ECLIPSE EASI-PICO MATRIX

User Guide

Eclipse Easi-PiCo Matrix Instruction Manual

www.clearcom.com

Part Number 810379Z Rev. 1

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IMPORTANT SAFETY INSTRUCTIONS

Please read and follow these instructions before operating this product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

Please familiarize yourself with the safety symbols in Figure 1. When you see these symbols on this product, they warn you of the potential danger of electric shock if the main station is used improperly. They also refer you to important operating and maintenance instructions in the manual.

This symbol alerts you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.

This symbol informs you that important operating and maintenance instructions are included in the literature accompanying this product.

Figure 1: Safety Symbols

EMC AND SAFETY

The Eclipse Easi-PiCo matrix meets all relevant CE, FCC, UL, and CSA specifications set out below:

EN55103-1 Electromagnetic compatibility. Product family standard for audio, video, audio-visual, and entertainment lighting control apparatus for professional use. Part 1: Emissions.

EN55103-2 Electromagnetic compatibility. Product family standard for audio, video, audio-visual, and entertainment lighting control apparatus for professional use. Part 2: Immunity.

UL 60065-7, CAN/CSA-C22.2 No.60065-3, IEC 60065-7 Safety requirements.

And thereby compliance with the requirement of Electromagnetic Compatibility Directive 2004/108/EC and Low Voltage Directive 2006/95/EC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1. INTRODUCTION

WHAT IS EASI-PICO?

The Easi-PiCo is a pre-configured entry-level 16-port matrix intercom system. The system is designed to allow person to person and one to many communications using the operator panels, wired beltpacks and external interfaces.

The user has the choice of 4 pre-configured system lay outs (maps), each using different numbers of panels, beltpacks or interfaces, which can be selected from the front of the matrix.

The system has been designed to allow the user to setup the system without the need for any configuration software.

The matrix system also comes with 2 x partyline channels and 2 x 4-wire channels for connection to external devices like mixers, external lines, camera CCU, 2-way radios etc.

The operator panels have been chosen for ease of use.

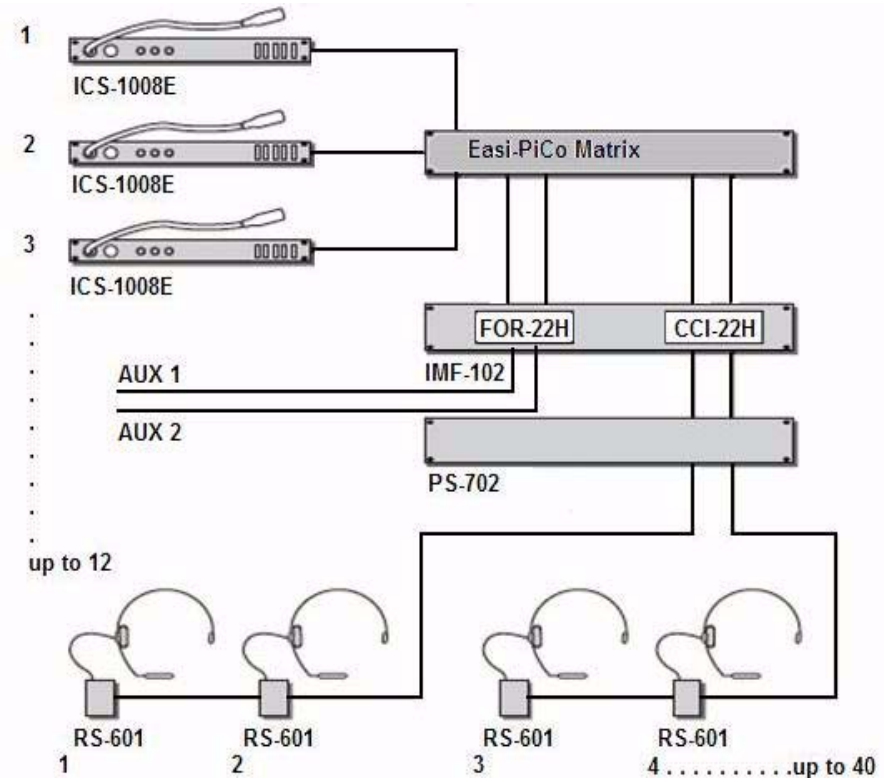


Figure 1-1: Easi-PiCo Example Block Diagram

The customer can easily upgrade from the Easi-PiCo package by purchasing an upgrade Licence Key - this will provide full access to all 36 matrix ports and allow the user to fully configure the matrix using the ECS configuration software. This

also allows the user to select other panel and interface types from the full ClearCom range

DIFFERENCE BETWEEN PARTY LINE AND MATRIX SYSTEMS

The main difference between a partyline system and a matrix system is the level of control over the communications the systems can offer you.

Party Line Setup

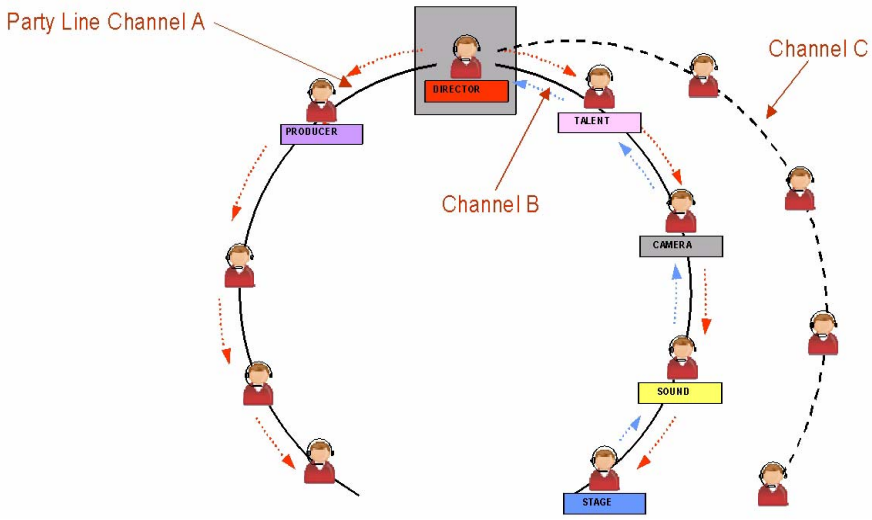


Figure 1-2: Party Line Communications

The features of Party Line communications are:

- Simple to use (no programming) but needs tuning
- Everyone can hear everyone on same channel

MATRIX SET UP

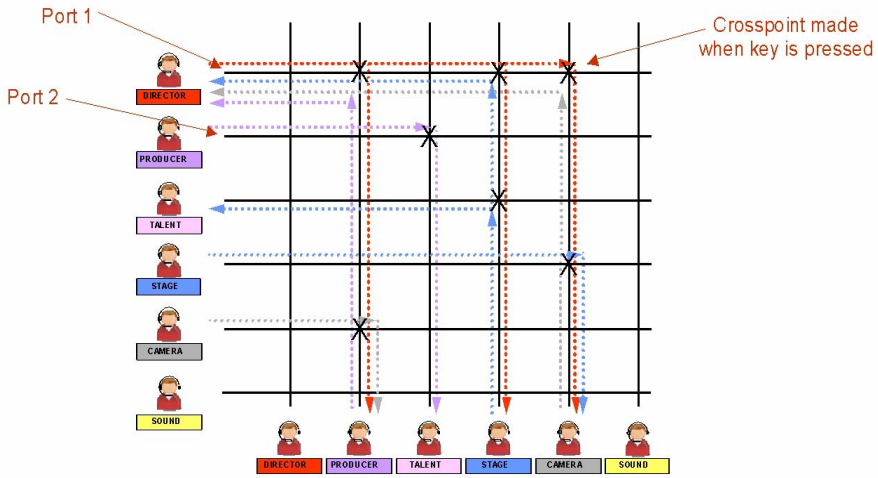


Figure 1-3: Matrix or 'Point to Point' Communications

- Configuration stored in memory
- Highly flexible, any combination of people or groups

2. PACKAGE COMPONENTS

Easi-PiCo is a true plug and play digital matrix intercom package

Package =	Easi-PiCo MTX	(16 port Matrix System)
	IMF-102	(Interface Frame)
	FOR-22H	(4-wire external interface card)
	CCI-22H	(2 wire/party line interface card)

MATRIX

Easi-PiCo MTX (16 port matrix system)

Easi-PiCo Mtx is a digital matrix intercom system in a 1 RU chassis, offering 16 full duplex communications ports with four pre configured maps loaded in the system memory

FRAME & INTERFACES

IMF-102 (Interface Frame)

The IMF-102 frame incorporates slots and connectors for two interface modules, plus an internal power supply, into a compact 1-RU chassis which then connect to the Easi-PiCo matrix.

FOR-22H (4 wire external interface card)

(Fits inside the IMF-102 Frame)

The FOR-22H connects the Easi-PiCo intercom systems to two external 4-wire circuits. Which could include: two-way radios, microwave and satellite links, IFB, camera intercoms and program audio in and out. Provides isolation, impedance matching, level control; supports external relay activation and call-sense circuitry.

CCI-22H (2 wire/ party line interface card)

(Fits inside the IMF-102 Frame)

The CCI-22H connects the two 2-wire, full-duplex party-line circuits to the digital intercom systems. The CCI -22H works with all Clear-Com and other party-line intercoms and also includes level and nulling controls.

