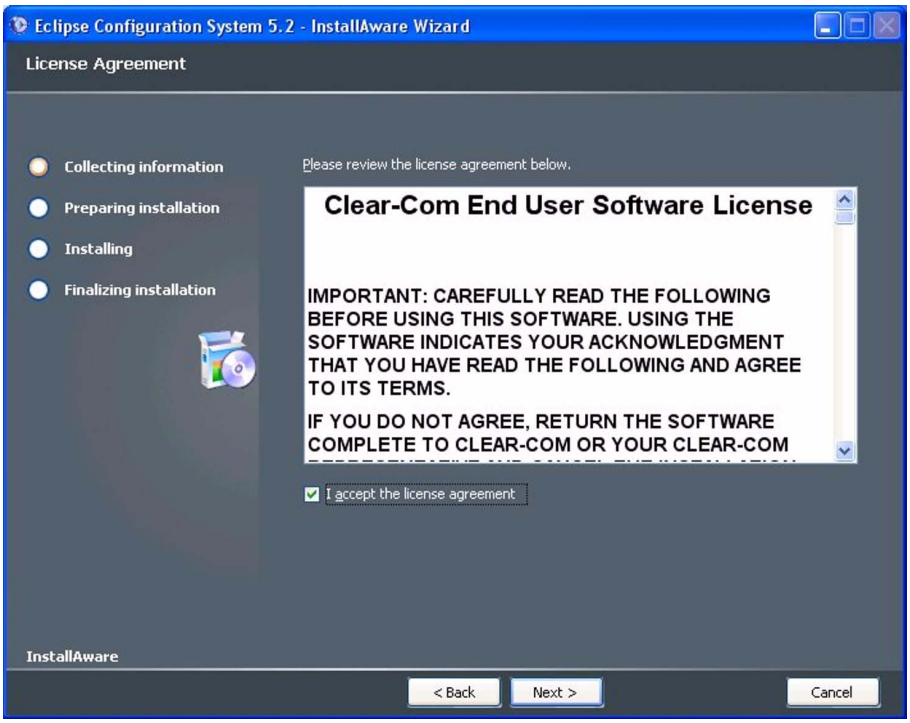


Figure 12-4: Software License

The user must click on the ‘Accept’ checkbox to accept the software license terms and conditions before being able to continue with the installation. After accepting the license terms click on the ‘Next’ button to continue.

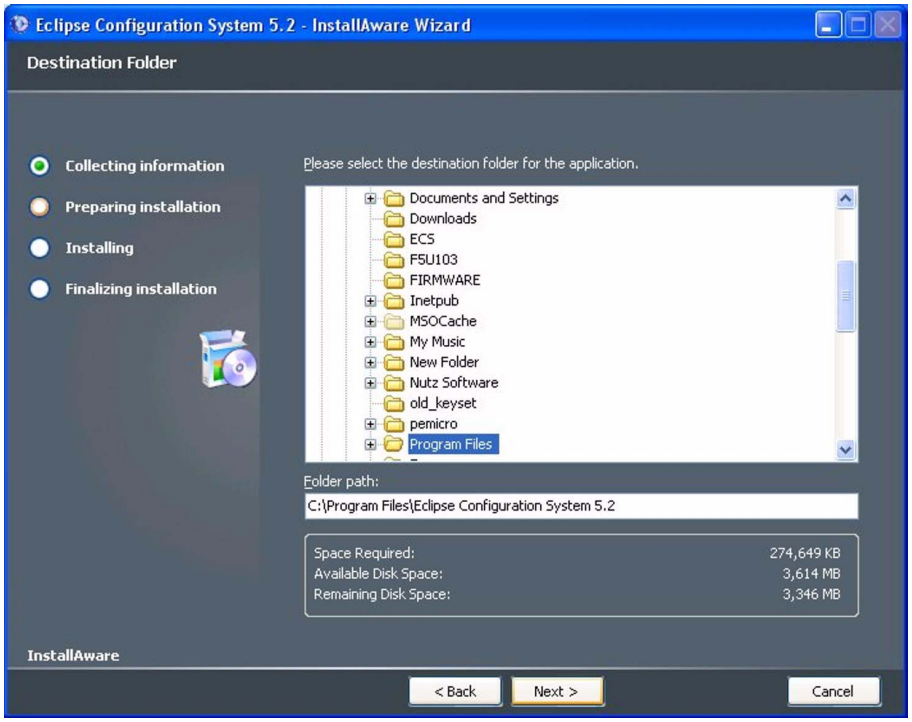


Figure 12-5: Installation Directory

The default installation folder is displayed together with disk space information. To accept the default folder (recommended) click on the 'Next' button. To change the installation folder edit the 'Folder path' to specify the required folder and the click on the 'Next' button.

The installer will then ask if ECS shortcuts are to be created for all users of the system or only for the user installing it.

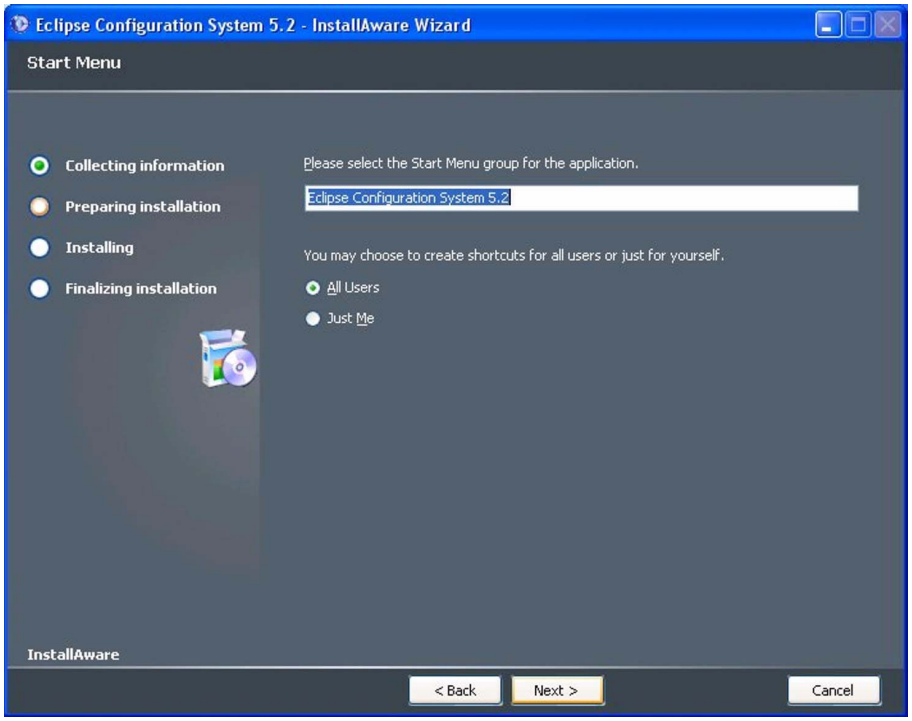


Figure 12-6: ECS User Setup

Select the required option for shortcuts and click on 'Next' to continue the installation.

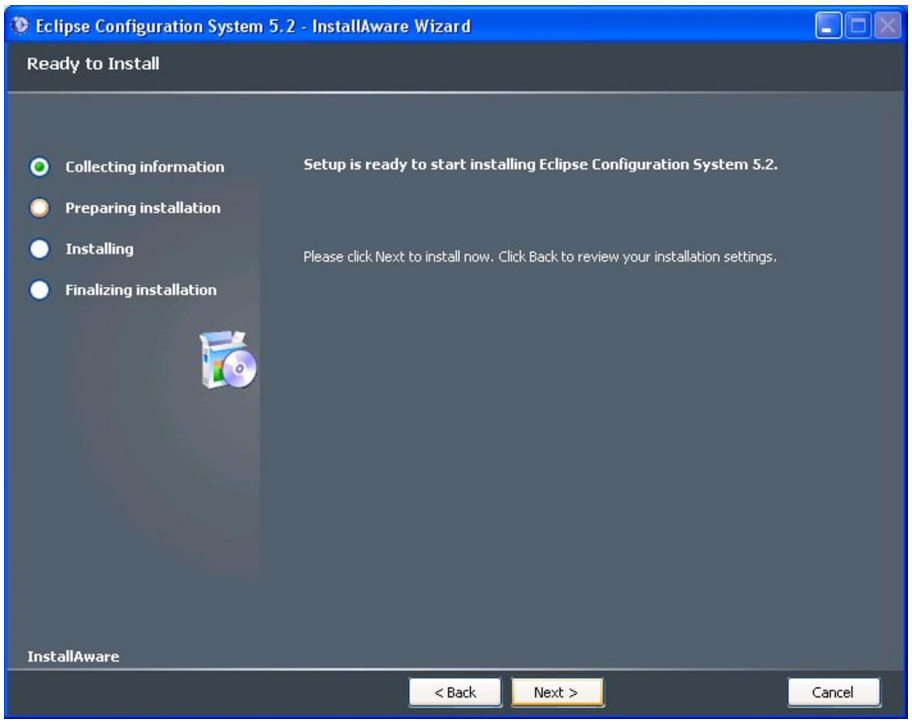


Figure 12-7: ECS Ready to Install

Click on ‘Next’ to start the ECS installation.

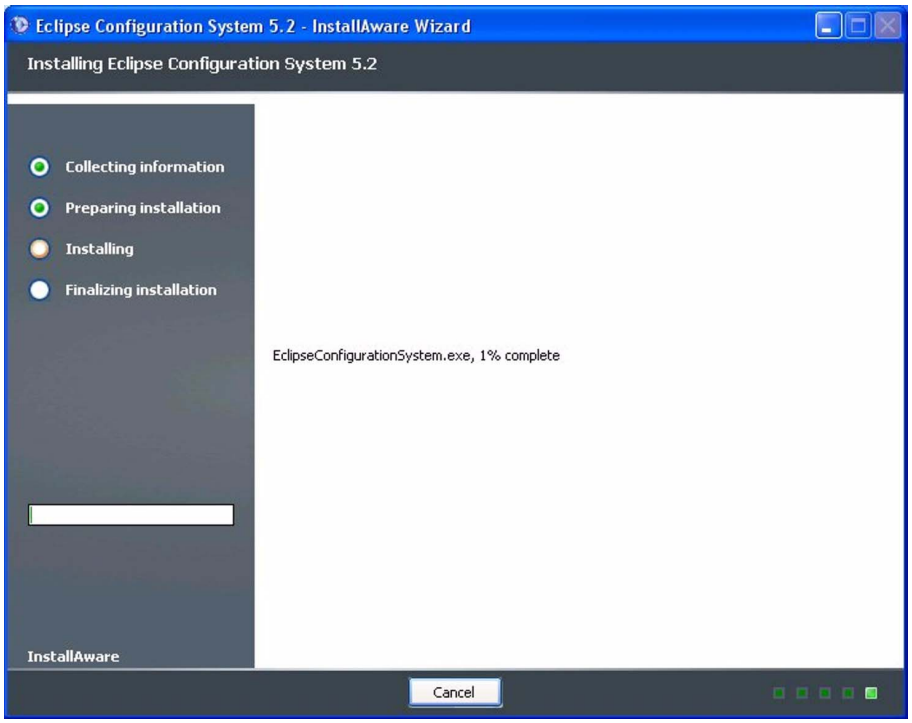


Figure 12-8: ECS Installation

The installer will install ECS in the required location and update the support files as required. When the installation is complete the user will be given the option of starting ECS when the installer exits.

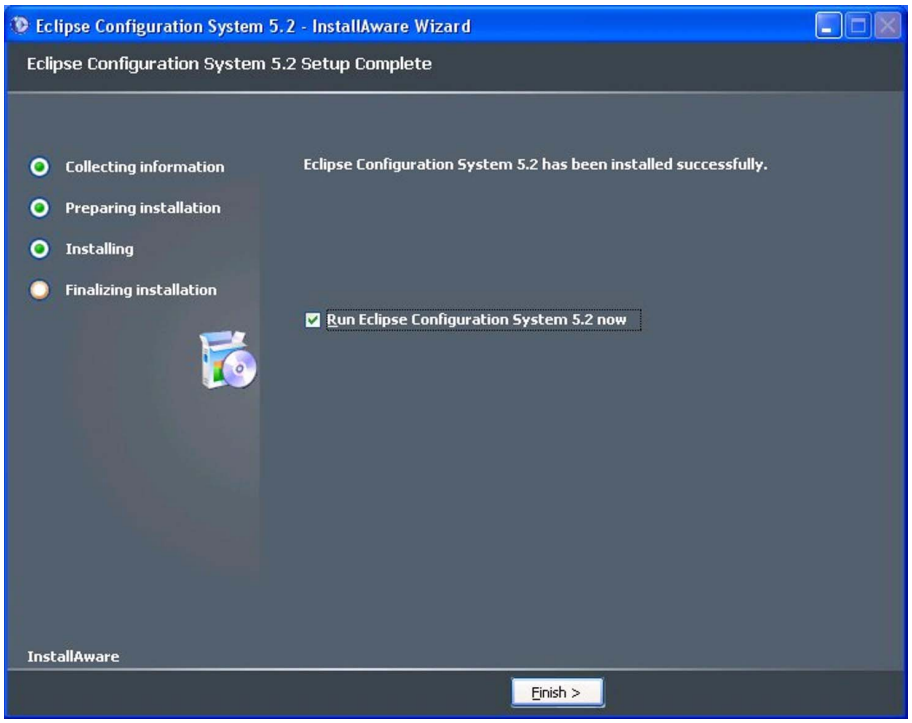


Figure 12-9: Installation Completion

The default setting is to start ECS when the installer exits; to change this click on the 'Run Eclipse Configuration Software 5.2 now' check box to clear it before clicking the 'Finish' button to exit the installation.

Once the installation has completed ECS can be run and any saved configurations can be imported (see Chapter 2).

ECS V5.2 SERVER INSTALLATION

Double click on the Setup.exe file in the ECS section of the DVD to start the installation. The installer will verify the setup file and display the first installation screen.

When installing on Windows XP it is essential that service pack 3 is installed first. This is supplied on the distribution media in the 3rd_Party_Software folder under "XP sp3". Run the executable in the folder to install XP service pack 3.

When installing on Windows Server 2003 it is essential that service pack 1 is installed first (service pack 2 is recommended). This is supplied on the distribution media in the 3rd_Party_Software folder under "Windows Server 2003 sp2". Run the executable in the folder to install Server 2003 service pack 2.

When installing on Windows Vista it is essential that service pack 1 is installed first. This is supplied on the distribution media in the 3rd_Party_Software folder under "Vista sp1 all language". Run the executable in the folder to install Vista service pack 1.

ECS 5.2 Server requires Internet Information Server 6 which must be installed before installing ECS 5.2 Server. If this is not present the installer will display an error message.

Figure 12-10: IIS Installation error

If the ECS server installation fails it will be necessary to install the SQL server manually as described in “Stand-Alone SQL Server Install” on page 12-17.

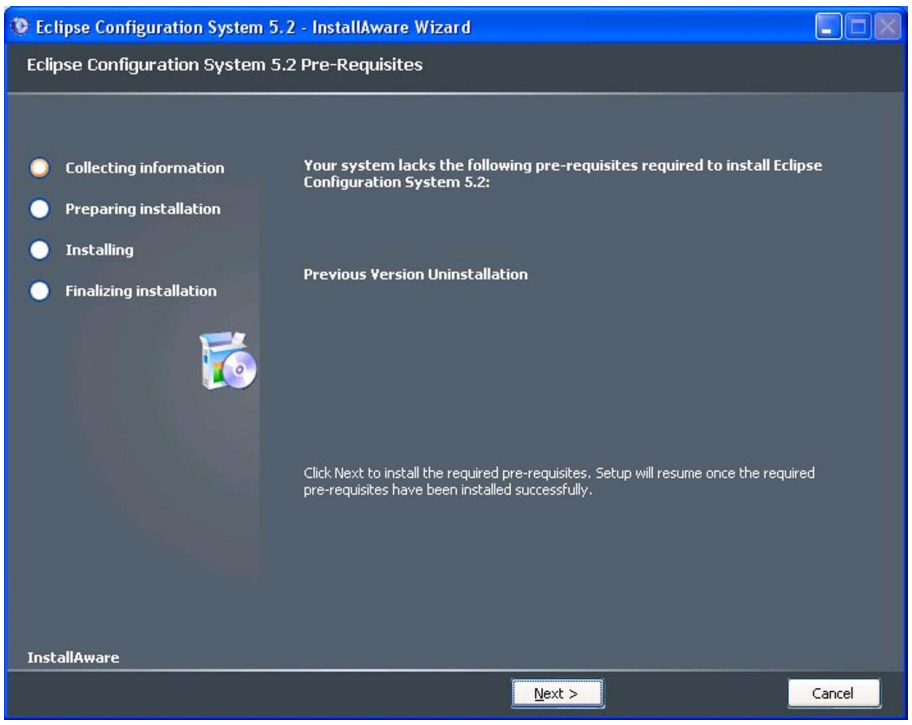


Figure 12-11: ECS Install First Stage

When the installer has completed collecting the required information click on the ‘Next’ button to prepare for installation.

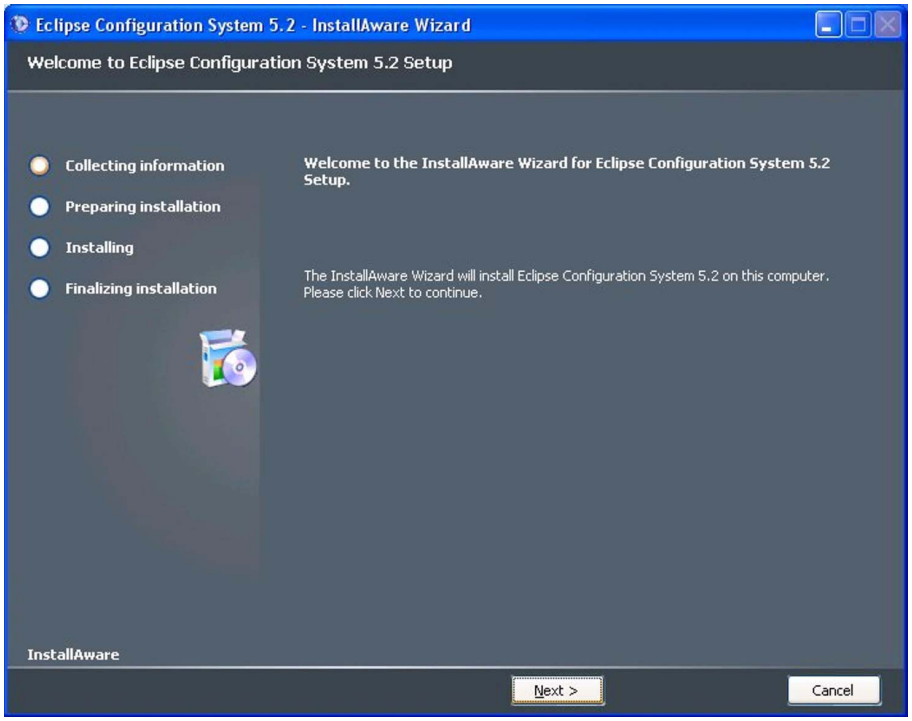


Figure 12-12: Installer Prerequisites Setup

When the prerequisites have been set up the installer allows the user to proceed to the next stage or go back to review the installation settings.