3. SYSTEM OPTIONS

These are the options the user can order as well as the Easi-PiCo package

Panels	ICS-1008E or ICS-1016E	(16 key push button matrix panel) (32 key push button matrix panel)
Microphone	GN-250	(25cm microphone)
Headset	CC-26	(single ear headset)
Beltpack	RS-601	(party line belt pack)
Power Supply	PS-702	(party line power supply)

PANELS

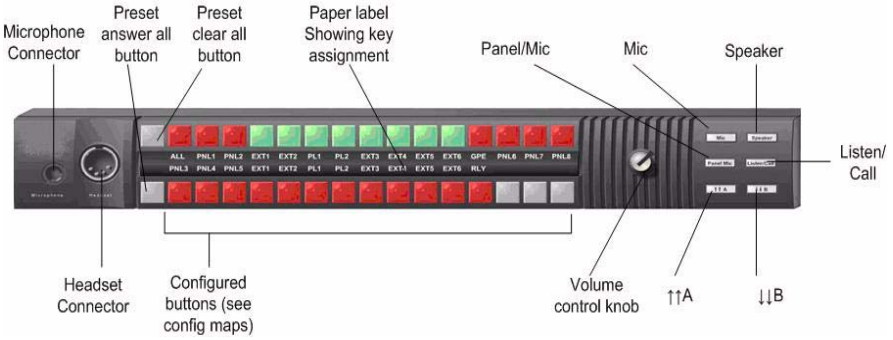


Figure 1-4: ICS-1016E 32 Key Push Button Panel

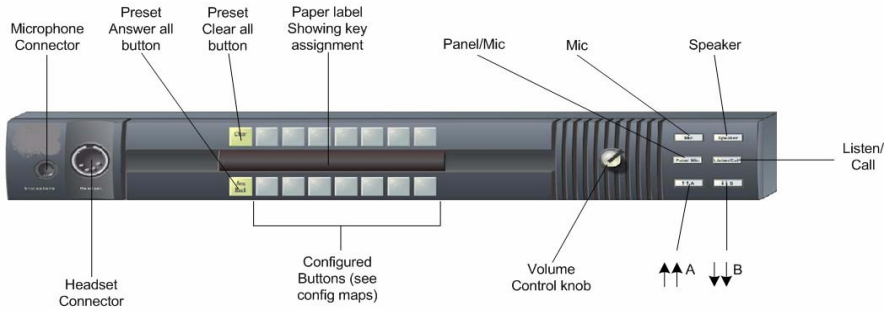


Figure 1-5: ICS-1008E 16 Key Push Button Panel

Both panels are non-display push button panels. An XLR connector is provided for a headset and a jack socket for a gooseneck microphone with a microphone/headset selector switch and auto-sensing when a gooseneck microphone is inserted, integral speaker, controls for side-tone and microphone gains. It includes designation strip for printed talk/listen labels (a template is provided at the end of this manual).

The ICS-1016E and ICS-1008E panels are interchangeable; they both have the same first 16 keys configured the same, so the user can plug either panel in to the ports marked for a panel without any change to the system.

To simplify the panel choice, we have limited the panels used with Easi-PiCo to just two panels. The preconfigured maps have been designed around these two panels. To use other panels from the Clearcom range the user will need to purchase the upgrade package to change the Easi-PiCo in to a full 36 port Eclipse PiCo matrix together with ECS (Eclipse Configuration Software).

Microphone

GN-250 25 cm Plug-in Panel Gooseneck microphone (other microphones are available on request).

Beltpacks

RS-601 (party line beltpack).

The RS-601 is single channel party line belt pack with 3-pin female and male XLR party line connections, 4-pin male XLR headset connector, 2.5mm AUX headphone connector.

Headsets

CC-26 (Single-ear headset).

The CC-26 is a single ear ultra-lightweight headset with dynamic, noise-cancelling microphone element on a flexible boom. Straight 5.5-foot cord with 4-pin female XLR-type connector.

The CC-26 headset can also be used on the ICS1008/1016 panels.

Other headsets are available on request.

Party line power supply

PS-702 (party line power supply).

The PS-702 (Party line power supply) is a two-channel, 2 Amp peak intercom power supply in a 1-RU chassis. The unit will power up to 40 intercom beltpacks even under the most demanding conditions. A custom-programmed microprocessor controls the PS-702, allowing it to run cooler, differentiate and react to shorts and overload conditions, display any fault conditions in the intercom line, and recover very quickly even under a full load. The PS-702 also offers switchable termination, three parallel XLR connectors per channel, an adjustable program input assignable to either or both channels, a convenient front-panel intercom connection assignable to either channel or a built-in test tone generator

4. GETTING STARTED

There are 3 simple steps in getting started with the Easi-PiCo system

1. Select which one of the default maps to use (see pages 7-10)
2. Cable the system to suit
3. Select the map from the front of the Easi-PiCo user menu display.

SELECT WHICH ONE OF THE DEFAULT MAPS TO USE

The Easi-PiCo is pre-configured with the following maps

MAP #1 - Basic configuration

MAP # 2 - Party Line configuration

MAP # 3 - IFB configuration

MAP # 4 - Panels configuration

MAP #1 Basic Configuration

This is a straight forward configuration that gives the user access to the four standard interfaces along with the possiblity of adding up to 4 more external interfaces via the direct RJ45 ports. This configuration can support up to eight panels.

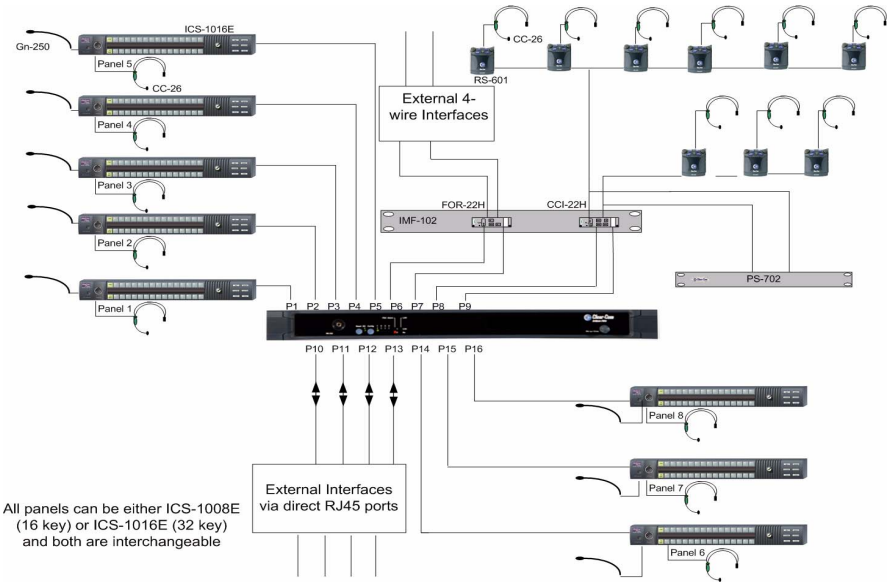


Figure 1-6: Basic Configuration System

This diagram shows all options attached.

MAP #2 Party Line Configuration

The party line configuration map is designed to give the user the up to 8 party line channels in one system; this gives the panel operators the option to speak to eight different party line rings individually or simultaneously. This configuration can support up to eight panels.

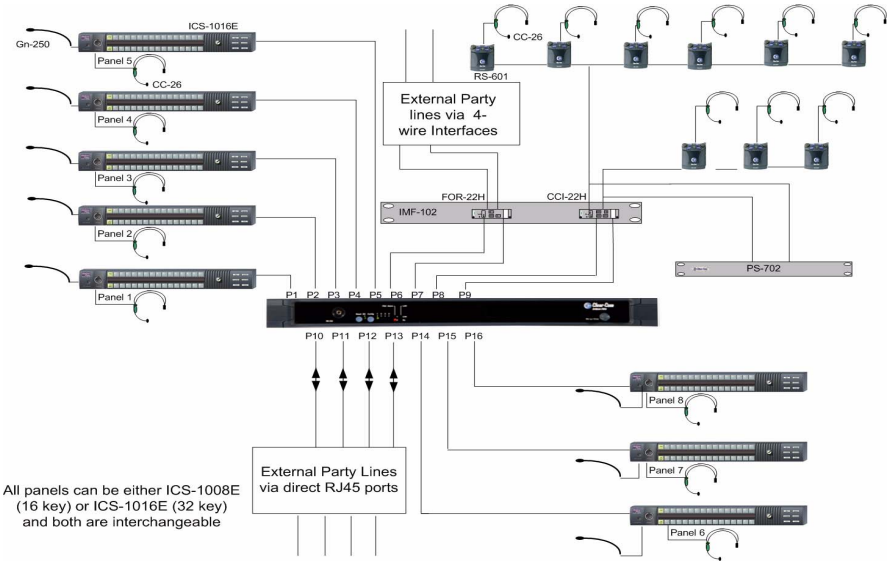


Figure 1-7: Party Line Configuration System

This diagram shows all options attached.

MAP #3 IFB Configuration

The IFB configuration map is designed around a TV studio set-up with four IFB (Interrupted Fold back) channels, one party line channel, one 4 wire interface and a camera group which allows single or full group communications. This configuration can support up to six panels.

IFB source 1 feeds both IFB#1 output (port 7) and IFB#2 output (port 8)

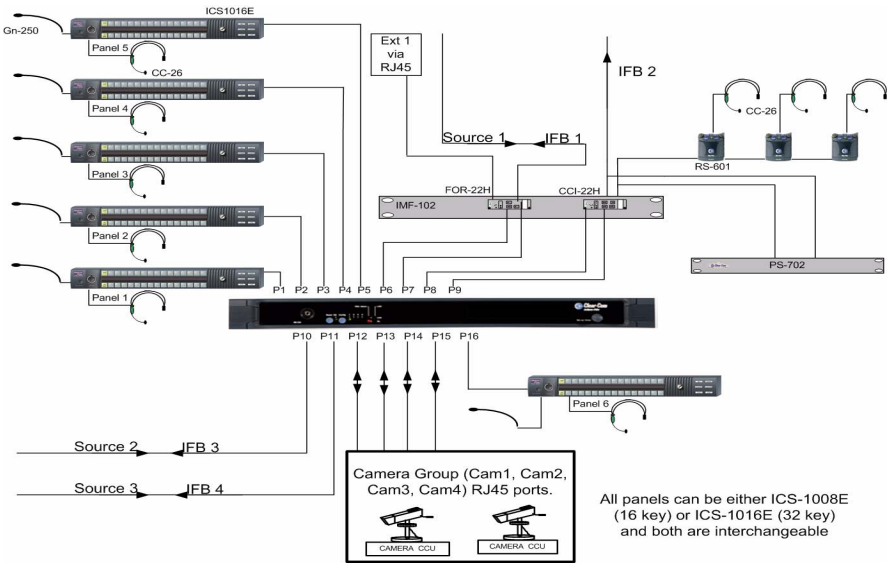


Figure 1-8: IFB Configuration System

This diagram shows all options attached.

MAP #4 Panels Configuration

The panels' configuration is designed to offer the most amount of panels with the four standard interfaces (two party lines and two 4-wires). This configuration can support up to twelve panels.

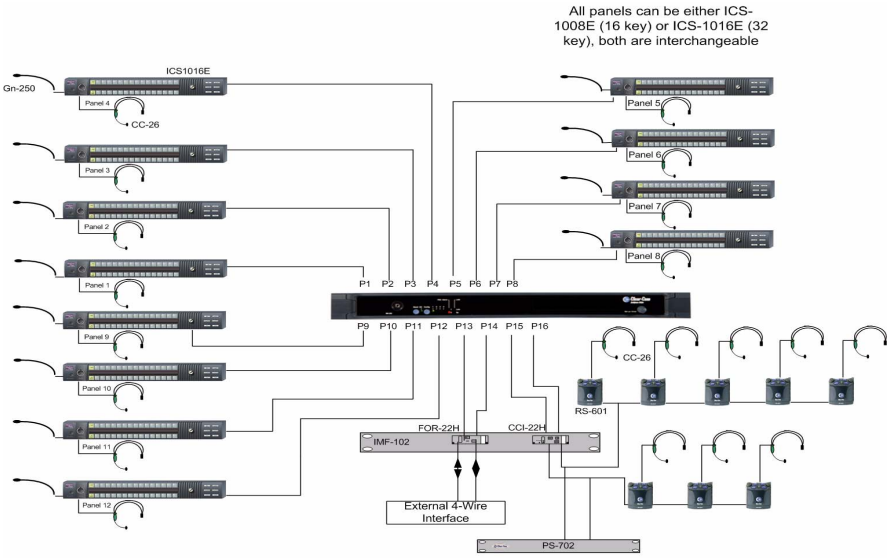


Figure 1-9: Panels Configuration System

This diagram shows all options attached.