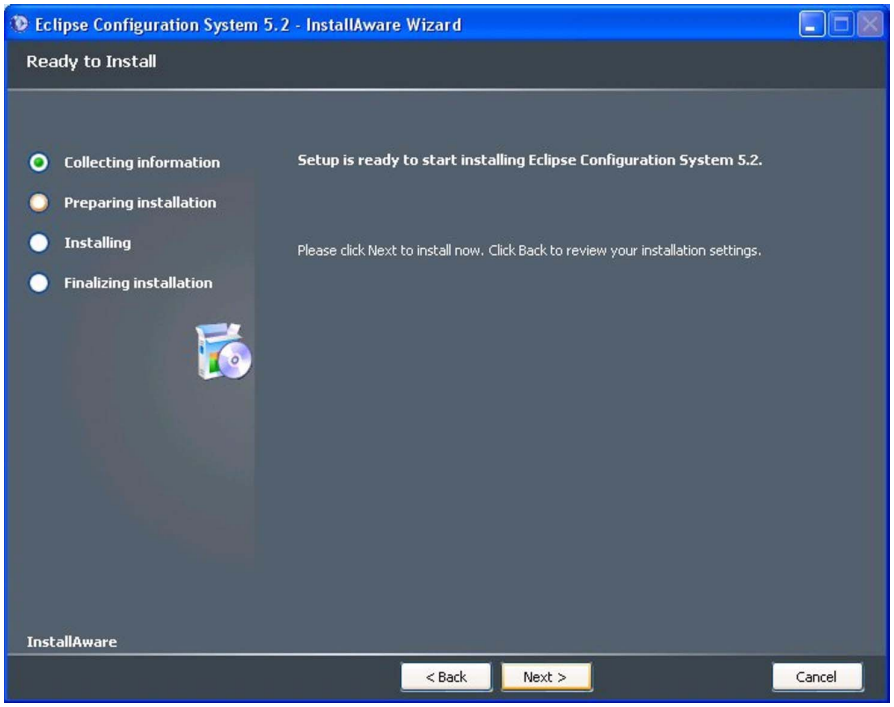


Figure 12-13: Install Prerequisites Complete

When the installer has completed the prerequisites the user should click on the ‘Next’ button to start the installation of ECS.

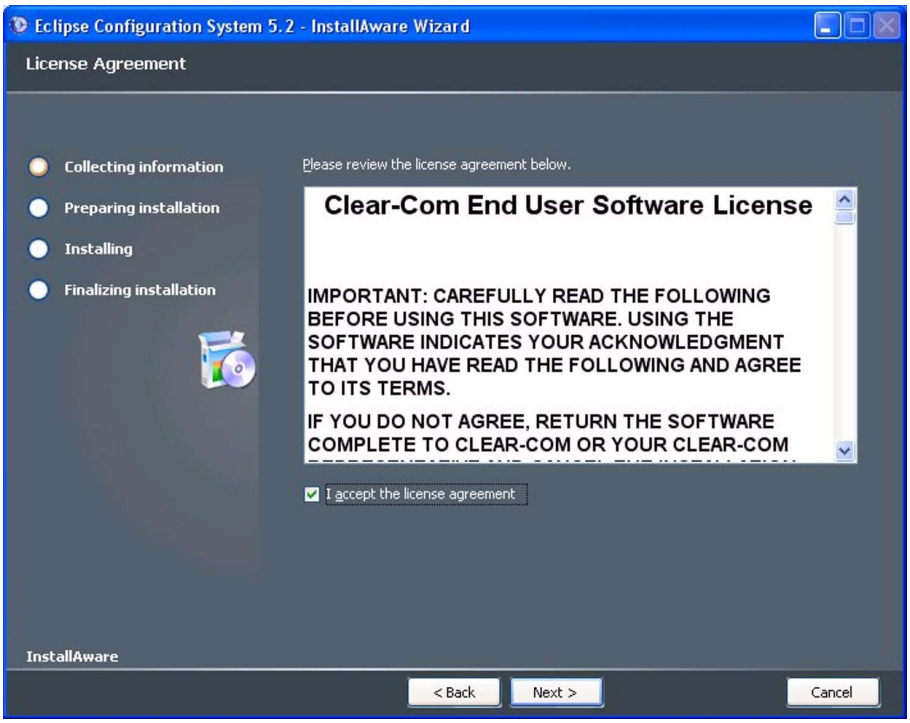


Figure 12-14: Software License

The user must click on the ‘Accept’ checkbox to accept the software license terms and conditions before being able to continue with the installation. After accepting the license terms click on the ‘Next’ button to continue.

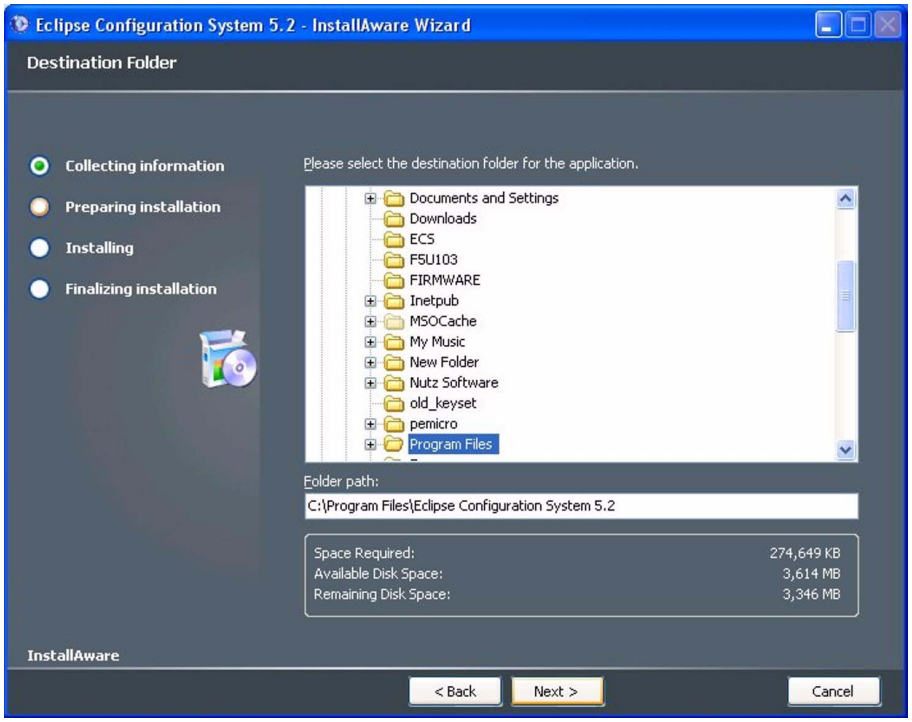


Figure 12-15: Installation Directory

The default installation folder is displayed together with disk space information. To accept the default folder (recommended) click on the 'Next' button. To change the installation folder edit the 'Folder path' to specify the required folder and the click on the 'Next' button.

The installer will then ask if ECS shortcuts are to be created for all users of the system or only for the user installing it.

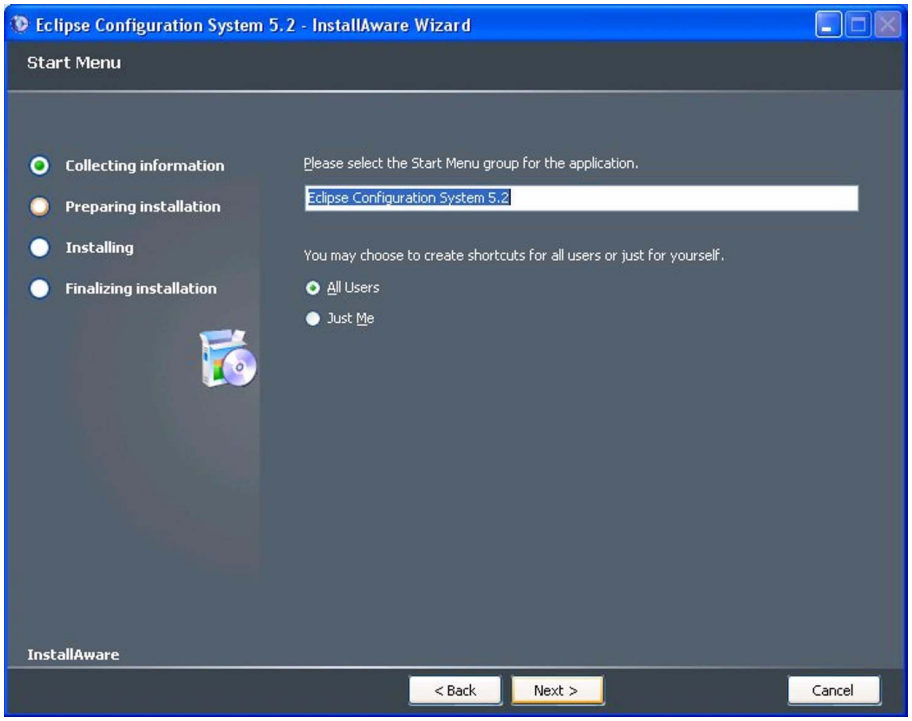


Figure 12-16: ECS User Setup

Select the required option for shortcuts and click on ‘Next’ to continue the installation.

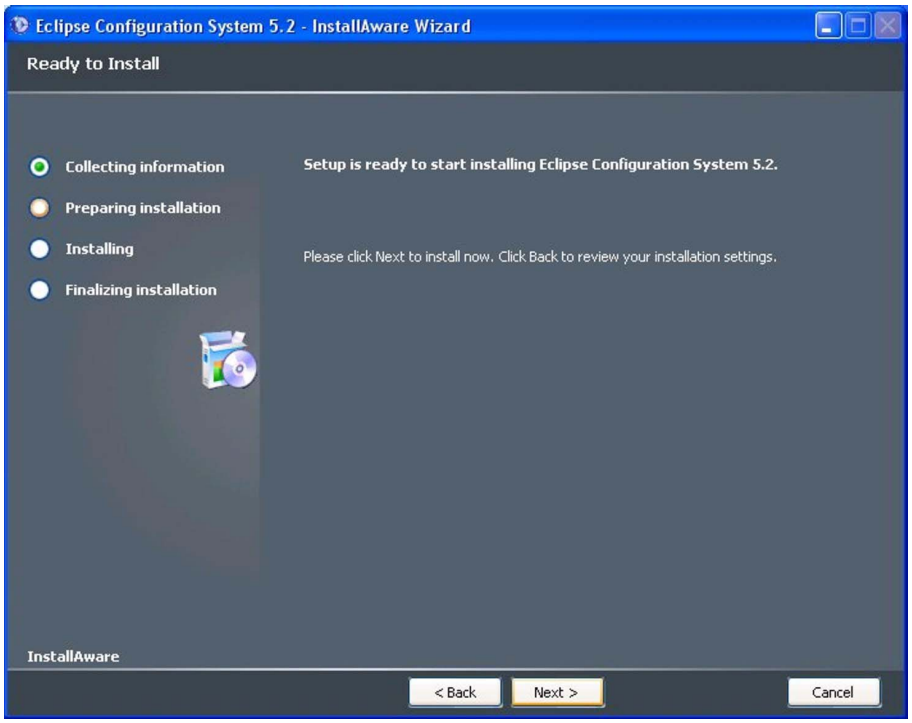


Figure 12-17: ECS Ready to Install

Click on ‘Next’ to start the ECS installation.

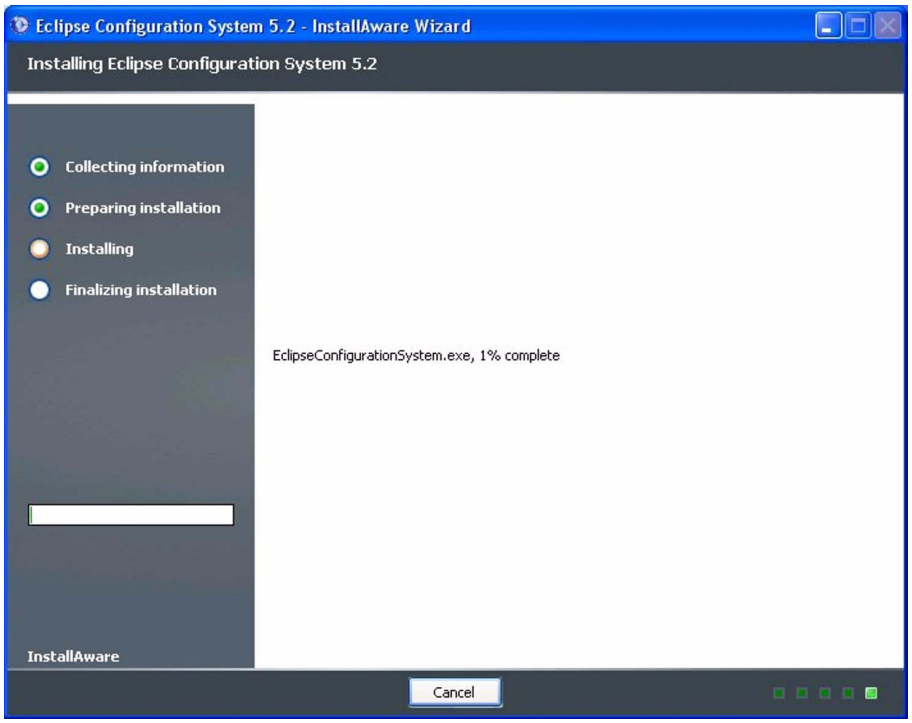


Figure 12-18: ECS Installation

The installer will install ECS in the required location and update the support files as required. When the installation is complete the user will be given the option of starting ECS when the installer exits.

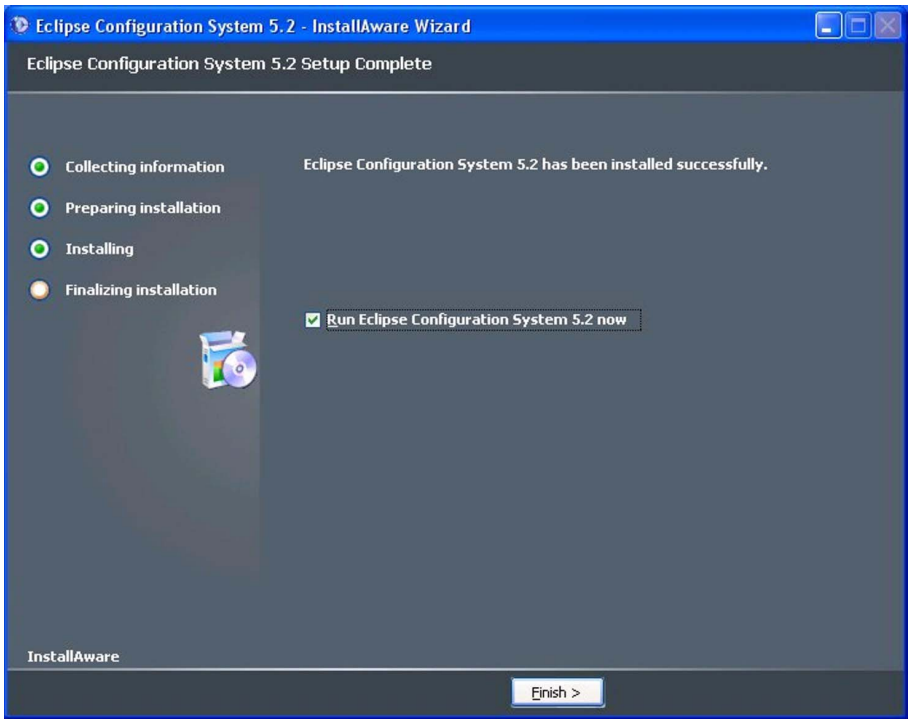


Figure 12-19: Installation Completion

The default setting is to start ECS when the installer exits; to change this click on the 'Run Eclipse Configuration Software 5.2 now' check box to clear it before clicking the 'Finish' button to exit the installation.

Once the installation has completed ECS can be run and any saved configurations can be imported (see Chapter 2).

STAND-ALONE SQL SERVER INSTALL

In some case due to PC/Windows configuration issues the ECS Server installer will fail when it attempts to install the SQL database server. If this happens the database server can be installed manually before installing ECS Server so the ECS installer does not attempt to install the SQL database server. In some cases the problem is caused by an XML parser called MSXML6 which can be installed as part of another package. In this case a utility must be used to remove it. This is described after the uninstall of SQL server.

This section deals with the installation of SQL Server Express 2005 with service pack 3 (SP3).

UNINSTALL OF SQL SERVER

It may be necessary to carry out an uninstall of the SQL server first to remove any existing components before installing the SQL server. The steps to do this are:

1. Create a new temporary directory for the SQL server such as c:\sqltmp.
2. Open a DOS window and navigate to the SQL directory on the DVD “\3rd_Party_Software\Sql Server 2005 with sp3”.
3. Run the installer file SQLEXPR.EXE using the DOS command “SQLEXPR.EXE /x:c:\sqltmp”.
4. Close the DOS window.
5. Navigate to the temporary subdirectory “c:\sqltmp\setup”.
6. Execute "sqlncli.msi" by double-clicking on the file.
7. Choose the "Uninstall" option.
8. Reboot the PC or server when the uninstall is complete.
9. Run the SQL Server Express 2005 SP3 installer as described below.

Removal of MSXML6 Parser

If the SQL Server install has reported an error caused by an MSXML6 file this file should be removed before retrying the SQL Server installation.

To remove the MSXML6 parser a utility called “msicuu2.exe” is available from Microsoft downloads. It is usually not possible to remove the XML parser from Add/Remove Programs.

Download and run the utility “msicuu2.exe” and follow the installer prompts.

Figure 12-20: Utility Installer Startup

Click on 'Next' to start the installation of the utility. The license agreement will be displayed.

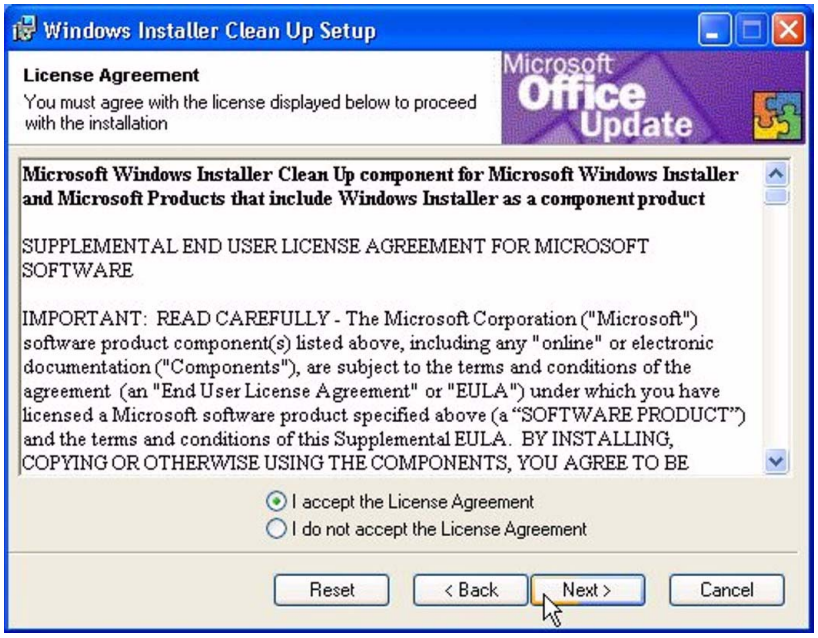


Figure 12-21: Utility License Display

Click on the radio button to accept the license agreement and then click on 'Next' to continue. Confirmation to continue will be requested.

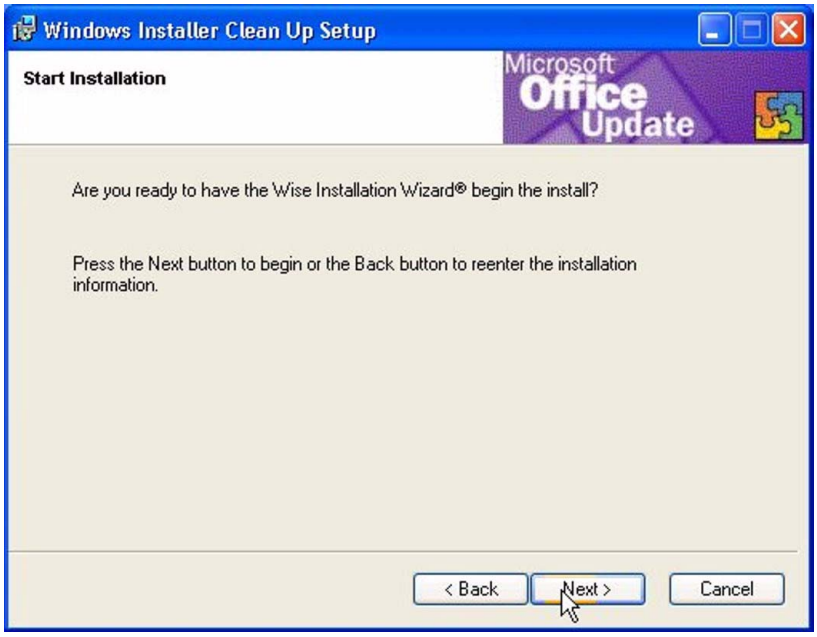


Figure 12-22: Installer Confirmation

Click on 'Next' to continue with the installation.

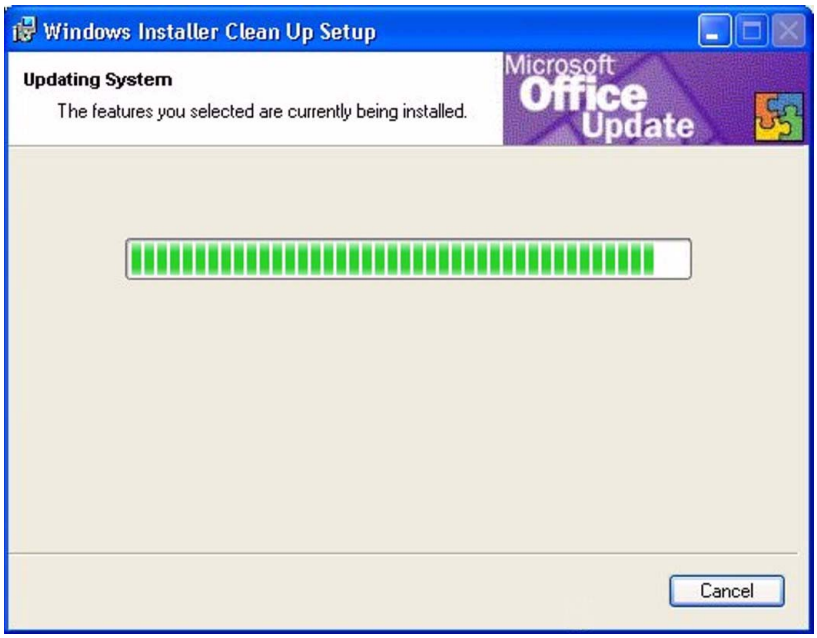


Figure 12-23: Utility Installation

When the utility has been installed the completion screen is displayed.

Figure 12-24: Clean-Up Utility Installed

Click on 'Finish' to exit the installer. The run the utility select 'Start' and then 'All Programs'. From the programs list select "Windows Install Clean Up".

Figure 12-25: Running the Clean Up Program

When the utility is run it will display a list of all the programs that can be removed.

Figure 12-26: Removing MSXML6 Package

Select MSXML6 Service Pack 2. Click on 'Remove' to remove this package and retry the SQL Server installation.

Install SQL Server

Download and run this utility before installing the SQL Server.

To install the database server manually carry out the following steps:

1. Load the ECS installation DVD.
2. Navigate to the “\3rd_Party_Software\Sql Server 2005 with sp3” directory.
3. Run SQLEXPR.exe. The SQL software license agreement for SQL Server 2005 Express will be displayed.

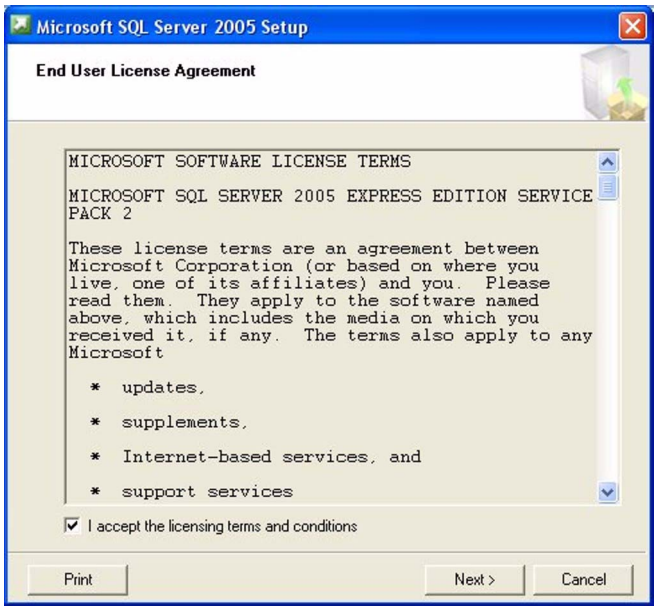


Figure 12-27: SQL Server 2005 Licence

4. Accept the license agreement and click on the ‘Next’ button. The SQL Server prerequisites installation screen will be displayed.

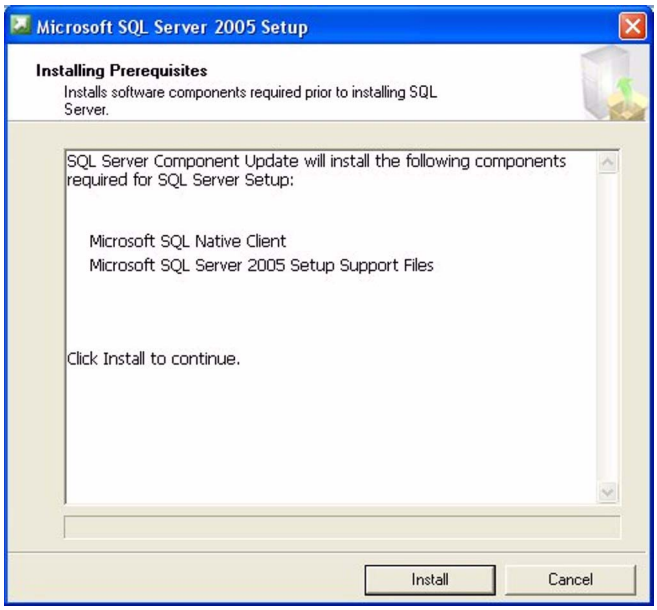


Figure 12-28: SQL Server Prerequisites

5. Click on the 'Install' button. The SQL server prerequisites will be installed.

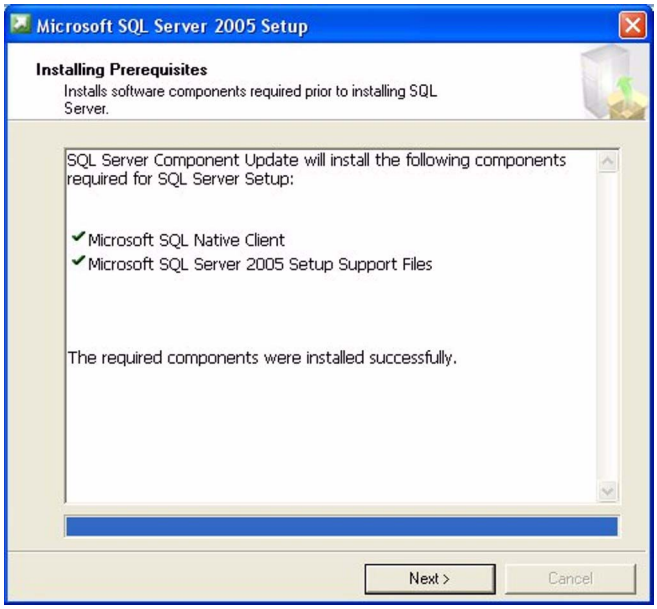


Figure 12-29: SQL Server Prerequisites Installed

6. Click on the 'Next' button to continue. The installer will then scan the PC configuration.

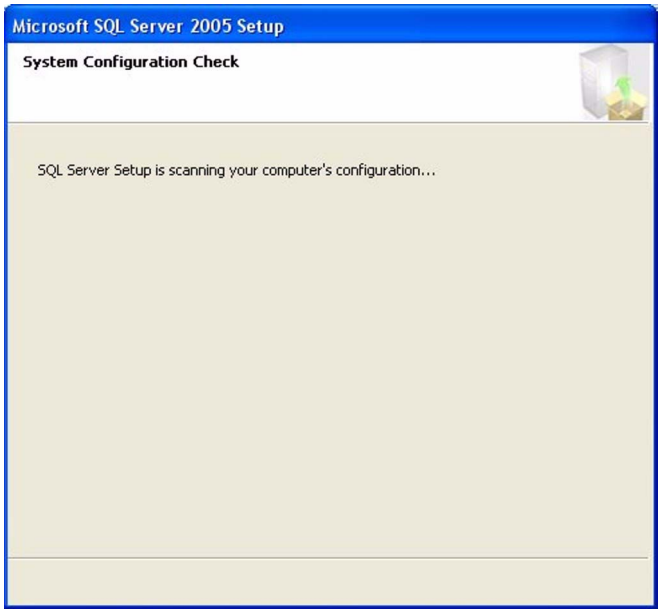


Figure 12-30: SQL Server System Configuration Check

7. When the configuration check is complete the SQL Server installation wizard is displayed.

Figure 12-31: SQL Server Installation Wizard

8. Click on the 'Next' button to start the SQL Server installation. The results of the system configuration check will be displayed.

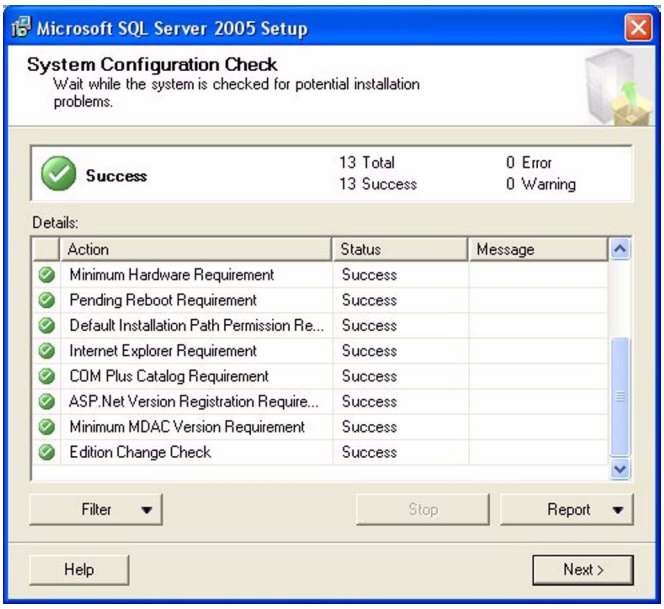


Figure 12-32: System Configuration Report

9. If the system configuration report does not show any problems click on the 'Next' button to continue. If problems are reported these should be corrected before continuing with the server installation. If 'Next' is selected the installer will prepare to start the installation.

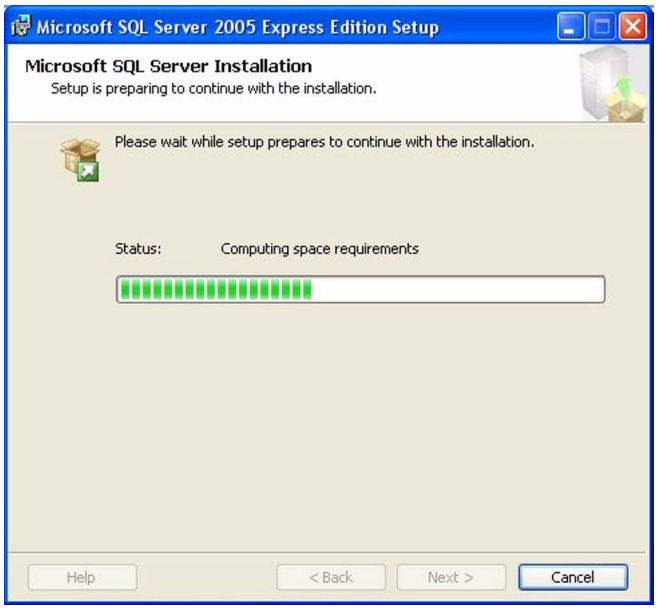


Figure 12-33: Installer Setup

When the installer preparation is complete the registration screen will be displayed.

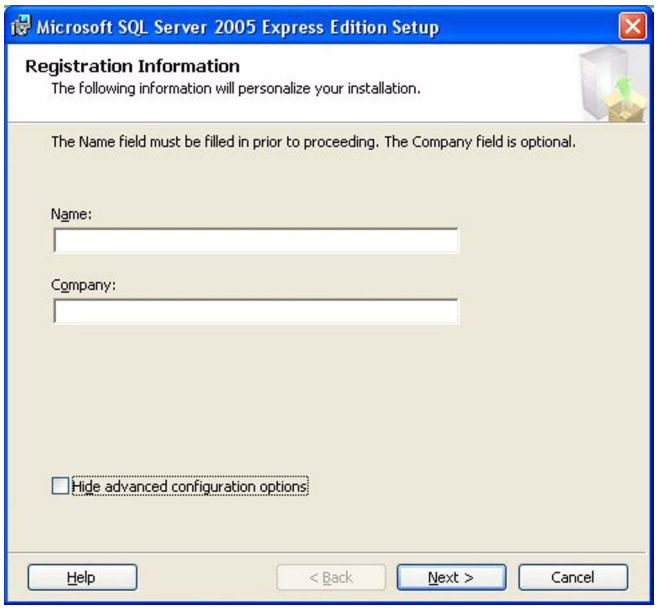


Figure 12-34: SQL Server 2005 Registration

10. Ensure that the 'Hide advanced configuration options' checkbox is deselected (no tick).
11. Complete the Name field and optionally the Company field.
12. Click on the 'Next' button.
13. The component selection screen will be displayed. Only the SQL Database Services are required; the Client components will be marked with an 'X' to indicate that they will not be installed.

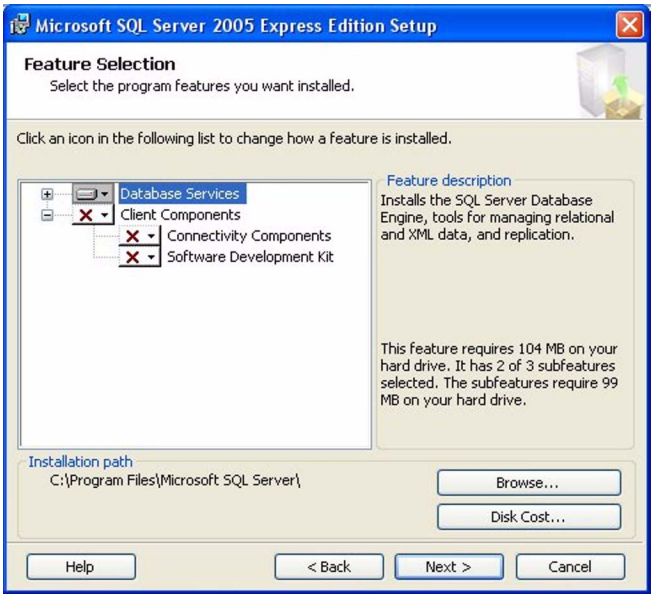


Figure 12-35: SQL Component List

14. Ensure that the correct components are selected and click on 'Next'.

15. Continue through the following screens by clicking on the ‘Next’ button until the Instance Name screen is displayed.

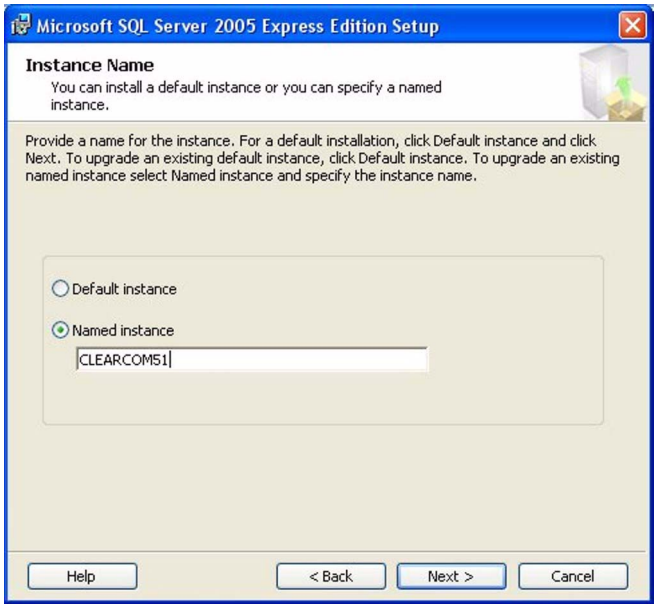


Figure 12-36: SQL Server 2005 Instance Name

16. Select the ‘Named instance’ radio button and enter ‘CLEARCOM51’ as the instance name.
17. Click on the ‘Next’ button to display the Service Account screen.

Figure 12-37: SQL Server 2005 Service Account

18. Select the Local System Account as the Service Account to use and “Local system” as the SQL server. The “SQL Server” and “SQL Browser” boxes in the “Start Services” section should be checked. Click on the ‘Next’ button to display the Authentication Mode screen.

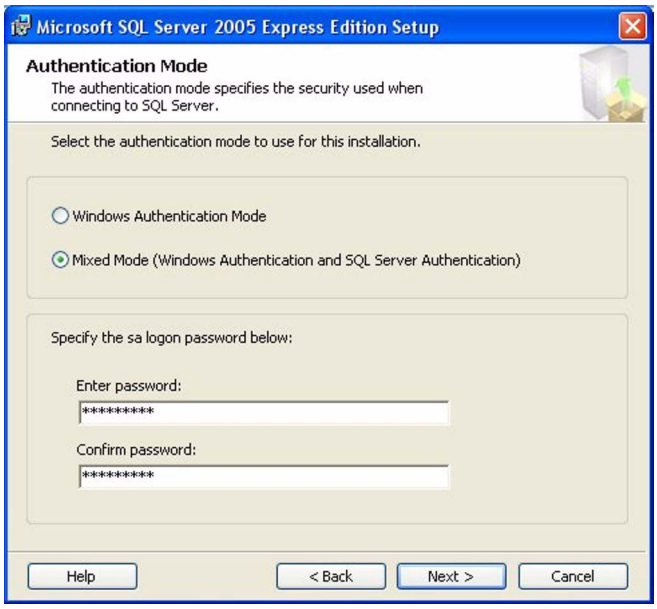


Figure 12-38: SQL Server 2005 Authentication Mode

19. Select Mixed Mode Authentication and set the sa password to CL34R_com (case sensitive) and click on the 'Next' button.
20. Click on the 'Next' button to display the "Collation Services" screen.