CABLE THE SYSTEM TO SUIT

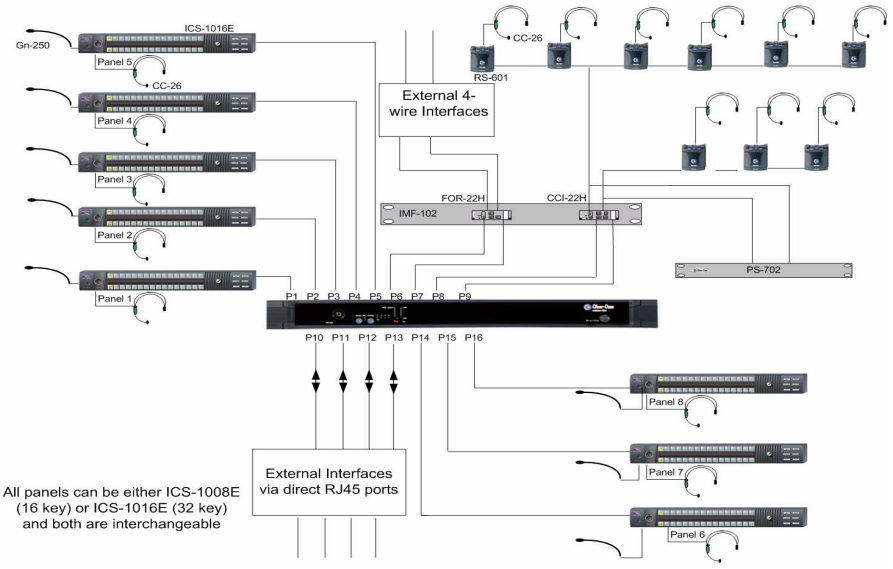


Figure 1-10: System Cabling

PANEL TO MATRIX

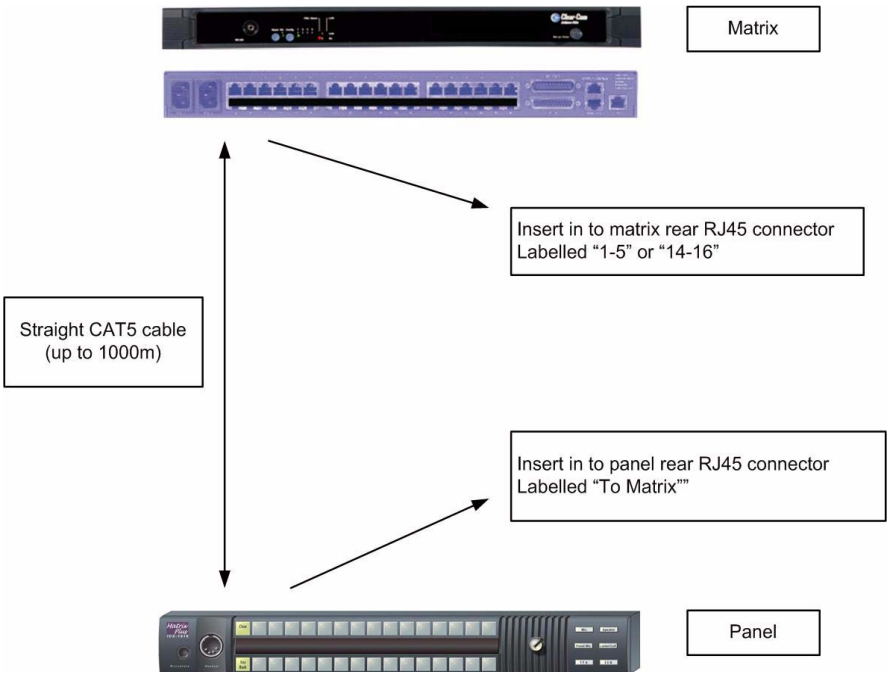


Figure 1-11: Panel to Matrix Connection

MATRIX TO EXTERNAL DEVICES VIA FOR-22

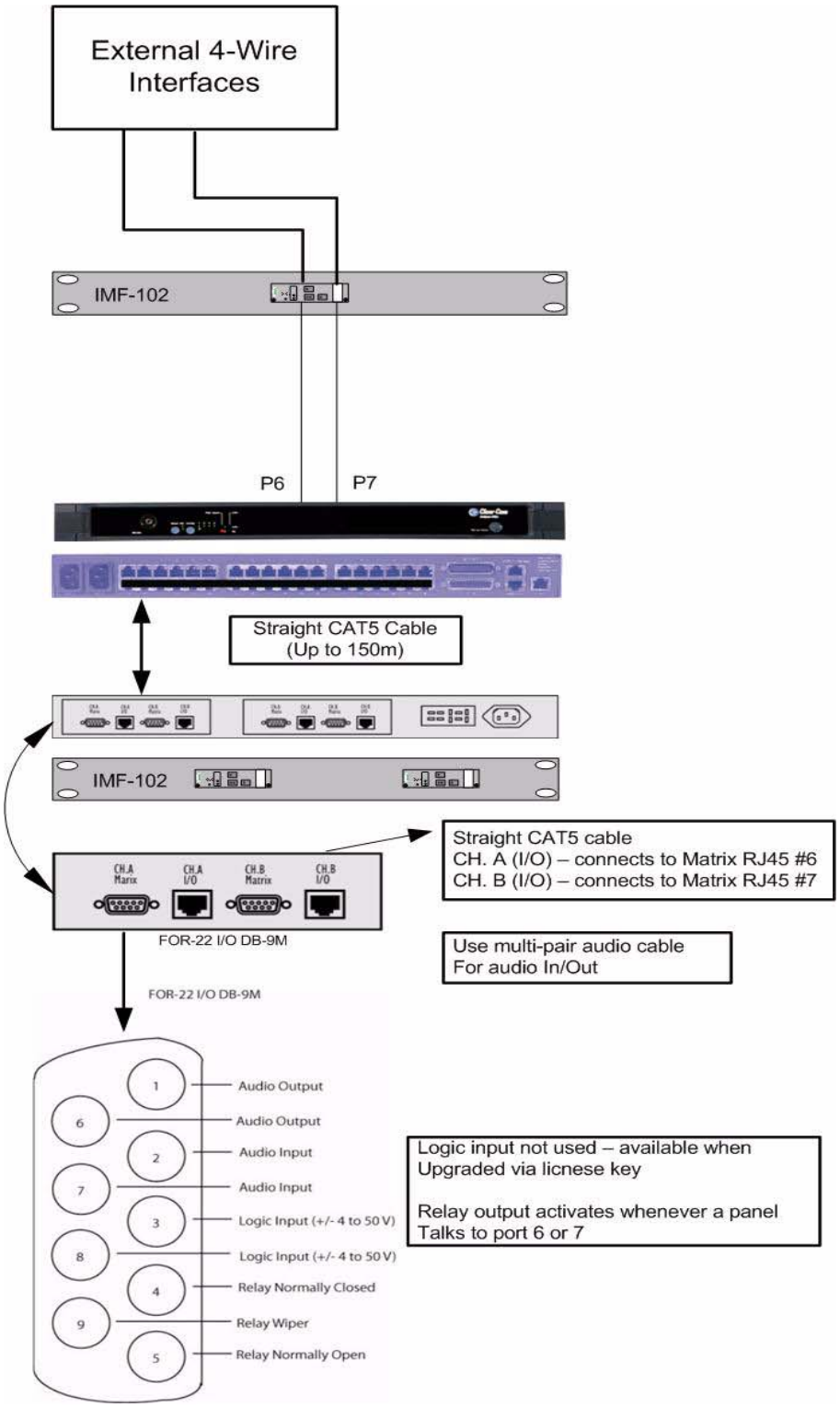


Figure 1-12: Connections to External Devices via FOR-22

MATRIX TO EXTERNAL PARTY LINE VIA CCI-22

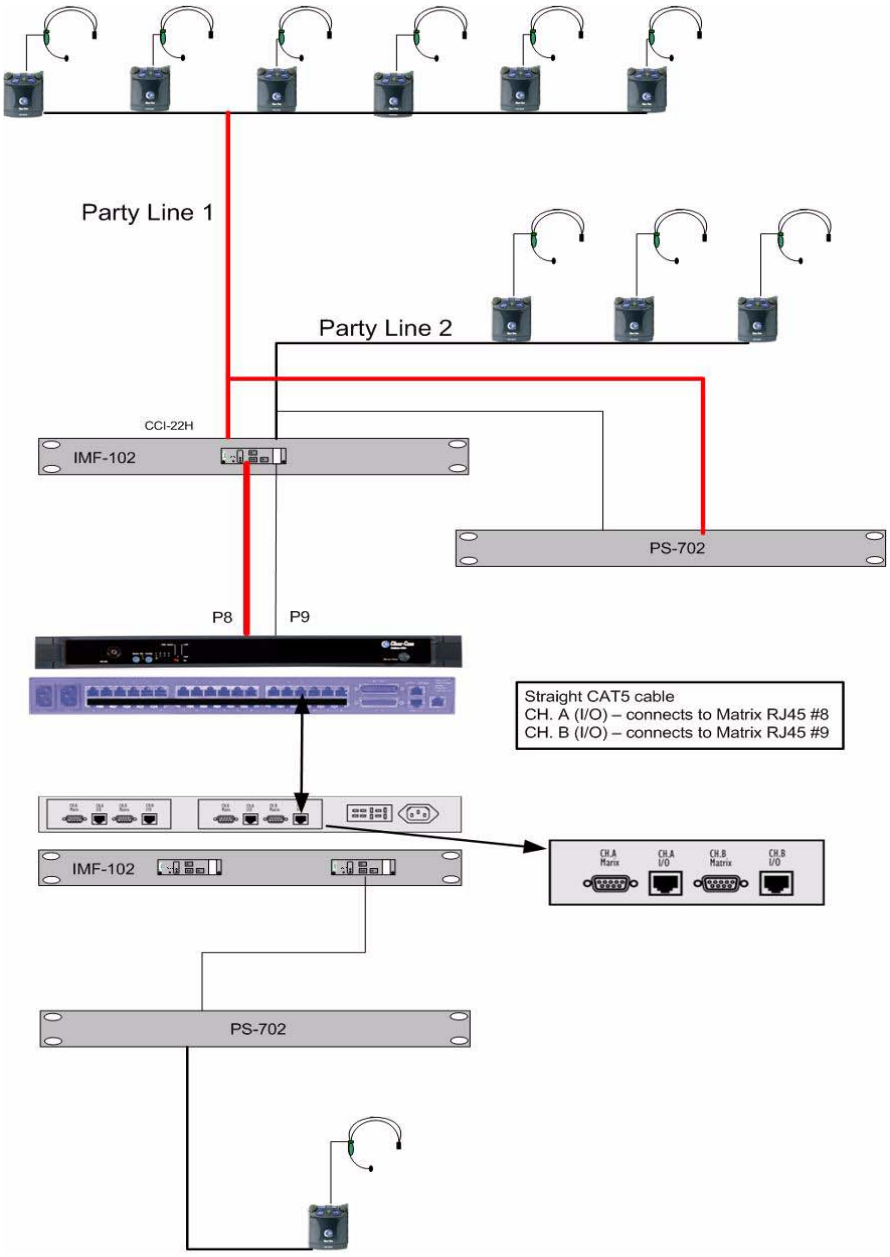


Figure 1-13: Connection to Party Line via CCI-22

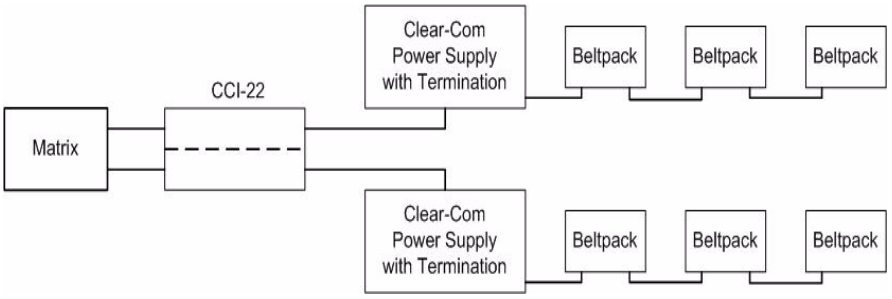


Figure 1-14: Connecting Easi-PiCo to Party Line Beltpacks

The "user" side of the CCI-22 for each channel is on a pair of DB-9M connectors on the rear of the interface frame. The diagram below shows the pinout of either one of these connectors. Both DB-9Ms are paralleled such that both party-line channels are available on each connector.

It is possible to wire one DB-9 connector as channel #1, the second DB-9M as channel #2. This is the default wiring recommend for each map.

It is also possible to bring both channels out on a single DB9 connector.

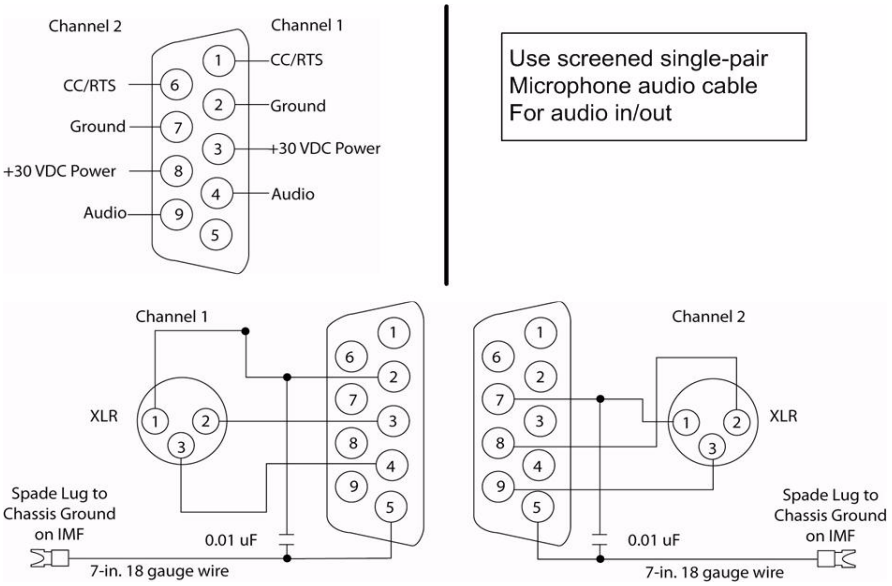


Figure 1-15: Wiring for Easi-PiCo to Party Line Beltpacks

MATRIX TO EXTERNAL 4-WIRE DEVICES

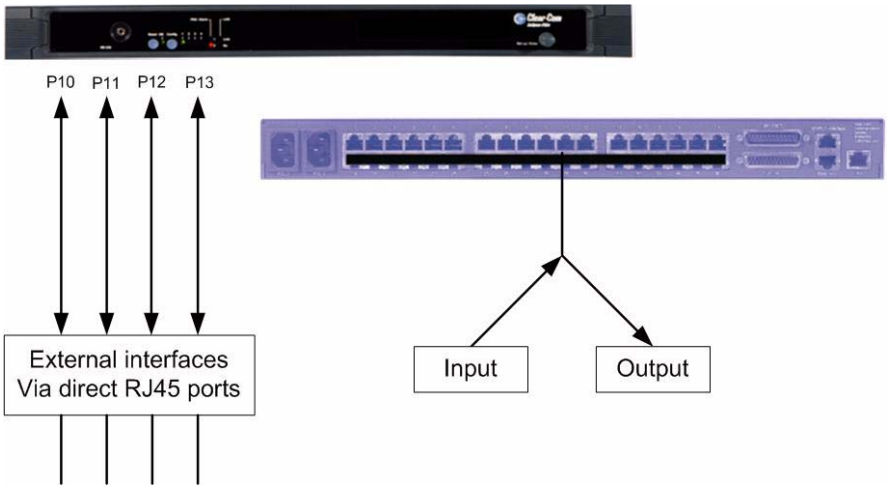
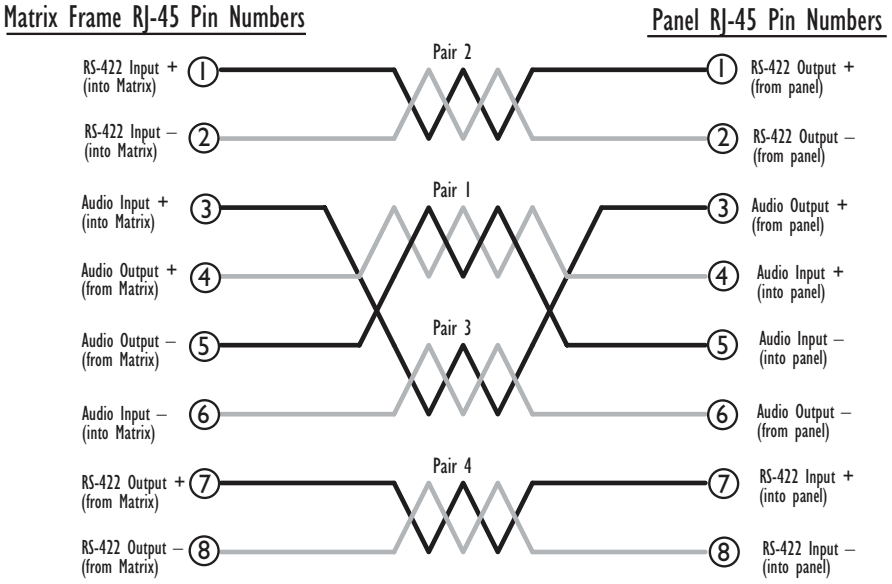


Figure 1-16: Easi-PiCo to External 4-Wire Devices



Pair 1 Audio output from Matrix to panel
Pair 2 RS-422 data input from panel to Matrix
Pair 3 Audio input from panel to Matrix
Pair 4 RS-422 data output from Matrix to panel

Figure 1-17: Connecting Easi-PiCo to 4-Wire Devices

SELECT MAP FROM EASI-PICO FRONT USER MENU

Use the Easi-PiCo front user menu to select one of the four pre-configured maps.

The setup knob is used to navigate through the following screens by rotating the knob left and right to move the highlighted sections on the screen.

Once the section is highlighted it can be selected by pressing the button in.

Figure 1-18: Selecting a Map from the Easi-PiCo Front Panel

Figure 1-19: Easi-PiCo Main Menu

Figure 1-20: Easi-PiCo Map Selection

Configuration

Easi-PiCo has four pre-configured maps in its onboard memory. A "configuration" is a complete set of operating parameters for the matrix system which includes all talk and listen paths for each connected interface, belt pack or panel.