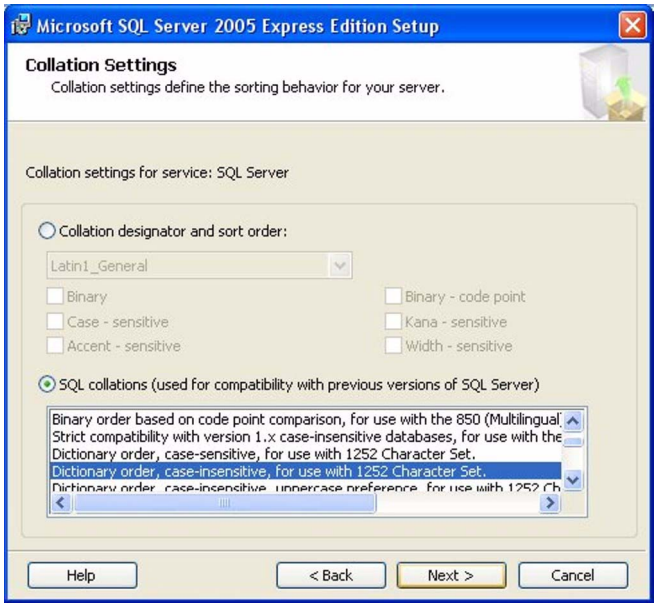


Figure 12-39: Collation Settings

21. Ensure that the Radio Button for compatibility with previous versions of SQL Server is selected and click on the 'Next' button.
22. Continue through the following screens by clicking on the 'Next' button until the "Configuration Options" screen is displayed.

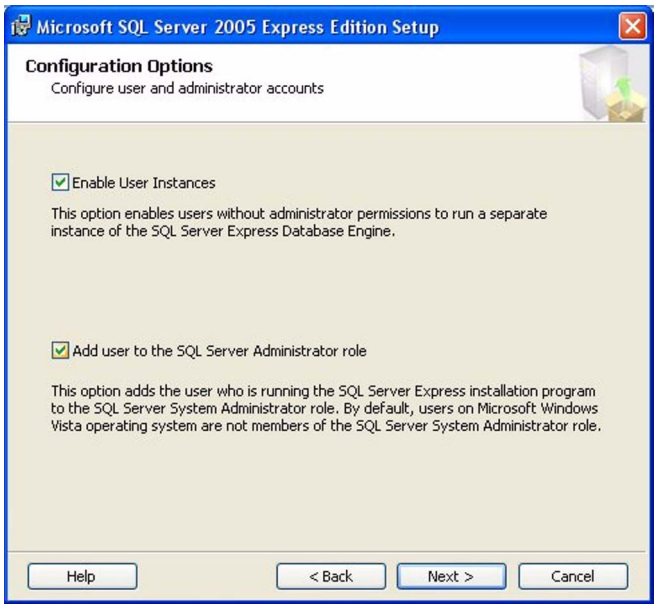


Figure 12-40: SQL Server 2005 User Instances

23. Click on the 'Enable User Instances' checkbox to enable. It is recommended that the user is also added to the SQL Server Administrator role. Click on the 'Next' button to continue the installation. The error reporting setting setup screen will be displayed.

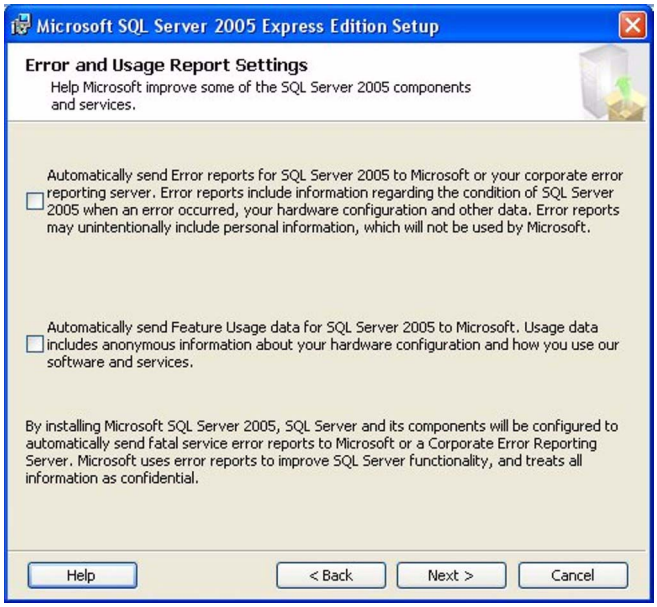


Figure 12-41: Error Reporting Configuration

It is optional whether the system is enabled to return information to Microsoft; Clear-Com makes no recommendations. In the event of doubt the installer should consult the IT department or systems administrator. Click on the 'Next' button to continue.

24. The installation confirmation screen will be displayed.

Figure 12-42: SQL Installation Ready

25. Click on the 'Install' button to start the installation. The installation progress will be displayed.

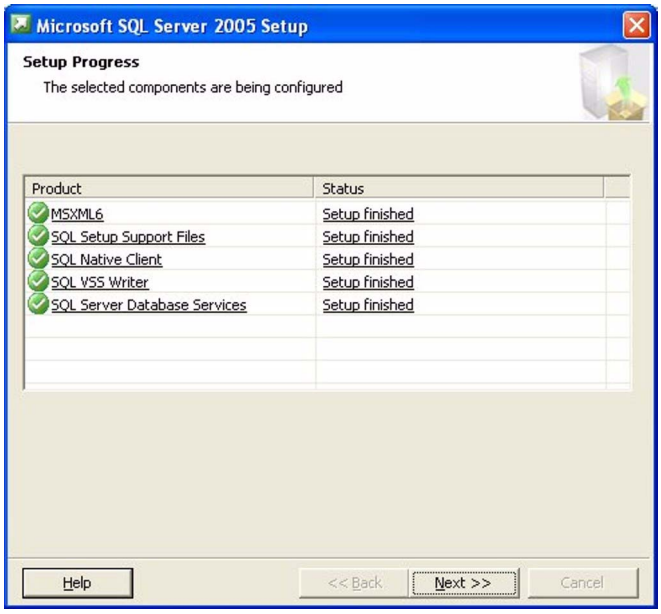


Figure 12-43: SQL Server Setup Progress

26. Continue through to the server install and complete the installation of SQL Server Express 2005. At the end of the installation a completion screen will be displayed.

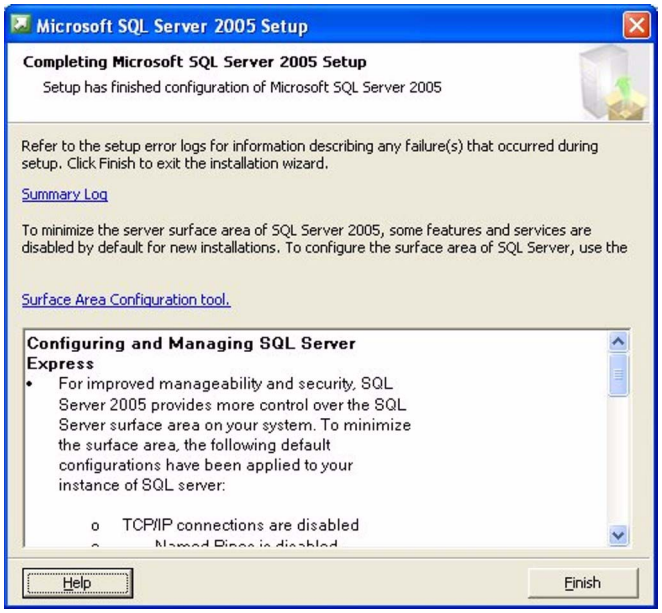


Figure 12-44: SQL Server Complete

UPDATING FIRMWARE

At this time the firmware update process for the Eclipse frame must be done manually. The details of how to upgrade Eclipse firmware are given in the Eclipse Upgrade procedure reference manual part number 810377Z.

These are the main steps that must be completed:

1. Upgrade CPU boot PROM.
1. Update application firmware in Config Cards (Omega and Median only)
2. Update application firmware on main board (E-32 and PiCo only).
3. Update firmware in MVX cards (Omega and Median only).
4. Update firmware in E-Que cards (Omega and Median only).
5. Update firmware in IVC-32 cards (Omega and Median only).
6. Update firmware in the LMC-64 cards (Omega and Median only).
7. Update firmware in panels.
8. Update ECS support packages as required by the new ECS.
9. Update ECS to new version.

CONFIG CARD FIRMWARE UPGRADE

Config cards can be upgraded using ECS or using the S4 driver. Both methods are described below.

USING ECS

Required Files

Binary File Required

Select the *.4kr file located in the distribution media.

Software Required

Run ECS - V5.2 version.

Instructions

Place the V5.2 Configuration Card Application code *.4kr file in a location that ECS can access.

Start and log onto ECS, load and activate a configuration for the Matrix that is to be upgraded.

Under the File menu select Update Firmware and the Update Firmware wizard will be started.

Figure 12-45: Start of ECS Upgrade Dialogue

Click on the ‘Next’ button to display the download type select dialogue.

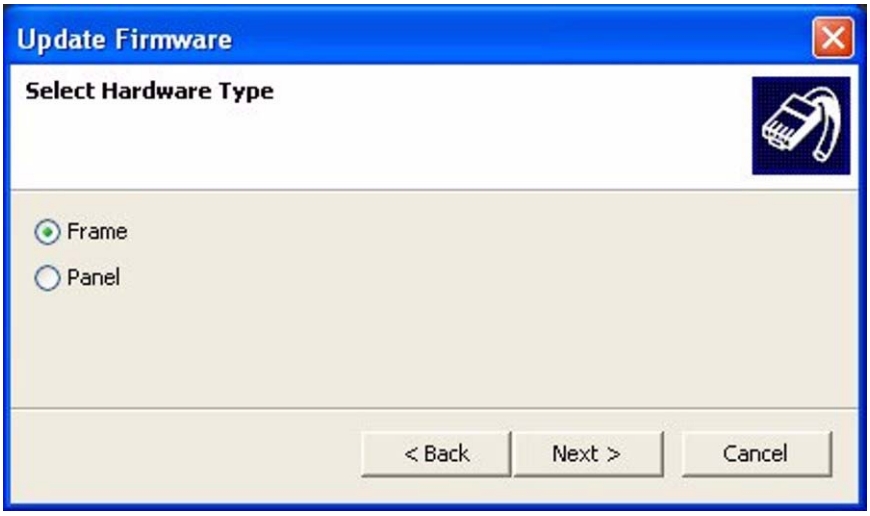


Figure 12-46: Update Hardware Type Dialogue

Select whether a matrix or a panel is to be updated using the radio buttons and click on the 'Next' button to proceed to the file select dialogue.

In the Choose Files dialogue click on browse to the location where the required update file is located and select the firmware file (normally a .4kr file).

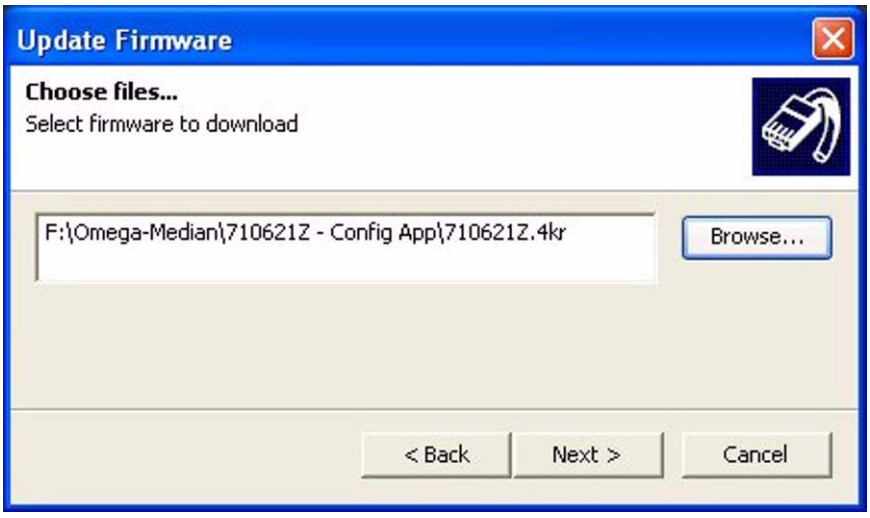


Figure 12-47: Locating Firmware File

Click on the 'Next' button to display the download confirmation dialogue.

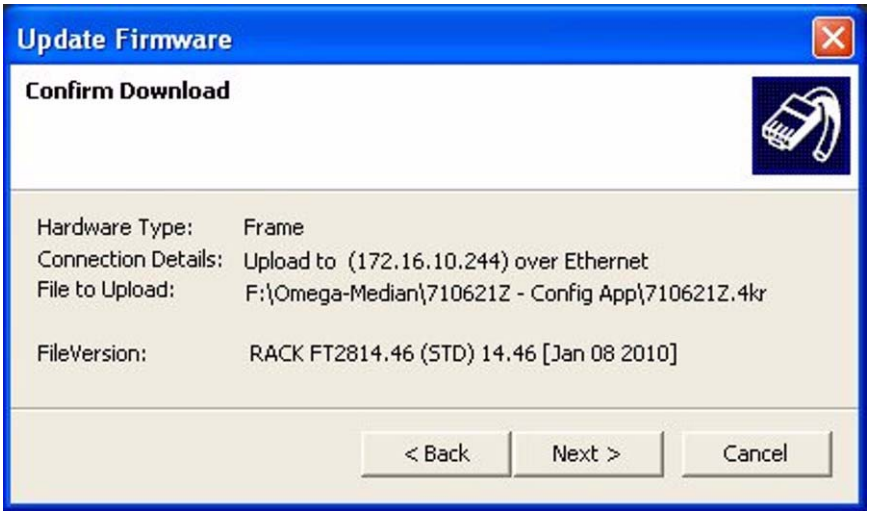


Figure 12-48: Firmware Download Confirm Dialogue

Click on the 'Next' button to proceed with the firmware download. The ECS software will display the download status then start the download to the specified target.

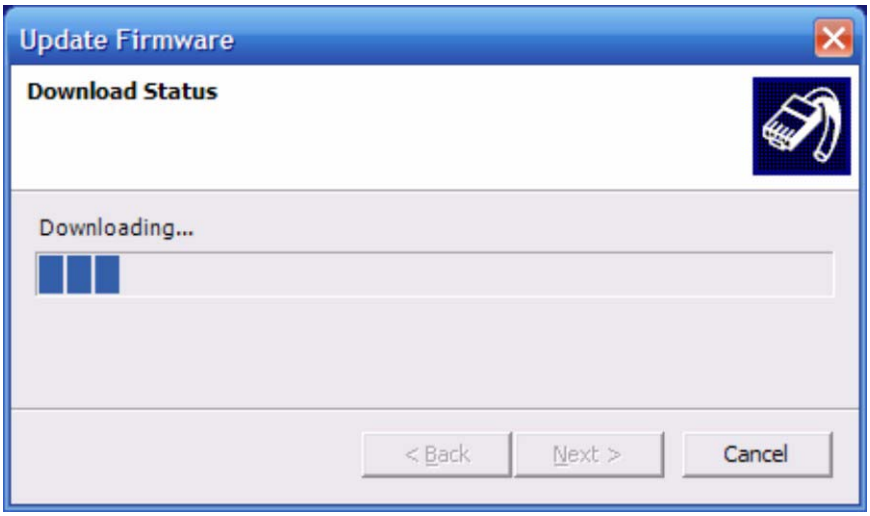


Figure 12-49: Download Status

When the download has completed click on the 'Next' button to continue. The download completion screen will be displayed.

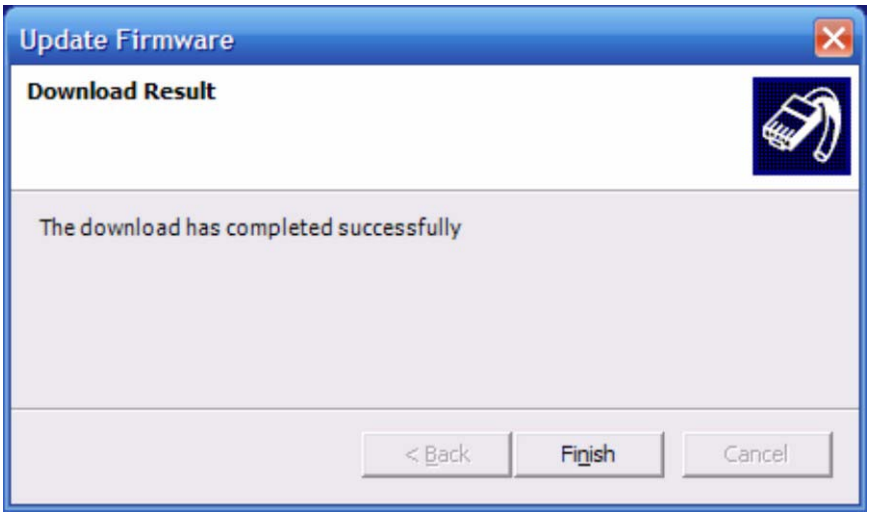


Figure 12-50: Download Completion

Click on the ‘Finish’ button to exit software download. The target will now be running the new firmware.

PANEL FIRMWARE UPGRADE

Panel firmware is upgraded via the matrix by downloading the firmware file to the matrix where it is held and uploaded by any panel that is online.

Under the File menu select Update Firmware and the Update Firmware wizard will be started.

Figure 12-51: Start of ECS Upgrade Dialogue

Click on the 'Next' button to display the download type select dialogue.

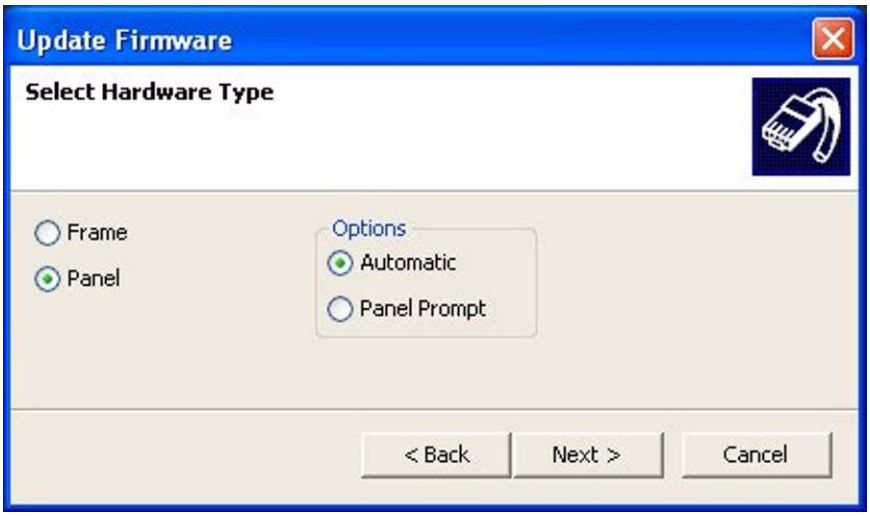


Figure 12-52: Select Update Dialogue

When panel update is selected two options for download are available, Automatic and Panel Prompt.

Automatic mode will tell the matrix to update all the panels currently connected to the matrix without any user intervention, offline panels will display a prompt to upgrade.

Panel Prompt mode will tell the matrix to hold the update but not to send the update to all panels immediately. Instead it gives more control by deferring the decision to take an update to the panel user, allowing the firmware update to be taken at a more convenient time. A prompt is displayed on panels supporting this update mode, giving the user the option of accepting the download (YES) or deferring the decision until later (NO). The prompt is indicated by flashing keys.

This mode is useful for upgrading panels which have been offline at the time of the download, or for testing new releases where the system administrator may only want to upgrade one panel prior to applying the update to the whole system.

The prompt is displayed when the panel goes from offline to online; once YES is chosen, a second confirmation will be displayed. If YES is again chosen download will commence immediately. If NO is selected then the prompt will no longer be displayed until either the update is downloaded to the matrix again or for non V-Series panels a BLACK reset is made to the matrix.

For V-Series panels the prompt is also accessible from the panel menus, the UPGRADE menu option is only displayed in the DIAGNOSTIC menu if an update is available in the matrix.

If the versions in the panels match the newly downloaded update then they will not receive the newly downloaded update.

Once the upgrade mode is selected click on the ‘Next’ button to proceed to the file select dialogue.

In the Choose Files dialogue click on browse to the location where the required update file is located and select the firmware file (normally a .4kr file).

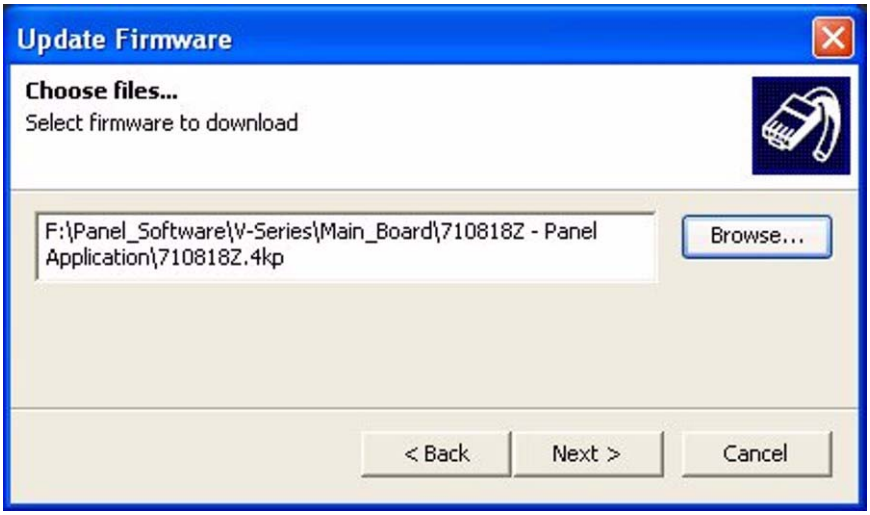


Figure 12-53: Locating Download File

Click on the 'Next' button to display the download confirmation dialogue.

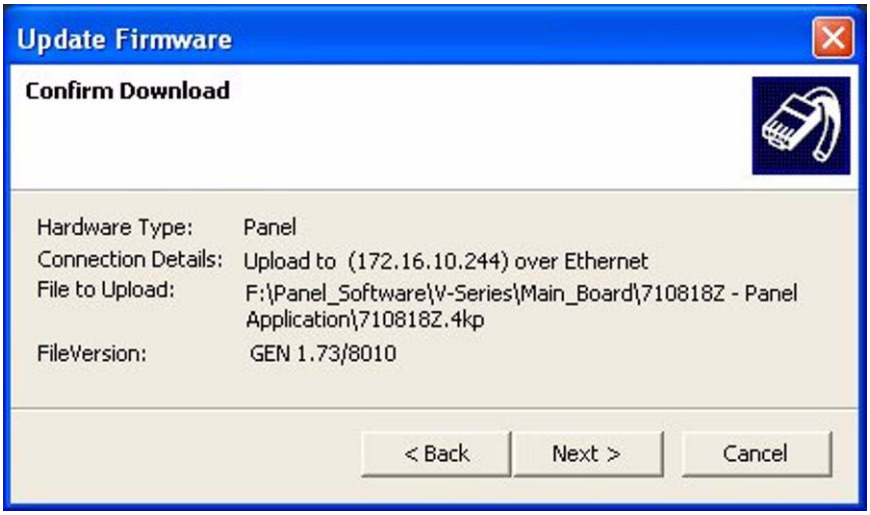


Figure 12-54: Firmware Download Confirm Dialogue

Click on the 'Next' button to proceed with the firmware download. The ECS software will display the download status then start the download to the specified target.

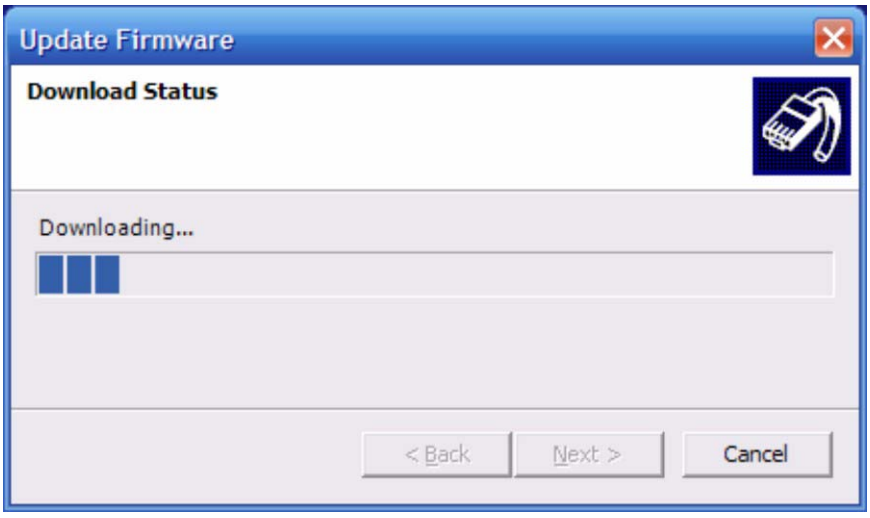


Figure 12-55: Download Status

When the download has completed click on the 'Next' button to continue. The download completion screen will be displayed.

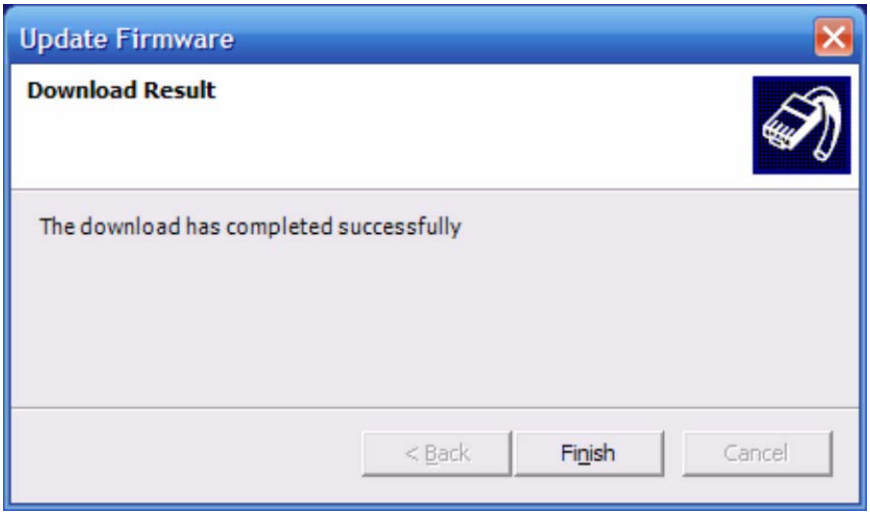


Figure 12-56: Download Completion

Click on the 'Finish' button to exit software download. The target will now be running the new firmware.

It should be noted that firmware uploads to panels will only occur once the firmware download from ECS to the matrix is completed. If any other download from ECS to the matrix occurs before all the online panels have completed updating then the updates will be aborted and the panels will continue with their current firmware. The panel firmware downloaded to the matrix will be lost and panel updates will not continue once the second download is completed.

In this event it is possible that some panels will be left with the new firmware if they completed updating before the new download from ECS started whilst others will still have the previous firmware. In this case the panel firmware will have to be downloaded to the matrix again and the panels allowed to update.

Note: The panels always update with a new firmware download regardless of their current firmware version; there is no version checking.

The V-Series firmware images downloaded are held in system RAM; the images are retained on NIDS and RED resets, a power cycle or BLACK reset will clear the image. Note that only one V-Series firmware image may be downloaded at any one time.

13 ECLIPSE DOWNLOADS

When the ECS operator creates or edits a configuration map, adds hardware to the system, or performs a variety of other functions the changes must be downloaded to the Eclipse system. The configuration can be downloaded either by:

- Opening the 'File' menu and selecting the 'Apply changes to Frame' function (Ctrl D).
- Clicking or 'Apply Changes' from the system layout.
- Selecting 'Apply changes to System' in the System menu.

The first two downloads that apply changes to the frame allow the new configuration to be merged with the existing configuration and allow the user to select the reset type.

The third download option will only download a new configuration to the system and reset it.

APPLY CHANGES TO FRAME

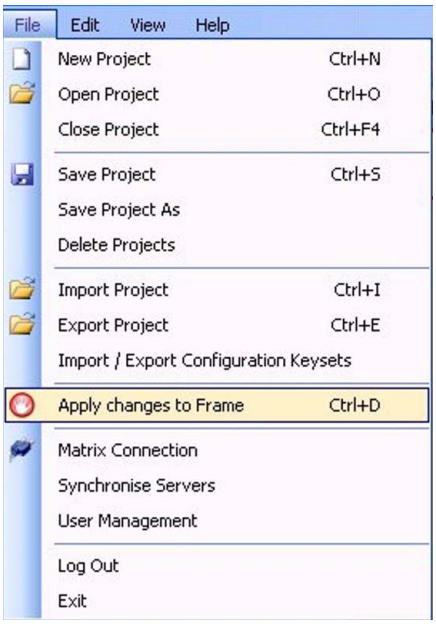


Figure 13-1: Eclipse Downloads

When the download function is selected a dialogue screen will be displayed to confirm the action.

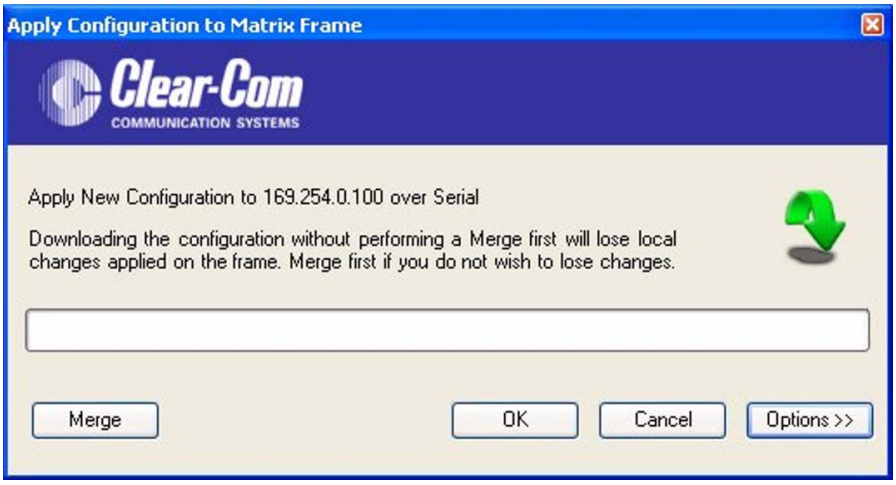


Figure 13-2: Download Dialogue

The “Merge” button allows the current ECS configuration to be merged with the rack configuration before download. This facility should be used if the rack configuration has been changed as a result of making changes in ECS Online mode or from assignment panels. In both cases these changes will not be reflected in the current ECS configuration and would be lost if a download was performed without first merging the configurations. The merge button has the same effect as performing a merge in Online mode and will display the same informatory messages.

To continue with the download to the frame click on the ‘OK’ button; to cancel the download click on ‘Cancel’

The options button displays a further dialogue allowing the user to set up actions after the download.

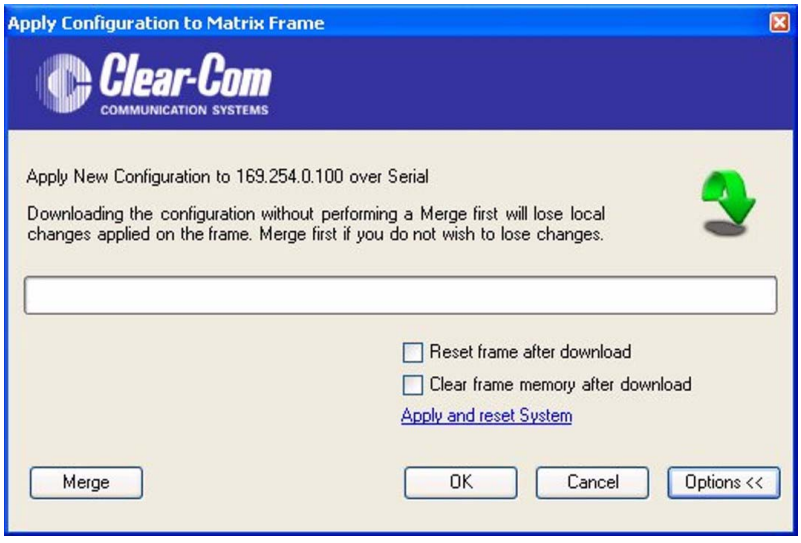


Figure 13-3: New Configuration Download Options

Click on the checkboxes for the required option or options and then ‘OK’ to continue with the download. A new configuration will be built and downloaded to the frame.

RED RESET (RESET FRAME AFTER DOWNLOAD)

If the ‘Clear all talk paths and listen levels during reset’ box is not checked the download will reset the matrix and any crosspoints. Talk/Listen paths will be remade.

This type of reset is required for:

- Downloading completely new configurations
- Hardware changes (not mandatory)
- Any locally assigned keys will be cleared.

BLACK RESET (CLEAR FRAME MEMORY AFTER DOWNLOAD)

If the ‘Clear all talk paths and listen levels during reset’ box is checked the download will clear down any active routes and reset the matrix to the ECS default map. Any local changes to groups, party lines or IFBs made via ICS2003 and i-stations are reset to the ECS map default .

This type of reset is used for:

- Correcting erroneous or spurious crosspoints.
- Any locally assigned keys will also be lost.
- Crosspoints - all active keys are reset to off.
- Crosspoint levels - all panel listen levels are rest to normal.
- Locally assigned keys - any locally assigned keys are deleted.
- Local panel microphone settings - all panel microphone settings are set to the ECS downloaded value.
- Local panel microphone gains- all panel microphone settings are set to the ECS downloaded value.
- Key status - all keys are unmade.
- Any local changes to groups, party lines and IFBs made via ICS2003 and i-stations are reset to the ECS map default.
- Locally assigned fixed groups - all groups are reset to the ECS default.
- Locally assigned party lines -all party lines are reset to the ECS default.
- Locally assigned IFBs -all IFBs are reset to the ECS default.
- Locally assigned forced listens-all Forced listens are reset to the ECS default.

- Input levels - Matrix input levels are reset to the ECS download value.
- Output levels - Matrix output levels are reset to the ECS download value.

APPLY AND RESET ALL FRAMES IN SET

This option should be selected when any of the following are true:

- The ECS operator is making the first download of a new linked set.
- The ECS operator has added or removed a Shared Port.
- The ECS operator has added a remote member to a party line.
- The ECS operator has added a remote key to a party line.
- The ECS operator has change the Port Count for a fiber card.

PRESERVING LOCALLY ASSIGNED KEYS

When a download is performed all the locally assigned keys (keys assigned from a panel rather than ECS) will be lost unless a merge operation is performed before the download. If the user wishes to retain these keys in the new configuration map the user should go into Online mode and merge the locally assigned keys with the new configuration before downloading and then save the modified project.

The configuration can then be downloaded with the locally assigned keys preserved in the new configuration map.

APPLY CHANGES TO SYSTEM

This type of download will only create a new configuration map and download it to the system and then reset the system.

Figure 13-4: System Menu

Clicking on this function opens the matrix download dialog that allows the configuration to be downloaded to the frame and provides options for the frame to be reset after download.

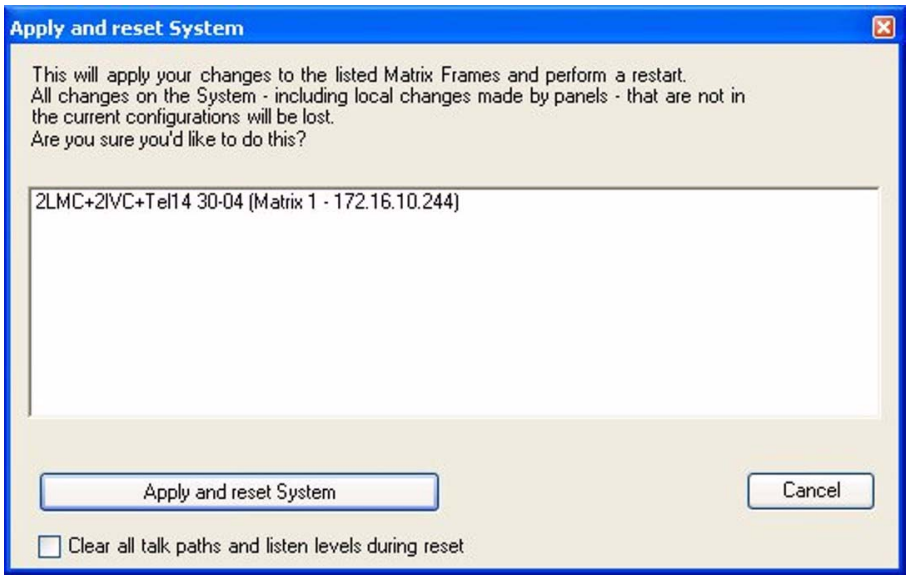


Figure 13-5: Apply Changes to System Dialog

Select the checkbox to clear talk paths and listen levels during the reset. This has the effect of performing a black reset on the matrix. If this box is not checked talk and listen paths are not cleared on reset which is the equivalent of performing a red reset.

To continue with the download to the frame click on the ‘Apply and reset System’ button and a new configuration will be built and downloaded to the frame. Click on ‘Cancel’ to abandon the download.

14 USING THE DIAGNOSTIC TOOLS

The diagnostic tools include crosspoint monitoring, event log monitoring, firmware downloading, and system monitoring.

The diagnostics menu displays information about the state of the system's hardware and software operation that is useful for diagnosing and preventing problems.

Figure 14-1: Diagnostics Menu

CROSSPOINT MAP

The crosspoint map gives the ECS operator a visual display of all "crosspoints" or source-to-destination assignments in the matrix system. The crosspoint map is a graphical representation of all inputs and outputs in the system.

This map can be used to identify talk and listen assignments, forced listens and blocked listens. It can also be used to make or cancel crosspoints and to override input and output levels set up in the map.

The grey triangles denote active crosspoints, pink half circles denote auto listen crosspoints, red crosses denote blocked listen crosspoints and green half circles denote forced listen crosspoints.