You can select and activate any of these maps directly from the Easi-PiCo. First, you select the configuration map to apply. Then when you reset the system, the selected configuration map goes into effect immediately.

To select a configuration map:

1. From the Main menu, select CONFIGS. The Configuration menu appears showing the names of each of the four onboard pre-configured maps.
2. Scroll to the desired configuration map's checkbox.
3. Press the setup/enter knob to select the configuration. An "X" appears in the configuration's checkbox when it is selected. A screen appears asking you to confirm your selection. Select Yes to confirm your selection or select NO or EXIT to back out from the changes.
   The Reset Options menu appears.
4. From the Reset Options menu, select one of the following.
   APPLY AND RESET resets the system to the currently selected configuration, while restoring active calls and activating any changes made from the PiCo's front panel since the last reset.
   CLEAR XPOINTS resets the system to the currently selected configuration, while clearing active calls and clearing any changes made from the PiCo's front panel since the last reset.
   To exit the menu, scroll to and select EXIT.

BASIC PANEL KEY OPERATION

Making calls, (Talk keys)

Each configured Talk button (red) will be dim to indicate it has a programmed label. When selected it will become bright RED to indicate it is active.

- Choose destination of call and select the key assigned to that destination.
- Push the correct key momentary to latch or push and hold for non latching key action.
- Then talk. Your command will come out of the destination loudspeaker automatically (all the talk keys are talk only so the call destination will have to operate a key to reply).
- The Talk key LED will lit bright RED showing the key is active.
- Release the key to end the call.

Receiving calls (Answering)

- When another panel is calling you will hear the message via the headset or the internal loudspeaker.
- The panel key that is programmed to talk back to the caller will flash red to indicate the caller.
- To answer this call you can either press the assigned to talk back to that destination which will be flashing red or by simply pressing the answer-back key.

Listen Key

Listen keys are programmed to allow the panels to monitor audio coming into the matrix from the interfaces / external ports

Each configured Listen button (yellow) will be dim to indicate it has a programmed label. When selected it will become bright YELLOW to indicate it is active.

- Choose destination to monitor and select the key assigned to that destination.
- Push the correct key momentary to latch or push and hold for non latching key acton.
- You will hear all audio traffic from the destination port that is entering the matrix on your loudspeaker automatically.
- The listen key LED will lit bright YELLOW showing the key is active.
- Release the key to stop monitoring.
- A flashing DIM yellow key indicates that there is audio traffic on the port (interface / externals only).
- Press the Listen key to monitor the audio traffic on the port.
- The listen key LED will lit bright YELLOW showing the key is active.
- Release the key to stop monitoring.

EASI-PICO MATRIX GENERAL INFORMATION

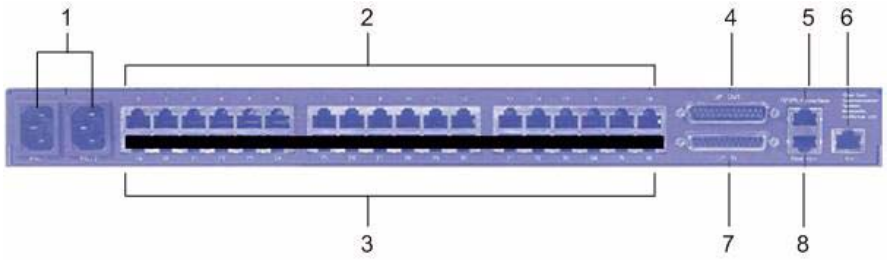


Figure 1-21: Easi-PiCo Rear View

1 AC mains Power

The Easi-PiCo matrix has two IEC mains AC power connectors that provide separate fused power inputs for the redundant power supplies. If you connect each AC input to a different mains AC branch, one power supply will continue to operate if the other supply's main AC branch fails.

2 RJ45 connector (1-16 Ports)

The Easi-PiCo has 36 RJ sockets for connecting the matrix to the panels and interfaces these sockets are referred to as "Ports". Only the first 16 ports (1-16) will be active for the Easi-PiCo.

3 RJ45 connector (17-36Ports)

Ports 17-36 are covered but can be activated and accessed if the matrix is upgraded to an Eclipse PiCo by purchasing the upgrade license key.

4 General Purpose Output connector

The male 25-pin D-type socket labelled "GP OUT" allows you to connect the Easi PiCo matrix to eight general purpose outputs (GPOs). General-purpose outputs are single-pole double-throw relays with contact ratings of 30 VDC (volts direct current) at 1 ampere.

A general purpose output or "relay" is a switch that you control remotely. Each of the four map configurations uses the GPO (relay) to close a contact whenever the RLY key is pressed on a panel. When the contact is closed it completes an electronic circuit's signal path so that a remote device, such as a light, is powered.

You can program a GPO to mute a speaker, to turn on an applause light, to turn on a door lock, or to perform a variety of other functions. For example, to get the attention of a station operator working in a high-noise environment such as a control booth, you can program a relay to switch on a light at his station each time he receives an incoming call, to ensure that he will not miss the call.

Note: *In the default configuration maps the following GPOs have been programmed*

Panel #1 will activate GPO#1 when the RLY key on panel #1 is pressed.

Panel #2 will activate GPO#2 when the RLY key on panel #2 is pressed.

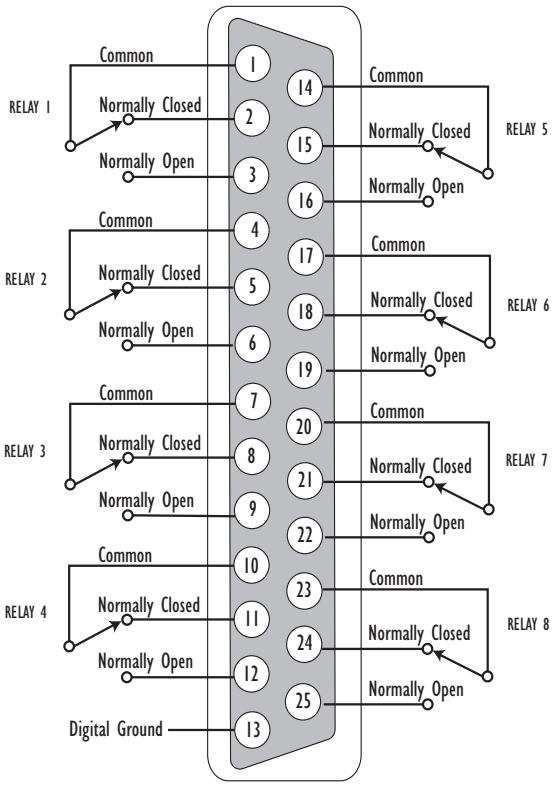
Panel #3 will activate GPO#3 when the RLY key on panel #3 is pressed.

…..

Panel #8 will activate GPO#8 when the RLY key on panel #8 is pressed.

DB-25 Male Connector

PIN	DESCRIPTION
1	RELAY 1 Common
2	RELAY 1 Normally Closed
3	RELAY 1 Normally Open
4	RELAY 2 Common
5	RELAY 2 Normally Closed
6	RELAY 2 Normally Open
7	RELAY 3 Common
8	RELAY 3 Normally Closed
9	RELAY 3 Normally Open
10	RELAY 4 Common
11	RELAY 4 Normally Closed
12	RELAY 4 Normally Open
13	GROUND
14	RELAY 5 Common
15	RELAY 5 Normally Closed
16	RELAY 5 Normally Open
17	RELAY 6 Common
18	RELAY 6 Normally Closed
19	RELAY 6 Normally Open
20	RELAY 7 Common
21	RELAY 7 Normally Open
22	RELAY 7 Normally Closed
23	RELAY 8 Common
24	RELAY 8 Normally Closed
25	RELAY 8 Normally Open



30 VDC at 1 Ampere

Figure 1-22: GPO Relay DB25 Connector Pinout Diagram

5 GPI/RLY Interface

This interface is not activated on the Easi-PiCo. It is used to connect to external GPI or RLY interface. This can be activated after the Easi-PiCo is upgraded to an Eclipse PiCo and with the addition of extra modules.

6 LAN Connector

This interface is not activatedon Easi-PiCo. The LAN RJ45 connector is a standard Ethernet. This feature can only be used after the Easi-PiCo is upgraded to an Eclipse PiCo.

7 General Purpose Input Connector

The GPI connector is not activated on the Easi-PiCo but can be accessed after upgrade.

8 Base Loop Connector

This interface is not activated. The feature of connecting two PiCo matrices together is not activated on the Easi-PiCo. This feature can only be used after the Easi-PiCo is upgrade to an Eclipsed PiCo.

Switching on

There is no on/off switch on the main matrix part of Easi-PiCo; the unit's display screen will power up when the matrix panel is plugged in. It will display the following message "Clearcom Easi-PiCo"

Note: ***The PiCo display dims when you have not used the unit for three minutes. Using the rotary encoder causes the screen brightness to be restored.***

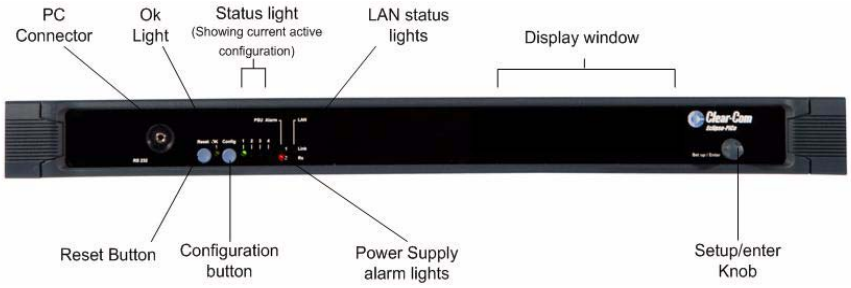


Figure 1-23: Matrix Front Panel Diagram

PC Connector

This interface is not activated. The female 3.5 mm jack socket labeled "RS-232" connects the matrix to an external computer. This feature can only be used after the Easi-PiCo is upgraded to an Eclipse PiCo.

Reset Button

Pressing the reset button causes the matrix to stop its current activity and to restart. The same configuration that was active before you reset the system will be active after you reset it. During the reset, configuration information reloads to the matrix's operational memory from its non-volatile memory and the matrix starts running again from the beginning.

OK Light

When flashing, the "OK" light indicates that the Easi-PiCo matrix is running successfully.

Status Light / Configuration button

The Easi-PiCo has four pre-configured maps in its operational memory. You can activate one of the four configurations using the configuration button on the matrix's front panel.

When one of the four configurations is active, its front-panel light illuminates steadily.

Note: *You can also select a configuration using the setup/enter knob and front-panel display. See Display screens (Configuration) for more information. The name of the configuration is displayed in this case.*

To select a new configuration:

Repeatedly tap the CONFIG button until the desired configuration's light (1, 2, 3, or 4) starts flashing.

While the desired configuration's light flashes, press and hold the configuration button for three seconds, until the light stops flashing, and illuminates steadily.

The selected configuration then becomes the system's active operational configuration.

Power Supply Alarm Lights

The Easi-PiCo matrix has two internal power supply units. One power supply unit can power an entire matrix; the second unit provides a backup in case of an equipment failure. In addition the two supplies have separate IEC connectors to AC mains power and are designed for completely automatic and transparent changeover between supplies in the event of an outage on one of the AC mains circuits.

The front-panel alarm lights do not illuminate under normal operating conditions.

The following conditions cause a power-supply alarm light to illuminate:

- If any of the voltages produced by the first power supply unit fall below normal levels.
- If any of the voltages produced by the second power supply unit fall below normal levels.

Once the power-supply fault condition is no longer present, the power-supply alarm light goes out.

LAN status light

Shows activity on the LAN interface connecter : Activated after upgrade to Eclipse PiCo.

Setup / enter Knob

The setup knob is used to navigate through the following screens by rotating the knob left and right to move the highlighted sections on the screen.

Once the section is highlighted it can be selected by pressing the button in.

Figure 1-24: Setup/Enter Procedure

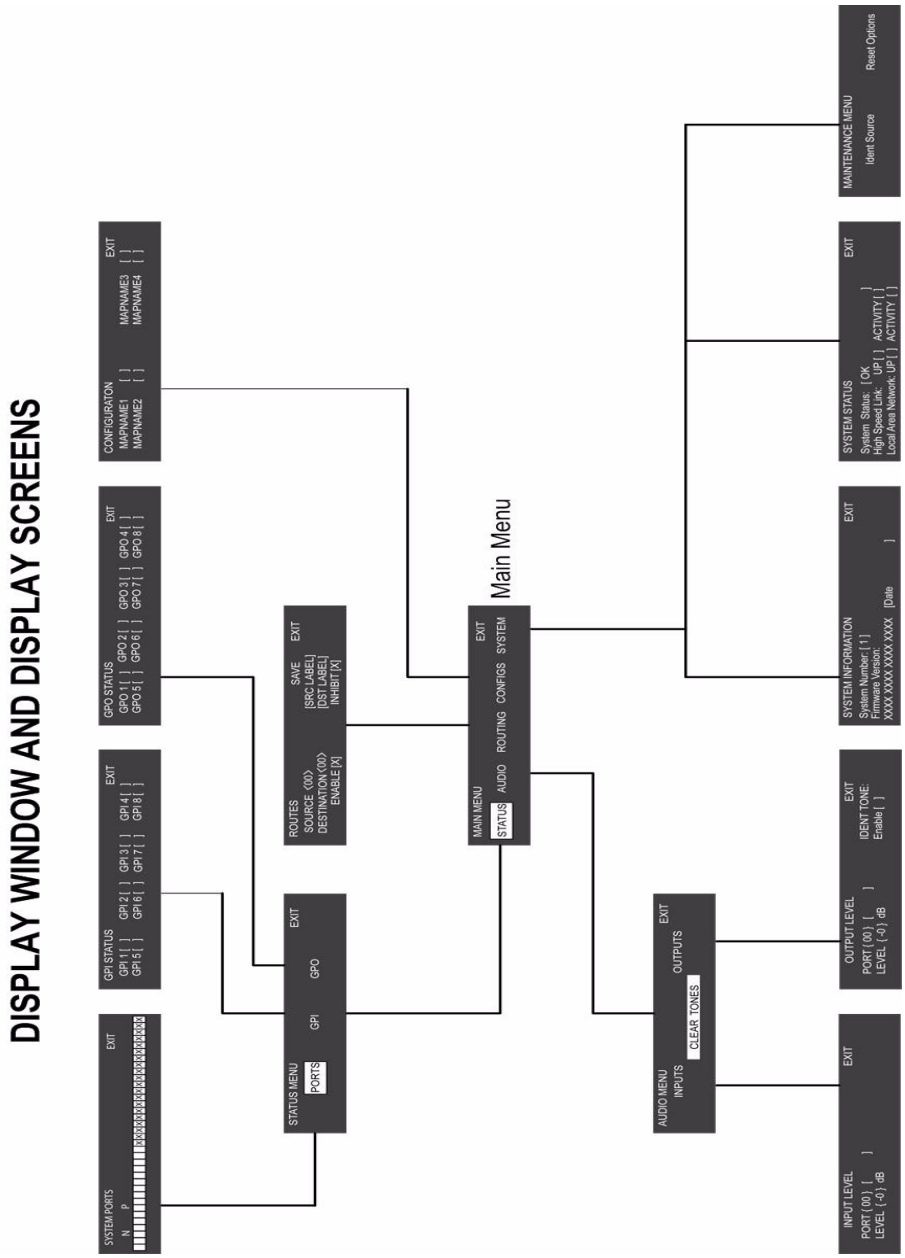


Figure 1-25: Easi-PiCo Front Panel Menus

Figure 1-26: Easi-PiCo Main Menu

MAIN MENU

When you first power the system up, the "Clear-Com Easi-PiCo" screen appears. When you press the setup/enter knob, the main menu appears.

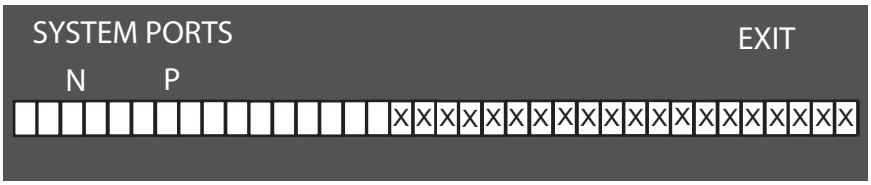


Figure 1-27: Easi-PiCo System Ports Screen

SYSTEM PORTS (PORT STATUS)

Each rectangle on the System Ports menu represents one of the 16 possible "port" connections in the system. A "port" connection is one of the RJ-45 connectors on the PiCo's rear panel to which remote panels and interfaces are connected with CAT-5 cable.

When a remote device is connected to a PiCo "port" the rectangle will first show a chequered pattern to indicate communications activity, then will change to a solid light when the connected device is online and communicating with the matrix.

In addition, a letter or number will appear above each rectangle to indicate the type of connection, as follows:

R	Partyline/2-wire (CCI-22H)
4	4-wire audio (FOR-22H) or 4-wire direct
P	panel
N	4-wire network link
X	Port not in use

Table 1-1: Easi-PiCo System Port Types

GPI STATUS (Read only screen in Easi-PiCo)

You can connect an external logic device-such as an external foot switch, a panel-mounted switch, or the logic output of some other device-to the "GP IN" connector on the rear panel of the PiCo.

After you have connected a GPI, you can check whether or not the GPI is "on" directly from the front panel of the PiCo.

Figure 1-28: Easi-PiCo GPI Status Screen

Note: ***The The GPI connector is not activated on the Easi-PiCo but can be accessed after upgrade.***

GPO STATUS

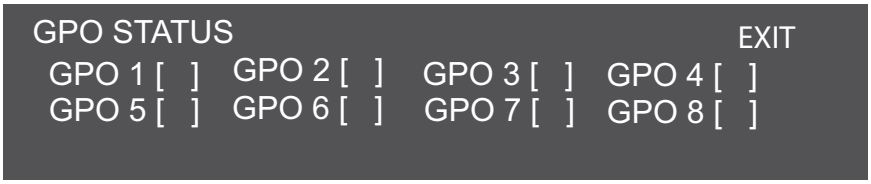


Figure 1-29: Easi-PiCo GPO Status Screen

A general purpose output or "relay" is a switch that you control remotely. The relay is preconfigured to close a contact whenever an intercom panel's RLY key is pressed. When the contact is closed, it completes an electronic circuit's signal path so that a remote device, such as a light, is powered.

You connect the general-purpose outputs to the male 25-pin D-type socket labelled "GP OUT" on the back of the PiCo.

After you have connected a GPO, you can check whether or not a GPO is "on" directly from the front panel of the PiCo. You can only toggle a GPO "on" or "off" directly from the Eclipse PiCo

The front panel display always shows the most current on/off status of the GPO, whether it has been produced by using the front-panel controls.

To check whether or not a GPO is on and/or to toggle a GPO on/off:

- From the Main menu, select STATUS. The Status menu appears.
- From the Status menu, select GPO. The GPO Status menu appears.
- If a GPO is "on" an "X" appears in the checkbox next to that GPO number on the menu. An unchecked box indicates that a GPO is "off."

The GPO status menu always shows the current status of the GPO, regardless of whether the status changes by using the front-panel menu options.

To exit the menu, scroll to and select EXIT.

Configuration

Figure 1-30: Easi-PiCo Configuration Screen

Easi-PiCo has four pre-configured maps in its onboard memory. A "configuration" is a complete set of operating parameters for the matrix system which includes all talk and listen paths for each connected interface, belt pack or panel.

You can select and activate any of these maps directly from the PiCo. First, you select the configuration map to apply. Then when you reset the system, the selected configuration map goes into effect immediately.

To select a configuration map:

1. From the Main menu, select CONFIGS. The Configuration menu appears showing the names of each of the four onboard pre-configured maps.
2. Scroll to the desired configuration map's checkbox.
3. Press the setup/enter knob to select the configuration. An "X" appears in the configuration's checkbox when it is selected. A screen appears asking you to confirm your selection. Select Yes to confirm your selection or select NO or EXIT to back out from the changes.
   The Reset Options menu appears.
4. From the Reset Options menu, select one of the following.
   APPLY AND RESET resets the system to the currently selected configuration, while restoring active calls and activating any changes made from the PiCo's front panel since the last reset.