The crosspoint map displays both the labels and the port numbers the labels are associated with for ease of identification.

The outputs are listed down the left hand side of the table with the output gain settings, while the inputs are listed along the top of the table with the input gain settings.

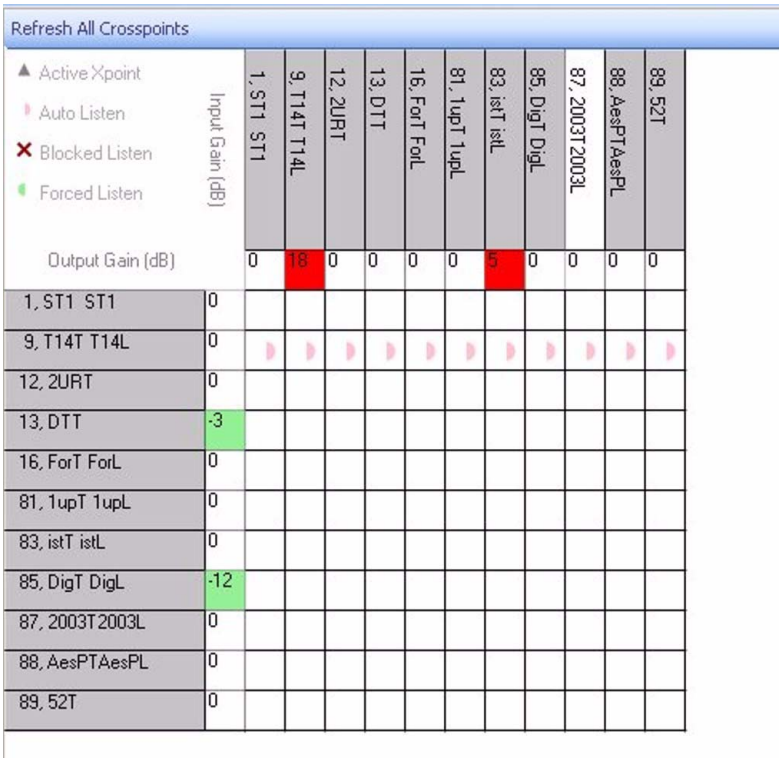


Figure 14-2: Crosspoint Monitor Display

The map gives the ECS user options to zoom in or out, producing clearer views of the map. Zoom can be done using Ctrl+ (zoom in) and Ctrl- (zoom out) using the keyboard or if a wheel mouse is available using Ctrl and the wheel to zoom.

Clicking on the 'Refresh All Crosspoints' button at the top of the crosspoint map requests the crosspoint information from the frame and uses it to update the crosspoint map.

When a input or output level is changed it will affect all the crosspoints that are connected to the port. If an input level for a port is reduced the input level to all the crosspoints for that port will be reduced (all the crosspoints in the column below the level). If an output level is changed all the crosspoints in that row will be affected. Note that these levels only change the input and output levels for the ports; they do not change the crosspoint level settings.

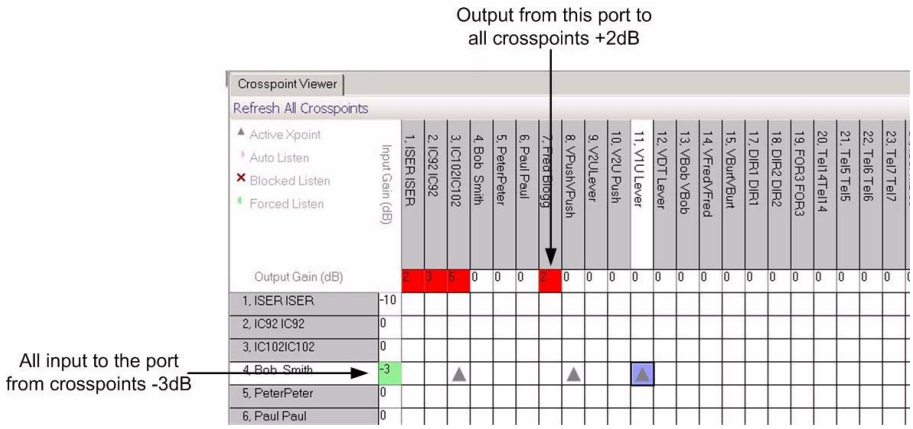


Figure 14-3: Port Gain Settings

Right clicking on an input or output setting (the cell next to the port information) will display a list of gain values.

Clicking on a value in the list will set the input or output gain to the required level in the matrix. This value will remain in force until it is either changed again using the Crosspoint Monitor or a new map is downloaded and the matrix is reset to the default values in the map.

If the matrix is only reset without a new map download the modified values set up using the Crosspoint Monitor will remain in force.

The settable values are: +18, +15, 12, +9, +6, + 5, +4, +3, +2, +1, 0, -1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -12, -14, -16, -20, -35, -45 and -72dB.

The current value can also be reset to the default value set up in ECS from this list. The crosspoint level cells are color coded to show whether the level is higher (red) or lower (green) than 0dB.

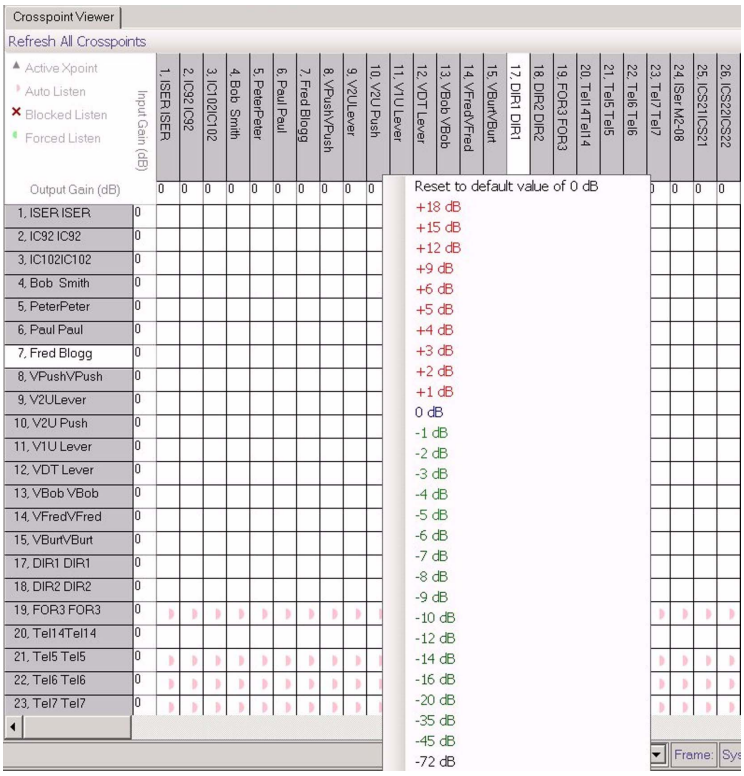


Figure 14-4: Input and Output Gain Settings

The default port gain may be set in ECS using ‘Advanced Settings’ under the ‘Matrix Hardware’ tab. The setting will be downloaded to the matrix as part of the map and will displayed by the crosspoint monitor. Right-clicking the port gain setting to display the gain levels will show this value as the default setting so the port may be reset to the ECS value at any time without a new map download and reset.

If the port gain is set to a non-zero level in ECS and then set to zero using the crosspoint monitor the gain will be shown highlighted in light blue to indicate that the zero value is not the default value in the map.

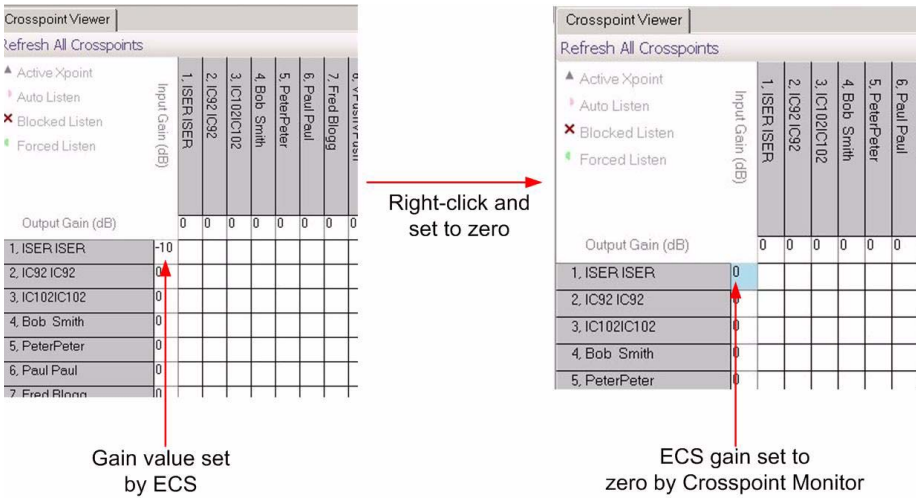


Figure 14-5: Overriding the ECS Port Gain

By right clicking a cell representing a crosspoint a list of options is displayed. To toggle a crosspoint from the 'On' state to the 'Off' state click on the 'State' option and then click on 'Toggle' in the next menu. Select the 'Kill" option from the 'State' menu to clear a crosspoint completely.

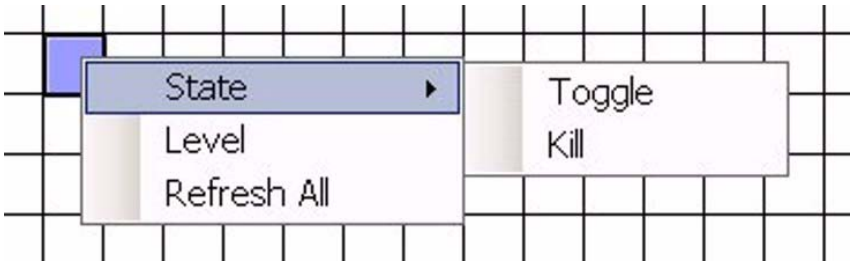


Figure 14-6: Crosspoint State Options

To set the crosspoint level select the level option on the menu to display the crosspoint level slider and set the required level.

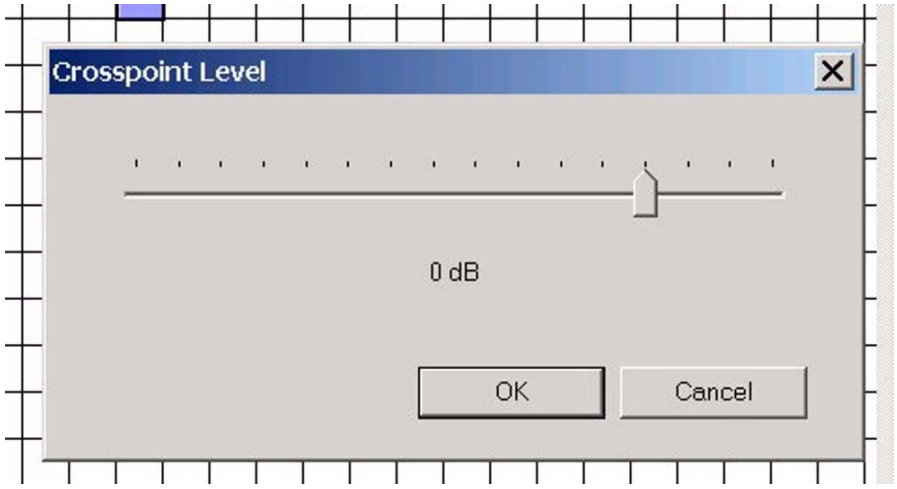


Figure 14-7: Crosspoint Level Slider

Select the ‘Refresh All’ option to update the display with the crosspoint settings current on the matrix.

CROSSPOINT SETTINGS AND AVERAGING

In some cases the same port may be placed on a panel as different key more than once, for example on different shift pages (multiple instances of the port). If these instances of the port or keys have been set up with different audio levels then the level used on any of keys connected to the port will be the average of the levels of all the instances on the panel. This is to prevent a situation where the audio level from the same port may vary greatly between different keys assigned to that port depending on how the different keys have been set up.

To improve the performance of the level averaging on ICS panels and i-Stations the crosspoint range for these panels is larger than previously. The preset levels in the matrix for ICS panels and i-stations are:

- -30.2 dB
- -24.1 dB
- -18.1 dB
- -12.1 dB
- -9.2 dB
- -6.0 dB
- -3.9 dB
- -2.1 dB
- 0 dB

- 1.1 dB
- 2.1 dB
- 3.2 dB
- 3.9 dB
- 6.0 dB
- 8.9 dB
- 12.1 dB

The range for PD4224, PD4222 and V-Series panels is -42 dB to +12 dB.

MATRIX EVENT LOG

The Matrix Event Log has two available modes; Live and Offline. In Live mode ECS makes a connection to the matrix. Messages are then displayed on the screen in ECS as they are generated by the matrix. In offline mode ECS makes a connection to the database. The user sets search criteria and the resulting messages are displayed from the database to the screen. The event log gives the ECS user information about state of the matrix that is helpful in diagnosing and repairing problems.

The event types to be logged are selected in the ‘Properties’ pane by clicking on the required checkboxes. The message types that can be selected for logging are Critical, Warning and Informatory.

The logging mode can be set to ‘Live’ to report current messages or ‘Historic’ to display previous logged messages. In ‘Historic’ mode the specific hour, minute, and second beginning and end dates to search can be set. Click ‘Display’ when these parameters have been set to display the required log messages.

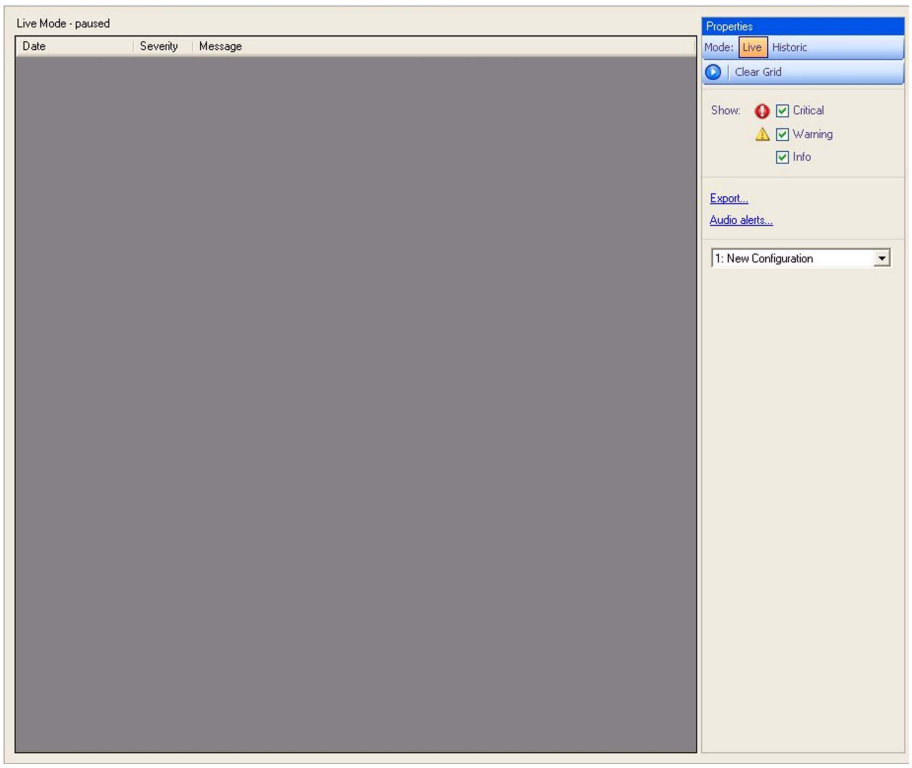


Figure 14-8: Event Log Display

The log messages can also be exported to a file for further processing using the ‘Export’ option in the ‘Properties’ pane.

Note: The logging export file is an XML file and can be imported into Excel using the speech quotes (“) as the delimiter.

REQUEST INFO

Selecting “Request Info” in the Properties pane will display a “Request Matrix Information” screen which will allows a number of matrix parameters to be set or displayed.

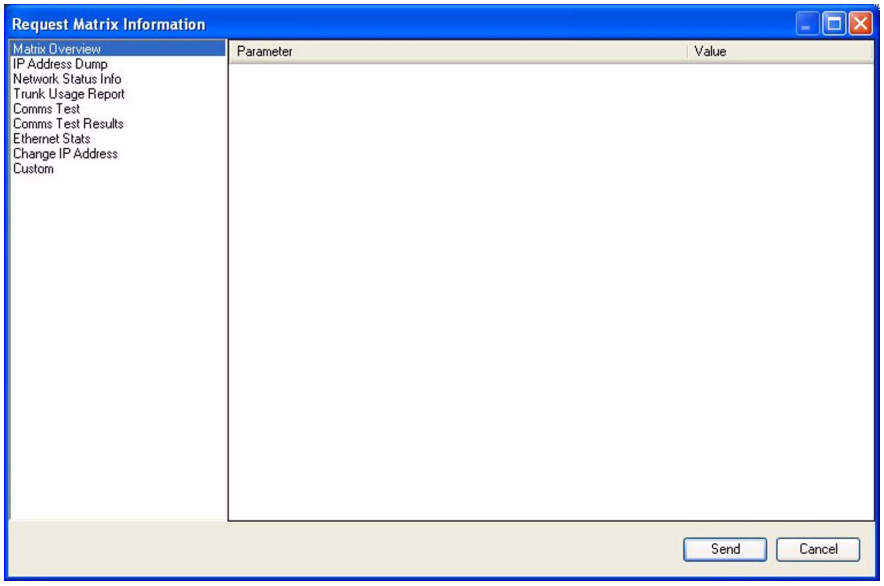


Figure 14-9: Request Matrix Information Display

Select the required function in the left pane and the click on the ‘Send’ button to send the request or update.

The default functions are described below.

Matrix Overview

Causes information about the current matrix status to be output to the matrix event log.

IP Address Dump

Outputs information on the current matrix IP address information to the event log.

Network Status Info

The current network status of the matrix is output to the matrix event log.

Comms Test

Initiates a network communications test.

Comms Test Results

Outputs the results of the last communications test performed to the matrix event log.

Ethernet Stats

Output the statistics of ethernet transactions logged such as packet losses etc to the matrix event log.

Change IP Address

This function allows the primary and secondary IP address of the target matrix to be set. These addresses correspond to the LAN1 and LAN2 connectors on the rear of the CPU card (see the Omega or Median Matrix manuals) or the Eclipse-32 or Eclipse PiCo unit (LAN 1 only). Please see for details“Changing Matrix IP Address” on page 3-8.

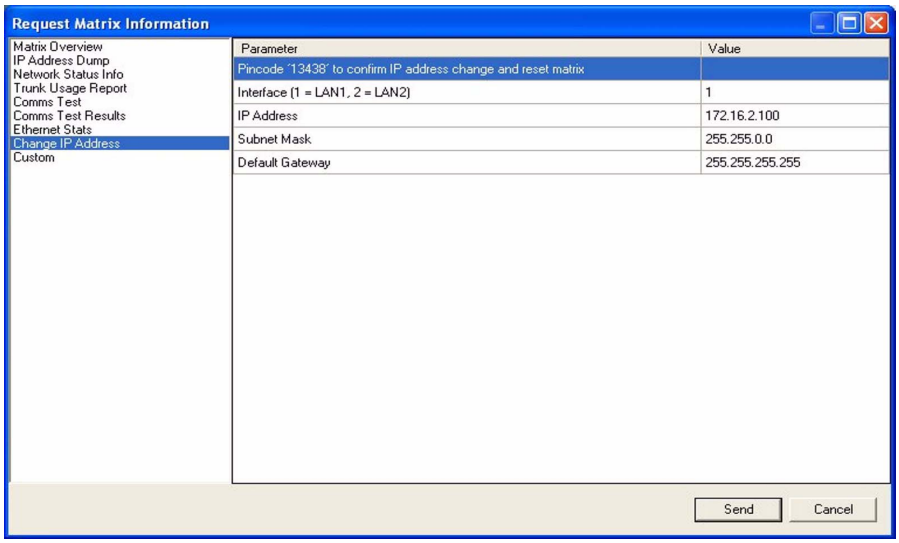


Figure 14-10: IP Address Setup Display

Select interface 1 or 2 (LAN1 or LAN2 port) and enter the required IP address, subnet mask and default gateway and click on ‘Send’ to update the matrix.

Note: Changing the IP address parameters may result in the ECS PC losing contact with the matrix and may require the ethernet configuration of the PC to be changed.

Custom

Allows request parameters to be entered manually for downloading to the matrix.

AUDIO ALERTS

This option in the ‘Properties’ pane allows audio alert sounds to be set up for the three message types of Critical, Warning and Informatory. The audio alerts are .wav files and the default is the standard Windows

media files. The ECS operator may configure other sound files if required.

Click to select one or all of the following categories of messages to cause an audio alert from the ECS computer.

• Critical

• Warning

• Info

If no option is selected no event in this category of messages will cause an audio alert.

CHANGING MATRIX IP ADDRESS

It may be necessary to change the IP address of a matrix. The sequence of steps to change the IP address of a matrix via the event log is:

1. After starting ECS open the configuration created in “Initial Configuration Sequence” on page 3-7.
2. Ensure that the PC is connected to the matrix via ethernet or a serial link (see “Selecting Serial or Ethernet Connection” on page 3-3).
3. Open Matrix Event Log from the Diagnostics menu (see the chapter “Using the Diagnostic Tools” for details on the Matrix Event Log).

Note: In order to display the diagnostics menu at least one matrix must be configured using ‘System’ first.

4. Press 'Play' to connect to the matrix.

Figure 14-11: Play Icon to Connect to Matrix

5. When connection is established click on the 'Request Info' button which will be displayed beside the ‘Play’ icon.

Figure 14-12: Request Info Button

6. Choose 'Change IP Address' from the list in the left hand pane and enter the desired values listed below.

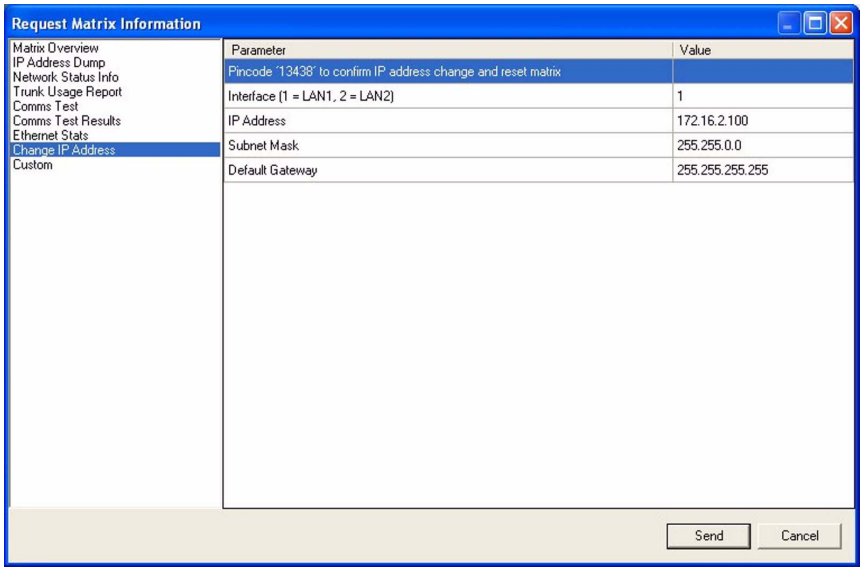


Figure 14-13: IP Address Entry

- Select parameter 1 and enter the pin code.
- Select parameter 2 and enter interface 1 and then enter the LAN1 port address.
- Select parameter 2 and enter interface 2 and then enter the LAN2 port address (Omega and Median matrix only).
- Select parameter 3 and enter the subnet mask.
- Select parameter 4 and enter the default gateway address

7. Click on ‘Send’ to update the matrix.

8. A message from the Matrix indicating that the change was successful will be seen in the log, and the matrix will reset.
9. Close Matrix Event Log, and open “My Systems”.
10. Change the IP address in My Systems to be the same as the new value in the matrix.
11. Press Save and Activate.
12. Note that it may be necessary to change the IP address and subnet mask of the PC if the new matrix IP address is from a different network range (see “Ethernet Connection” on page 3-4).

SYSTEM MONITORING

System monitoring is started by selecting the ‘Monitor’ link from the System menu.

Figure 14-14: System Menu

The ‘System’ configuration screen displays all the frames in the current configuration and their status.

An additional pane displays the status messages for all the system components.

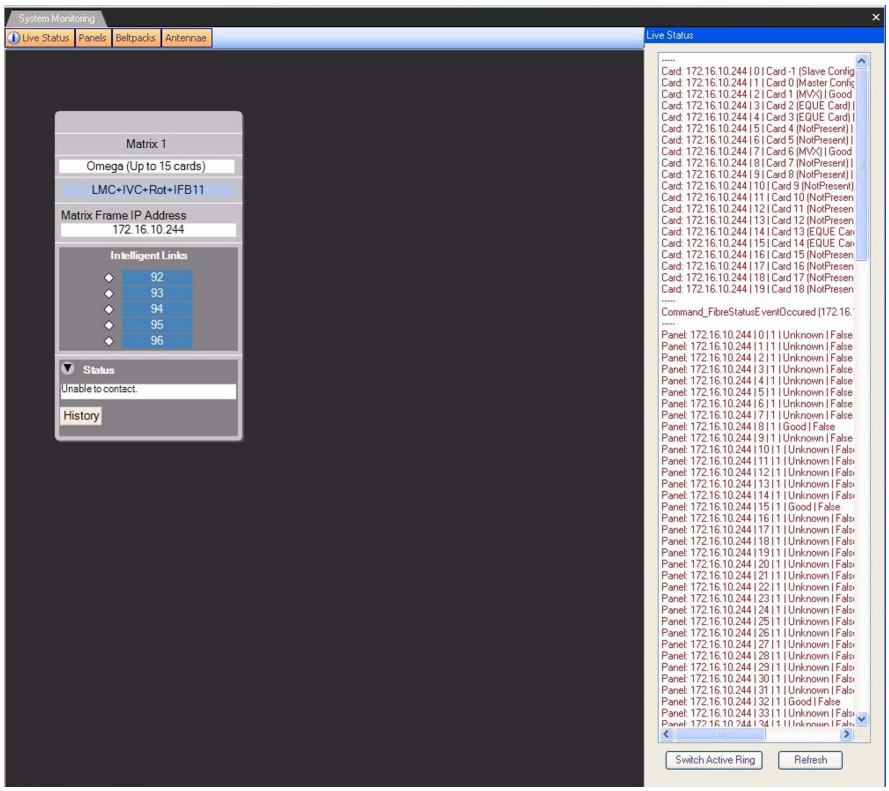


Figure 14-15: System Monitoring Screen

The system status is shown as:

- Orange - unable to communicate with frame.
- Red - errors reported from frame.
- Grey - frame OK.

When ‘Live Status’ on the system monitor toolbar is selected tabs for Panels, Beltpacks and Antennae are displayed. Selecting these displays the status of all the devices of this type in the current configuration.

15 SERIAL UPLOADER

ECS allows the operator to retrieve a configuration map file stored in a matrix's non-volatile memory and upload the file to a computer for viewing, editing, or saving. However, this feature only works when the computer on which ECS is installed is connected to the matrix via an Ethernet network.

If the ECS computer is connected directly to the matrix with a serial (null-modem) cable, it is possible to use the Serial Uploader program on the Eclipse installation disk to upload a configuration.

INSTALLING THE SERIAL UPLOADER

Use Serial Uploader to upload a configuration from the matrix when the computer is connected serially to the matrix.

1. Insert the Clear-Com Eclipse CD-ROM into the CD-ROM drive.
2. Right click on 'My Computer and select 'Explore' from the short-cut menu.
3. Click the 'Serial Uploader' folder on the CD-ROM disk to open the folder.
4. Click 'Setup.exe' to launch the InstallShield Wizard.

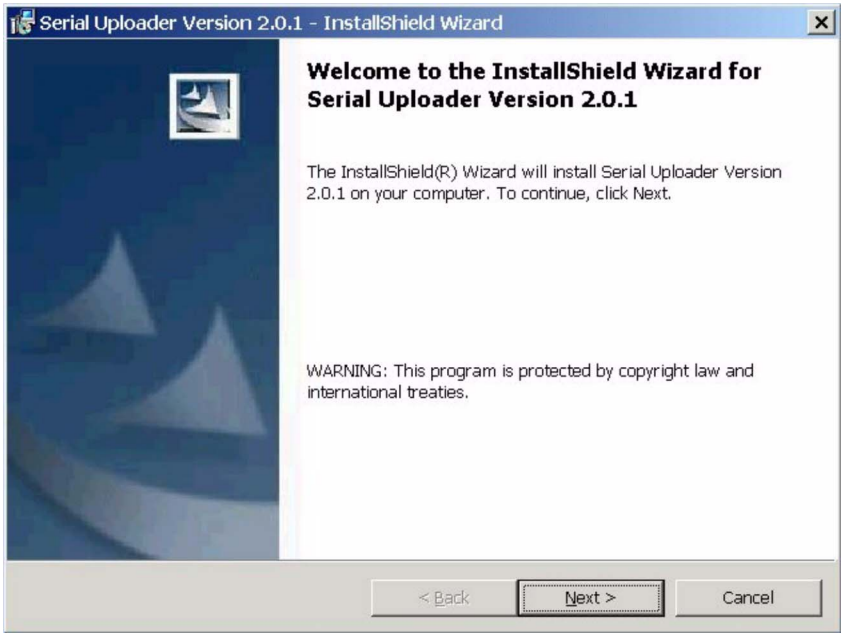


Figure 15-1: Serial Uploader Installer Startup Screen

5. Click on the 'Next' button to start the installation.
6. Follow the instructions of the onscreen InstallShield Wizard to install the Serial Uploader on the computer.
7. To start the program from the Start menu on the Windows desktop, navigate to 'All Programs', then to 'Clear-Com', then to 'Serial

Uploader <version>', and then again to 'Serial Uploader <version>' where <version> is the version number of the serial uploader.

The program starts and runs on the computer. Follow onscreen directions.

UPLOADING A CONFIGURATION FROM THE MATRIX

1. If not already connected, connect the matrix to the computer with a cross-over (null-modem) serial cable.
2. From the Start menu on the computer, navigate to ‘Clear-Com’, and then to ‘Serial Uploader <version>’, and then to ‘Serial Uploader <version>’ again to start the program.

   The Clear-Com Serial Configuration Uploader dialog box appears onscreen.

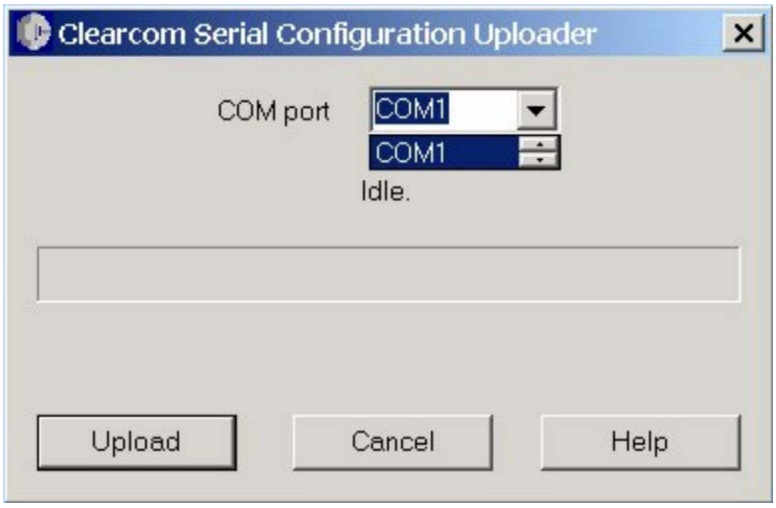


Figure 15-2: Clear-Com Serial Configuration Uploader Dialog Box

3. From the COM port drop-down list select the COM port to which the serial cable is connected on the computer.
4. Click Upload to start uploading the configuration from the matrix.

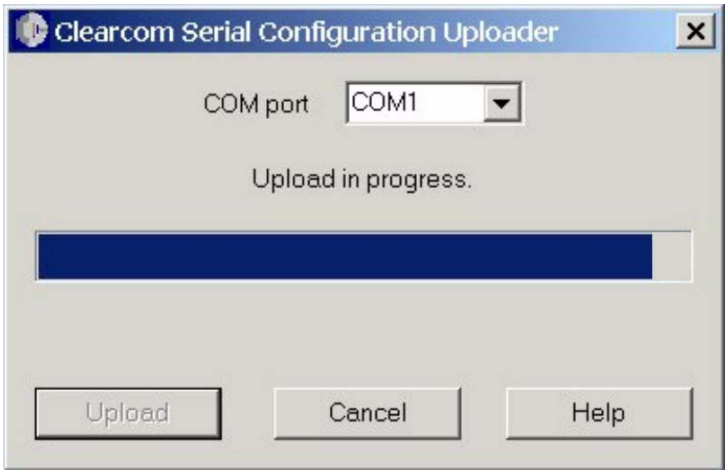


Figure 15-3: Clear-Com Serial Configuration Uploader Progress Bar

- A progress bar advances onscreen to indicate the progress of the upload. If the computer is unable to communicate with the matrix, an error message saying “Failed to Communicate with System” is displayed. If this happens, check to make sure the computer is connected to the matrix with a cross-over (null modem) serial cable, and that each end of the cable is securely connected.
- The upload may take up to one minute, depending upon the complexity of the configuration. When the upload is complete, the ‘Save As’ dialog box appears, allowing the configuration to be saved to the computer.

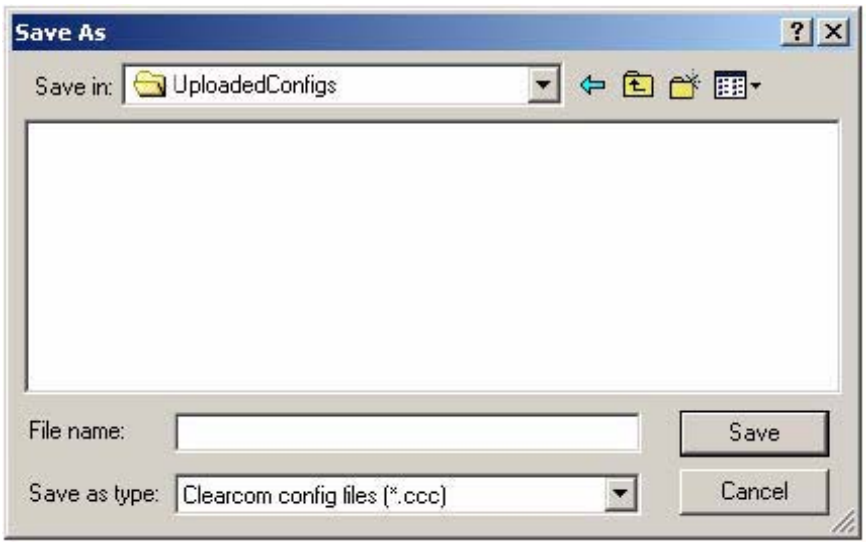


Figure 15-4: The “Save As” Dialog Box

5. Navigate to the folder on the computer in which configuration is to be saved and click on ‘Save’.

   The configuration is saved to the selected folder. The file can now be imported into ECS.

IMPORTING A CONFIGURATION FILE INTO ECS

1. Start and log in to the ECS program.
2. From the ‘File’ menu or ECS Toolbar, click ‘Open’.
   The Open dialog box appears.

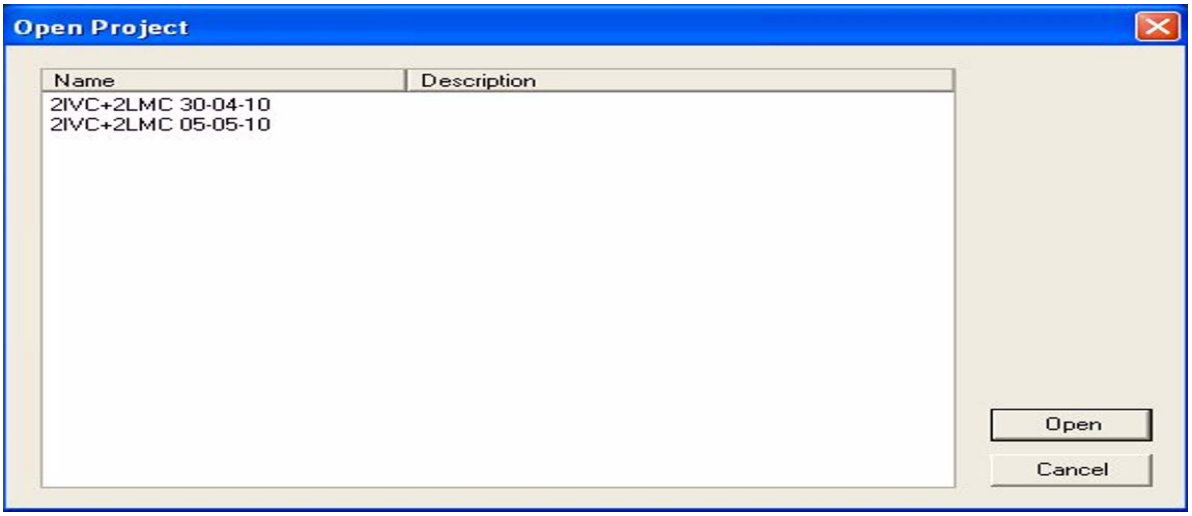


Figure 15-5: The Open Configuration Dialog Box

3. Click on the required configuration to highlight it.
4. Click on the ‘Open’ button.
5. From the ‘File’ menu select the ‘Save As’ option.
   The Save As dialog box is displayed with the name of the selected configuration in the Name field.
6. Click ‘Save’.
   The configuration is saved in ECS and can now be edited and downloaded if needed.

16 GLOSSARY

Analog Port Any of the Eclipse matrix's analog input/output RJ-45 connectors that are used to connect cable from the matrix to panels and interfaces. Each "port" connects to a separate audio channel in the matrix intercom system.

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 Production Maestro which can have any user labeled background.

Category-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:

1. The metal housing for the circuit cards and power supplies.
2. The circuit cards.
3. The power supplies.
4. The rear panel connectors which connect the matrix's hardware to panels and interfaces.

Conference An internal matrix virtual party line or busbar where many panels and interfaces can talk onto or listen from the party line without talking to themselves.

Destination A device such as an intercom panel, beltpack, or interface to which audio signals are sent. The device from which audio signals are sent is called a "source".