To exit the menu, scroll to and select EXIT.

AUDIO LEVELS

You can adjust both incoming and outgoing audio levels for an audio device (panel, interface, and so on) connected to an Easi-PiCo port.

Figure 1-31: Easi-PiCo Audio Levels Screen

Input level

To adjust a port's incoming audio levels:

1. From the Input Level menu, scroll to the PORT number.
2. Press and release the setup/enter knob.
3. Rotate the setup/enter knob clockwise to display the available port digits.
4. When the desired port digit appears in the display, press the setup/enter knob to select it.
5. Scroll to the LEVEL number.
6. Press and release the setup/enter knob.
7. Rotate the setup/enter knob clockwise to display available decibel levels. The audio level changes in real time as you scroll, similar to adjusting the audio with a volume-control knob.
8. When the desired decibel level appears in the display, press the setup/enter knob to select and save it. You can select between -60 dB and 18 dB in 1 dB steps.
9. To exit the menu, scroll to and select EXIT or to adjust another port's level repeat steps 1 through 8.

Figure 1-32: Easi-PiCo Output Level Screen

Output level

To adjust a port's outgoing audio levels:

1. From the Output Level menu, scroll to the PORT number.
   When a port number appears onscreen, that port's label, as set in ECS, automatically appears next to it.
2. Press and release the setup/enter knob.
3. Rotate the setup/enter knob clockwise or counter clockwise to display the available port digits.
4. When the desired port number appears in the display, press and release the setup/enter knob to select it.
5. Rotate the setup/enter knob clockwise or counter clockwise to scroll to the LEVEL number.
6. Press and release the setup/enter knob.
7. Rotate the setup/enter knob clockwise or counter clockwise to display available decibel level values.
   The audio level changes in real time as you scroll, similar to adjusting the audio with a volume-control knob.
8. When the desired digit appears in the display, press and release the setup/enter knob to select and save it. You can select between -60 dB and 18 dB in 1 dB steps.

9. To exit the menu, scroll to and select EXIT, or to adjust another port's audio level, repeat steps 1 through 8.

Ident tone

The ident tone is disabled in the Easi-PiCo matrix

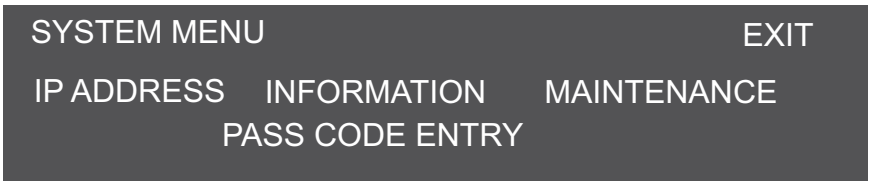


Figure 1-33: Easi-PiCo System Menu

PASS CODE ENTRY

By selecting the passcode entry screen you can enter the upgrade passcode in to the matrix to turn your Easi-PiCo matrix in to a full Eclipse PiCo matrix.

The passcode is 16 digits long and is entered using the set up knob; each character is individually selected by highlighting the character, then pushing the set up knob activates the character to be changed, and scrolling left and right to find the specified character, finally pushing the set knob to fix that specific character. This is repeated until the passcode is entered.

Once the passcode is entered and saved, the display will ask you whether you would like to "apply the changes".

Select this and the Easi-PiCo will then re-boot and after about 10-20 seconds the front splash with appear read "ECLIPSE PICO" to confirms the upgrade is complete.

If the matrix will not let you save or apply the changes, please check the passcode with your local sales contact or see the contact details in chapter 3 of this user guide.

AUDIO ROUTES

Read only Screen in Easi-PiCo.

IP ADDRESS

Read only Screen in Easi-PiCo.

SYSTEM INFORMATION

Read only Screen in Easi-PiCo.

SYSTEM STATUS

Read only Screen in Easi-PiCo.

MAINTENANCE SCREEN

Read only Screen in Easi-PiCo; the reboot function is available.

5. PANELS

ICS-1008E/ICS-1016E

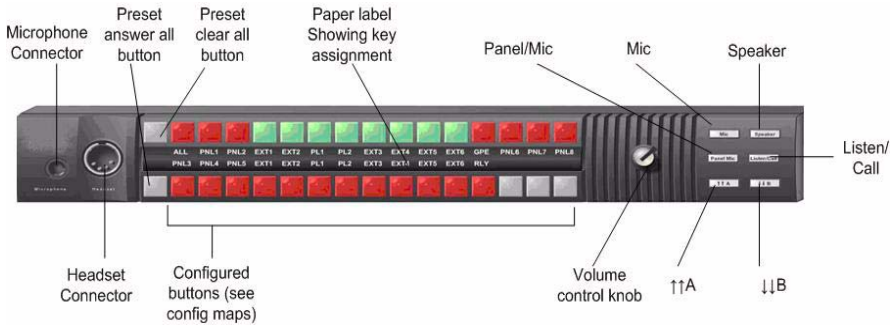


Figure 1-34: ICS-1008E Panel Facilities

Panel Microphone Connector

This connector allows panel operators to use a panel microphone. Plugging in a panel microphone will initially cause the panel to switch to panel-microphone and will turn the headset microphone off.

Headset Connector

The headset connector provides a front-panel connection for a headset. Plugging in a headset will initially cause the panel to switch to headset mode.

Preset Answer all button / Preset Clear all button

The "Ans Back" button is used to answer calls to a panel from other panel or interfaces not assigned to that panel's talk/listen buttons. When these calls arrive:

- The "Ans Back" button will flash bright red.
- The calling station's label will be temporarily assigned to the panel's "Ans Back" button.

These two conditions will continue until the call is answered, or until the answer-back time-out period lapses and the caller's label is automatically removed. To answer the call push the "Ans Back" button. The button will turn bright red indicating an active talk path to the caller. The talk path is active for as long as the button is held down.

*Note: **The "Ans Back" button cannot be latched; it is a momentary-only function.***

To manually remove the caller's label from the "Ans Back" button push the "Clear" button. The label assignment will be removed automatically after the answer-back time-out period lapses. If another call (or calls) comes in while answering a call using the "Ans Back" button:

- The user will hear the caller's voice.
- The calling station's label will be placed in the panel's answer-back stack.

- To answer the next caller: Release the "Ans Back" button.
- Push the "Clear" button to remove the current caller's label.
- Push the "Ans Back" button to talk to the next caller.

Configured Button

Each configured button is pre-programmed as a talk (red) or listen (yellow). The button colour will be dim to indicate it has a programmed label. When selected it will become bright to indicate it is active.

Volume Control Knob

This controls the volume of the internal panel speaker and the volume of the headset ear phones.

Mic

This button activates or mutes the panel gooseneck or headset microphone, whichever has been selected with the "Panel Mic" button. The button will be bright yellow when the selected microphone is active, dim yellow when not active, and off when a microphone is not present. The "Mic" button also is activated when the user activates a talk button. If the talk is latched, the microphone will remain on after the call.

Speaker

This button toggles the front-panel speaker between active (bright yellow) and inactive (dim yellow). If a headset is not attached the "Speaker" button will default to bright yellow and the panel speaker can not be turned off.

Panel Mic

This button toggles between the panel (bright yellow) and headset (dim yellow) microphones. If only a panel microphone is attached, the button will default to bright yellow and cannot be turned off. If a panel microphone is not attached, this button is off and not functional.

Listen/ Call, A and B keys

The "Listen/Call" button has three functions:

- Activating the listen-level mode.
- Resetting the listen-level settings.
- Sending call signals.

Listen-Level Mode

To use the listen-level adjust mode:

1. Push (for less than 1 sec.) and quickly release the "Listen/Call" button.
2. The button will turn bright yellow to indicate the function is on and all the active buttons programmed with listen will begin to flash. In addition, A and B keys will turn from dim yellow to off.

3. Push the appropriate Talk/Listen button programmed as a listen. The selected button will turn bright yellow and A and B keys will turn dim yellow.
4. Use the A and B keys to increase (up arrows) or decrease (down arrows) the channels volume of the selected button.
5. To exit, push the "Listen/Call" button or wait for the 3 sec. time-out.

Listen Level Reset

To reset the listen level:

1. Push (for less than 1 sec.) and quickly release the "Listen/Call" button to activate the listen-level mode. The "Listen/Call" button will turn bright yellow and the active configured buttons listen will flash.
2. Push and hold the "Listen/Call" button for 3 sec. to reset the listen level settings to the default. The active configured buttons will return to their previous states.
3. Release the "Listen/Call" button.

Call Signals

To activate call signals:

1. Push and hold the "Listen/Call" button until it is bright yellow (at least 1 sec).
2. Push the talk/listen button programmed with a talk or talk with listen of the desired destination's label. The call signal will be sent each time the destination's talk/listen button is pressed.
3. The call-signal mode will time-out after 5 sec. of button inactivity or can be deactivated by pressing the "Listen/Call" button.

Call signals can be issued to all destinations. All labels will receive the signal. If a label is a fixed group, the entire group will receive the call signal. If the label is a party line, then every station listening on the party line will receive the call signal.

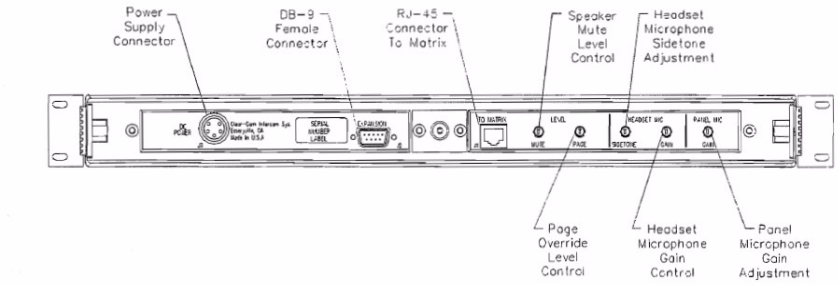


Figure 1-35: Rear of ICS-1008E and 1016E Panels

Power supply connector

3pin EIA power connector, 100-250 VAC 50 to 60 Hz 50VA max.