Duplex All real-time communication between individuals talking face to face is full duplex, meaning that they can both talk and listen simultaneously. The Eclipse matrices provide full-duplex audio.

ECS Eclipse Configuration Software. Software program that guides the operation of the central matrix circuit cards and connected panels.

Ethernet International standard which describes how information is transmitted across a network. Provides for the efficient organization of network components.

Fiber-optic Cable A fiber-optic cable consists of a glass core covered with a reflective material called “cladding” and several layers of buffer coating to protect the cable from the environment. A laser sends light pulses through the glass core to the other end of the cable.

FreeSpeak Digital wireless communications product. Sold under the FreeSpeak name in Europe and Asia and CellCom name in USA.

Full Duplex Refers to transmission of signals in two directions simultaneously.

IFB “Interruptible Foldback”. The term “foldback” refers to sending “program” audio, or some other audio mix, back to announcers while they are on the air. Doing so allows announcers to monitor themselves, other announcers, videotapes of commercials, or some mix of sources, while they on the air. This is typically found in television news and live broadcast events.

Announcers typically wear a small ear piece so they can hear the selected foldback audio mix. When a director wants to give directions to an announcer on air, or to announce changes in the program, the director must “interrupt” the foldback. To do this, the director uses a channel specifically set up to interrupt the foldback audio.

Interface Module A piece of electronic hardware designed to convert the 4-wire signals of a central matrix port to some other form of communication, such as 2-wire party line, telephone, etc. The interface module is connected to a central matrix port. The external non-4-wire device is then connected to the interface module.

ISO The ISO function, short for “panel ISOlation”, allows a panel operator to call a destination and interrupt all of that destination’s other audio paths and establish a private conversation. When the call is completed the destination’s audio pathways are restored to their original state before the interruption.

KeyGroup KeyGroups provide a way of assigning a label to multiple panels simultaneously even within a networked matrix system. Once the KeyGroups have been defined using ECS, all the keys within a KeyGroup can be changed with a single assignment in Production Maestro (Pro mode only).

Label A label is an alphanumeric name of up to five characters that identifies a source, destination, or control function accessed by an intercom panel. Labels appear in the displays of the intercom panel. Labels can identify panels, ports interfaced to other external equipment, fixed groups, party lines, and special control functions.

Multiplexing The process by which two or more signals are transmitted over a single communications channel. Examples include time division and wavelength division multiplexing.

Non-volatile Memory Data stored in the CPU's firmware (ROM) that is not lost when the power is turned off.

Palette The port, keyGroup and Monitor selection screen in Production Maestro.

Panel Also referred to as "station" in some cases (usually older manuals). 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.

Party Line 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, "program" audio is the audio that is broadcast on air.

Rack Unit or RU Standardized unit of mounting space on a rack panel. Each rack unit is 1.75 inches (44.45 mm) of vertical mounting space. Therefore 1 RU is 1.75 inches (44.45 mm) of vertical mounting space, 2 RU is 3.5 inches (88.9 mm), 3 RU is 5.25 inches (133.35 mm), and so on.

Remote Panel Any intelligent intercom device connected to the back-panel ports of the central matrix. This term does not refer to devices connected through interfaces.

Sidetone The sound of the panel operator's own voice heard in their own earphone as they speak.

Source In this manual, the term "source" refers to a device—such as an intercom panel, interface, or beltpack —that sends audio into the matrix. The device to which audio is sent is called a "destination".

VOX In the Eclipse system, when audio at a panel exceeds a threshold, a light switches on at the panel's port card to visually cue the operator. The threshold level is set in the Eclipse Configuration Software.

V-Series Communications panels used with Eclipse systems providing advanced facilities. Available in rack mount and desktop formats.

ECLIPSE MANUALS

The following manuals are available covering Eclipse products and accessories.

SOFTWARE MANUALS

Eclipse Configuration Software (ECS) Instruction Manual - 810299Z

Eclipse Logic Maestro Instruction Manual - 810414Z

Eclipse Production Maestro Quick Start Guide - 810409Z

Eclipse Production Maestro Installation and User Guide - 810410Z

Eclipse DECTSync Manual - 810412Z

Eclipse Host Computer Interface (HCI) Manual - 810413Z

HARDWARE MANUALS

Eclipse Omega Matrix Instruction Manual - 810290Z

Eclipse Median Matrix Instruction Manual - 810347Z

Eclipse PiCo Matrix Instruction Manual - 810348Z

Eclipse-32 Matrix Instruction Manual - 810315Z

Eclipse Matrix Installation Manual - 810298Z

Eclipse Upgrade Reference Manual - 810377Z

Eclipse V-Series Panels User Manual - 810365Z

Eclipse FOR-22 4-Wire Interface Instruction Manual - 810306Z

Eclipse CCI-22 Party Line Interface Instruction Manual - 810307Z

Eclipse TEL-14 Telephone Interface Instruction Manual - 810308Z

Eclipse GPI-6 General Purpose Inputs Instruction Manual - 810309Z

Eclipse RLY-6 General Purpose Outputs Instruction Manual - 810310Z

DIG-2 Digital Interface Instruction Manual - 810311Z

IMF-3, IMF-102, DIF-102 Interface Module Frame Instruction Manual - 810313Z

Eclipse AES-6 Digital Interface Instruction Manual - 810383Z

Eclipse BAL-8 Isolation Interface Instruction Manual - 810403Z

Eclipse V-Series AES-3 Option Card Installation Instructions - 810388Z

Eclipse V-Series XLR-7M Upgrade Instructions - 810405Z

Eclipse V-Series T-Adapter Installation Instructions - 810406Z

Eclipse FIM-202D Fiber Interface Instruction Manual - 810385Z

Eclipse FIM-102 Fiber Interface Instruction Manual - 810319Z

Eclipse FIM-108 Fiber Interface Instruction Manual - 810291Z

Eclipse 4000 Series II Panels Installation Guide - STA0530Z

Eclipse 4000 Series II Panels User Guide - STA0531Z

Eclipse ICS 1008E/1016E Panels Instruction Manual - 810404Z

Eclipse ICS 102/62 Panels Instruction Manual - 810302Z

Eclipse ICS 2003 Panel Instruction Manual 810303Z

Eclipse ICS 92/52 Panels Instruction Manual - 810301Z

Eclipse i-Station Instruction Manual - 810305Z

Eclipse ICS-21 Speaker Panel Instruction Manual - 810263Z

Eclipse ICS-22 Speaker Panel Instruction Manual - 810264Z

Eclipse ICS-24 Headset Panel Instruction Manual - 810265Z

Eclipse Digital Wireless Beltpack Instruction Manual - 810376Z

LIMITED WARRANTY

This document details the Clear-Com Standard Limited Warranty for all new products for sale within all regions with the exception of Military, Aerospace, and Government (MAG).

EXCEPT AS SET FORTH HEREIN ("LIMITED WARRANTY"), CLEAR-COM MAKES NO OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT OF THIRD PARTY RIGHTS, OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

1. **Standard Limited Warranty.** Clear-Com warrants its products, including supplied accessories, against defects in material or workmanship for the time periods as set forth below provided it was purchased from an authorized Clear-Com dealer or distributor.

   a) Pursuant to this Limited Warranty, Clear-Com will, at its option:

      i) repair the product using new or refurbished parts, or;

      ii) replace the product with a new or refurbished product.

   b) Remedies: In the event of a defect, the rights detailed in 1 (a) are your exclusive remedies. For purposes of this Limited Warranty, "refurbished" means a product or part that has been returned to its original specifications.

   c) Standard Warranty Period (by Product):

      i) All Clear-Com brand systems and products, including belt packs, have a Limited Warranty of two years, with the exception of;

         (1) Cables, accessories, components & consumable items have a Limited Warranty of 90 days.

         (2) Any Clear-Com product that has been classified as obsolete at the time of sale has a Limited Warranty of 90 days from sales and will be replaced with the same product or a sales credit will be issued, at the sole discretion of Clear-Com.

         (3) Headsets, handsets, microphones, and associated spare parts, as well as UHF wireless IFB products, have a Limited Warranty of one year.

         (4) UHF WBS Analog wireless intercom systems have a Limited Warranty of three years.

(5) All software products, including Concert (Client and Server), ECS, Production Maestro and Logic Maestro are warranted for one year and shall substantially conform to published specifications. The media on which the Software is furnished is warranted to be free of defects in material and workmanship (under normal use) for a period of one year.

(6) Any Clear-Com products that are listed within the last time buy period have the same Limited Warranty for their type 1.i 1 - 1.i.5 as above.

d) Any Clear-Com product that is repaired or supplied as a replacement under the terms of this Limited Warranty shall inherit the remaining warranty period from the original product.

e) Standard Warranty Period Start Date

i) Dealer / Distributor Sales: In view of Dealer or Distributor stocking practices, the Standard Warranty Period for products sold through Dealers or Distributors will commence from the Clear-Com invoice date and will include an automatic extension of three months. Any valid warranty claim within the Standard Warranty Period as determined by the Clear-Com invoice date will be covered without further supporting evidence. All warranty claims after this date must be supported by the Customer's proof of purchase that demonstrates the product is still within the Standard Warranty Period (as detailed in Section 1.c.i above, plus the automatic three month extension) from their purchase date.

ii) Direct Sales: The Standard Warranty Period will commence from the date the product was shipped from Clear-Com to the Customer. The Standard Warranty Period start date for contracts that include commissioning will be the date of the Site Acceptance Test (SAT) or one month from conclusion of the commissioning project, whichever is earlier.

f) Invalidation of Warranty

i) This Limited Warranty shall be invalidated if the product's outer case has been opened and internal modifications have been made or damage has occurred, or upon the occurrence of other damage or failure not attributable to normal wear and tear. Authorized modifications with Clear-Com's express written permission will not invalidate the warranty.

g) Software Updates

i) Software Updates are released periodically to correct discovered program bugs. During the Warranty Period, software updates are available to Customers free of charge.

h) Software Upgrades

i) Software Upgrades include new Features and/or Functional Enhancements and are not included as part of the Standard Warranty but may be purchased at the published rates.

ii) Note: In the absence of a Software Update containing a program correction and no available workaround to mitigate the problem, at the discretion of Service, Sales, Engineering, or Product Management, the Customer may be provided a Software Upgrade under warranty.

2. **Exclusions.** Services do not cover damage or failure caused by any occurrence beyond Clear-Com's reasonable control, including without limitation acts of God, fire, flooding, earthquake, lightning, failure of electric power or air conditioning, neglect, misuse, improper operation, war, government regulations, supply shortages, riots, sabotage, terrorism, unauthorized modifications or repair, strikes, labor disputes or any product failure that Clear-Com determines is not a result of failure in the Services provided by Clear-Com. Further Services excluded from this Agreement include: services required due to errors or omissions in Customer purchase orders; installation or maintenance of wiring, circuits, electrical conduits or devices external to the products; replacement or reconditioning of products which, in Clear-Com's opinion cannot be reliably maintained or properly serviced due to excessive wear or deterioration; Customer's failure to maintain the installation site in accordance with the environmental specifications of the products; or service on products removed from the location originally specified by Customer and/or reinstalled without the prior written approval of Clear-Com. Customer will pay Clear-Com's then current published charges to restore such Covered Products to a condition eligible for further service under this Agreement. Clear-Com shall be excused from and shall not be liable for any failure or delay in performance under this Agreement due to the foregoing or any causes beyond its reasonable control.

3. **Limitation of Liability. IN NO EVENT WILL CLEAR-COM BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), REGARDLESS OF THE FORM OF ACTION, EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.**

4. **Assignment.** Neither party may assign this Agreement or any portion thereof without the prior written consent of the other, except in the event of a merger, sale of all or substantially all of the assets or other corporate reorganization.

5. **Ownership of replaced parts or product.** All replaced parts or products become the property of Clear-Com.

6. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes all prior or contemporaneous proposals, oral or written, and all other communications between them relating to the subject matter of this Agreement.

TECHNICAL SUPPORT & REPAIR POLICY

NOVEMBER 1, 2008

In order to ensure that your experience with Clear-Com and our World Class products is as beneficial, effective and efficient as possible, we would like to define the policies and share some "best practices" that can accelerate any problem solving processes which we may find necessary and to enhance your customer service experience. Our Technical Support, Return Material Authorization, and Repair Policies are set forth below. These Policies are subject to revision and constantly evolve in order to address our Customers' and the Market's needs. Accordingly these are provided by way of guidance and for information only and may be changed at anytime with or without Notice.

TECHNICAL SUPPORT POLICY

a) Telephone, online, and e-mail technical support will be provided by the Customer Service Center free of charge during the Warranty Period.

b) Technical support will be provided free of charge for all software products under the following conditions:

i) The application, operating, and embedded software is installed on a product covered by Clear-Com's Limited Warranty, and:

(1) The software is at the current release level; or,

(2) The software is one (1) version removed from current.

ii) Older versions of software will receive "best-effort" support, but will not be updated to correct reported bugs or add requested functionality.

c) For Technical Support:

i) North and South America, (inc. Canada, Mexico, and the Caribbean) & US Military:

Hours:	0800 - 1700 Pacific Time
Days:	Monday - Friday
Tel:	+1 510 337 6600
Email:	CustomerServicesUS@clearcom.com

ii) Europe, the Middle East and Africa:

Hours:	0800 - 2000 Central European Time

Days: Monday - Friday
Tel: +49 40 853 999 700
Email: TechnicalSupportEMEA@clearcom.com

iii) Asia-Pacific:
Hours: 0800 - 1700 Pacific Time
Days: Monday - Friday
Tel: +1 510 337 6600
Email: CustomerServicesAPAC@clearcom.com

d) Email Technical Support is available for all Clear-Com branded products free of charge for the life of the product, or two years after a product has been classified as obsolete, whichever comes first.

e) Support for Distributor and Dealer Sales

i) Distributors and Dealers may utilize the Customer Service Centers once a system has been installed and commissioned. Clear-Com Systems and Applications Engineers will provide support to the Distributor from the pre-sales stage through to satisfactory installation for new system purchases. Customers will be encouraged to contact their Dealer or Distributor with their installation and technical support enquires rather than using the Customer Service Centers directly.

f) Support for Direct Sales

i) Customers may utilize the Customer Service Centers once a system has been installed and commissioned by Clear-Com Systems and Applications Engineers, or in the case of project installations, once the Project Team has completed the hand-over to the Support Centers.

RETURN MATERIAL AUTHORIZATION POLICY

a) Authorizations: All products returned to Clear-Com or a Clear-Com Authorized Service Partner must be identified by a Return Material Authorization (RMA) number.

b) The Customer will be provided with an RMA number upon contacting Clear-Com Sales Support as instructed below.

c) The RMA number must be obtained from Clear-Com via phone or email prior to returning product to the Service Center. Product received by the Service Center without a proper RMA number is subject to return to the Customer at the Customer's expense.

d) Damaged equipment will be repaired at the Customer's expense.

e) Returns are subject to a 15% restocking fee.

f) Advance Warranty Replacements (AWRs);

i) *During the first 30 days of the Standard Warranty Period:* Once the equipment fault has been verified by Clear-Com or its authorized representative, Clear-Com will ship a new replacement product. The Customer will be provided with an RMA number and be required to return the faulty equipment within 14 days of receipt of the replacement or will be invoiced for the list price of a new product.

ii) *During days 31-90 of the Standard Warranty Period:* Once the equipment fault has been verified by Clear-Com or its authorized representative, Clear-Com will ship a like-new, fully refurbished replacement product. The Customer will be provided with an RMA number and be required to return the faulty equipment within 14 days of receipt of the replacement or will be invoiced for the list price of a new product.

iii) To obtain an RMA number or request an AWR:

(1) North and South America, Asia-Pacific, and US Military:

Hours:	0800 - 1700 Pacific Time
Days:	Monday - Friday
Tel:	+1 510 337 6600
Email:	SalesSupportUS@clearcom.com

(2) Europe, the Middle East and Africa:

Hours:	0800 - 1700 GMT + 1
Days:	Monday - Friday
Tel:	+ 44 1223 815000
Email:	SalesSupportEMEA@clearcom.com

iv) Note: AWRs are not available for UHF WBS Analog wireless intercom systems. UHF WBS Analog wireless intercom systems out-of-box failures must be returned to Alameda for repair.

v) Note: Out-of-box failures returned after 90 days will be repaired and not replaced unless approved by Clear-Com Management.

vi) Note: AWRs are not available after 90 days of receipt of product unless an AWR Warranty Extension is purchased at the time of product purchase.

vii) Note: Shipping charges, including duties, taxes, and insurance (optional), to Clear-Com's factory is the responsibility of the Customer. Shipping AWRs from Clear-Com is at Clear-Com's expense (normal ground or international economy delivery). Requests for expedited shipping (E.g. "Next-Day Air") and insurance are the responsibility of the Customer.

REPAIR POLICY

a) Repair Authorizations: All products sent to Clear-Com or a Clear-Com Authorized Service Partner for repair must be identified by a Repair Authorization (RA) number (see above).

b) The Customer will be provided with an RA number upon contacting Clear-Com Customer Services as instructed below.

c) The RA number must be obtained from Clear-Com via phone or email prior to returning product to the Service Center. Product received by the Service Center without a proper RA number is subject to return to the Customer at the Customer's expense.

d) Return for Repair

i) Customers are required to ship equipment at their own cost (including transportation, packing, transit, insurance, taxes and duties) to Clear-Com's designated location for repair.

(1) Clear-Com will pay for the equipment to be returned to the Customer when it is repaired under warranty.

(2) Shipping from Clear-Com is normal ground delivery or international economy. Requests for expedited shipping (E.g. "Next-Day Air") and insurance are the responsibility of the Customer.

ii) **Clear-Com does not provide temporary replacement equipment ("loaner") during the period the product is at the factory for repair.** Customers should consider a potential prolonged outage during the repair cycle, and if required for continuous operations purchase minimum spare equipment required or purchase an AWR Warranty Extension.

iii) No individual parts or subassemblies will be provided under warranty, and warranty repairs will be completed only by Clear-Com or its Authorized Service Partners.

iv) Customers requesting a non-warranty repair will be provided an estimate of the total repair cost prior to the return of the equipment. In the event that Clear-Com is unable to estimate

the cost of repair, the Customer may elect to return the product to the factory for an estimate. The Customer is responsible for shipping costs both to and from the factory in the event they choose not to accept the estimate.

v) The Customer must provide either a purchase order for the repair work, or will be required to make an advance payment (as a debit against the Dealer's line of credit, or credit card) prior to the repaired product being returned to the Customer.

vi) For requesting a Repair Authorization number:

(1) North and South America, Asia-Pacific, and US Military:

Hours:	0800 - 1700 Pacific Time
Days:	Monday - Friday
Tel:	+1 510 337 6600
Email:	CustomerServicesUS@clearcom.com

(2) Europe, the Middle East and Africa:

Hours:	0800 - 2000 Central European Time
Days:	Monday - Friday
Tel:	+49 40 853 999 700
Email:	TechnicalSupportEMEA@clearcom.com

vii) Note: Clear-Com's Limited Warranty does not cover normal wear and tear. The Customer will be charged the full cost of the repair if their equipment has been tampered with by non-approved personnel, or has been subject to damage through electrical failure, liquid damage or mishandling. The Customer Service Center will provide the Customer with a cost estimate for any such repairs prior to undertaking the work.