DB-9 Female connector

Allow the panel to connect to an expansion panel (this feature is only active after upgrade to Eclipse PiCo).

RJ-45 Connector to Matrix

Connects to panel to matrix via CAT 5 cabling.

Speaker Mute Level control

This knob adjusts the speaker DIM level when any talk is active at the station; this function helps prevent possible feedback. The maximum amount of muting is 15db below full volume. If the rear panel control is set below that level then muting will have no effect.

Page Override Level Control

This knob adjusts the override level; this feature is not used in the Easi-PiCo system.

Headset Microphone Sidetone Control

This knob adjusts the headset sidetone level. Sidetone is the sound of the user's voice in his headset.

Headset and Panel Microphone Gain Controls

These knobs adjust the gain of the headset and panel microphones. The preamplifier gain of the panel and headset microphone can be adjusted over a range of 0 to 20 dB.

Basic Panel Key operation

Making Calls (Talk keys)

Each configured Talk button (red) will be dim to indicate it has a programmed label. When selected it will become bright RED to indicate it is active.

- Choose destination of call and select the key assigned to that destination.
- Push the correct key momentary to latch or push and hold for non latching key action.
- Then talk. Your command will come out of the destination loudspeaker automatically (All the talk keys are talk only so the call destination will have to operate a key to reply).
- The Talk key LED will lit bright Red showing the key is active.
- Release the key to end the call.

Receiving Calls (answering)

- When another panel is calling you will hear the message via the headset or the internal loudspeaker.
- The panel that is programmed to talk back to the caller will flash red to indicate the caller.
- To answer this call you can either press the assigned to talk back to that destination which will be flashing red or by simply pressing the answer-back key.

Listen Key

Listen keys are programmed to allow the panels to monitor audio coming into the matrix from the interfaces / external ports.

Each configured Listen button (yellow) will be dim to indicate it has a programmed label. When selected it will become bright YELLOW to indicate it is active.

- Choose destination to monitor and select the key assigned to that destination.
- Push the correct key momentary to latch or push and hold for non latching key action.
- You will hear all audio traffic from the destination port that is entering the matrix on your loudspeaker automatically.
- The listen key LED will lit bright YELLOW showing the key is active.
- Release the key to stop monitoring.
- A flashing DIM yellow key indicates that there is audio traffic on the port (interface / externals only).
- Press the Listen key to monitor the audio traffic on the port.
- The listen key LED will lit bright YELLOW showing the key is active.
- Release the key to stop monitoring.

6. BELTPACK

RS-601 Beltpack

The RS-601 beltpack offers the following features:

One intercom channel.

3-pin female and male XLR connectors for looping the party line cables.

4-pin male XLR to connect a headset.

Figure 1-36: RS-601 Beltpack

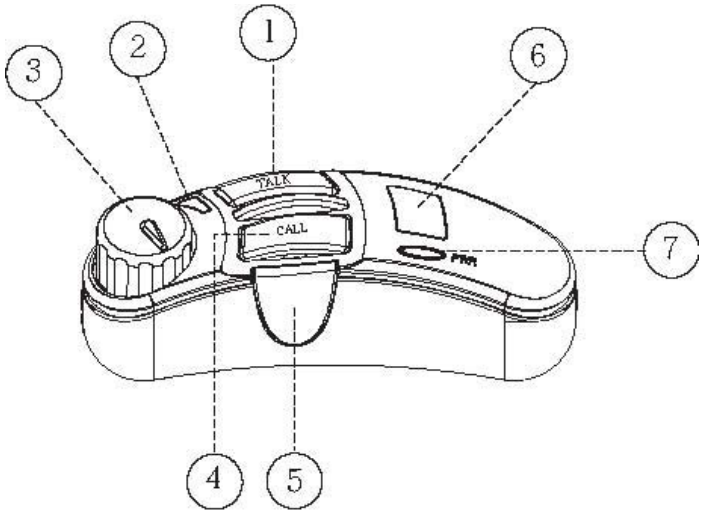


Figure 1-37: RS-601 Beltpack Controls

Talk Button (1)

To talk on the intercom line, press and hold the beltpack's talk button while speaking into the microphone in your headset. While you hold the button, your

voice transmits to the intercom line. When you release the button, your voice no longer transmits to the intercom ine.

To "latch" the talk button "on" for hands-free use, quickly tap the button twice. To unlatch the talk button, press the button again.

Talk Light (2)

The green talk light illuminates when you press or latch the talk button.

Volume-Control Knob (3)

The volume-control knob adjusts incoming volume level ("listen level").

There is a limiter built into the beltpack circuitry to prevent incoming volume from exceeding a safe level.

Call Button (4)

When you press the call button, a call signal voltage is sent to all beltpacks and panels on the intercom line.

The call light glows red to indicate both outgoing and incoming call signals.

Call Light (5)

The call light illuminates when the beltpack sends or receives a call signal.

Setup Information Window (6)

This feature is deactivated in Easi-PiCo mode.

Power Status Light (7)

An illuminated power status light indicates that the beltpack is connected to a powered intercom line.

*Note: **The light may illuminate even if the beltpack is receiving less than the minimum 12 VDC required for beltpack operation***

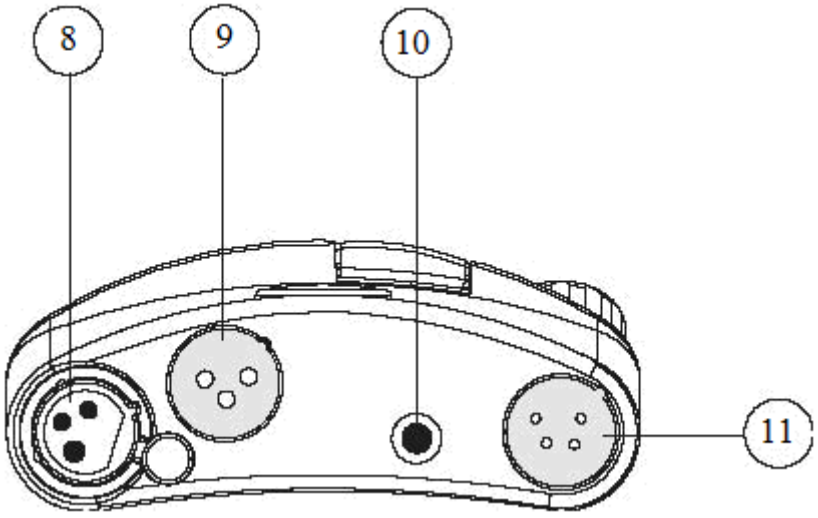


Figure 1-38: RS-601 Connections

Intercom Connector (8)

The beltpack connects to a main station, power supply or to other beltpacks through the connector labelled "intercom." When you press the blue button next to this connector the attached cable releases.

Pin	Function
1	Ground
2	+30 VDC
3	Intercom

Table 1-2: Intercom Connector Pinout

Loop-Through Connector (9)

The "loop-through" socket can be used to connect the beltpack to another beltpack. It can also connect to an intercom station if necessary.

Table 1-1shows the pin assignments for this connector.

Auxiliary ("AUX") Headphone (10)

Clear-Com designed the auxiliary headset connector, labelled "AUX," for use with the CC- 25 (Ultra-Light) headset. The beltpack's circuitry is designed to work with the CC-25 headset to produce excellent quality sound.

While certain types of mobile-phone style headsets will fit the 2.5 mm AUX jack, using these headsets may degrade system performance. You can use such mobile-phone style headsets more reliably with listen-only applications.

By default, the AUX connector provides bias voltage for electret microphones.

*Note: **Using multiple mobile-phone style headsets in a system could adversely affect nulling, crosstalk and overall system performance.***

Pin	Function
Tip	Mic
Ring	Earphone
Sleeve	Common

Table 1-3: Pin outs for RS-601 Auxiliary Headset Connector

Headset Connector (11)

You connect a headset to the beltpack at the 4-pin male XLR connector labelled "headset." The headset connector is always active and has priority if a second headset is connected to the auxiliary ("AUX") connector. You should connect only one headset at a time to a beltpack.

Pin	Function
1	Mic (Low)
2	Mic (High)
3	Headphone (Low)
4	Headphone (High)

Table 1-4: Headset Connector Pinout

7. CCI-22H

2 wire / Partyline interface

Power LED

The green "PL Power" LEDs indicate whether the interface channels are getting +30 VDC power from the external party line to which they are connected.

Level Controls

The "Send" level controls affect the level of the audio signals from the Easi-PiCo matrix to the external party line.

The "Recv" level controls affect the level of the audio from the party line to the matrix. The level controls have a range of ±13 dB; they are normally set to the midrange position.

Send and Receive Null Adjustment

In interfaces, it is necessary to null (minimize) the leakage of send from return audio as much as possible when an external party line is placed in the matrix environment. Ideally, there should be no portion of the talk signal in the listen signal.

The CCI-22 features sophisticated built-in nulling circuitry, including a test-tone generator and an accessory earphone. The earphone plugs into a phone jack on the front panel. When the earphone is plugged in, it automatically switches on a test tone and monitors the output of the null circuit.

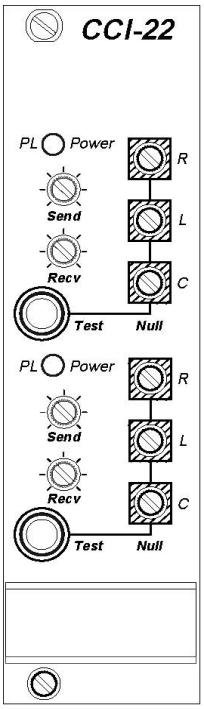


Figure 1-39: CCI-22H Front diagram

Separate "R" (resistance), "L" (inductance), and "C" (capacitance) controls compensate for each component of the line's impedance, providing the best null possible.

The null circuit is effective on line lengths between zero and 4000 ft. with impedances in the range of 120 to 350 ohms, and can reduce local audio in the received signal by more than 0 dB over the frequency range of 200 Hz to 8 kHz.

To null one channel of the CCI-22:

1. Connect the external party-line devices to the CCI-22 channel. Make sure that any connected devices do not have their microphones on.
2. Plug the accessory earphone into the front-panel jack labelled "Test". This will disconnect the interface from the matrix and enable a test oscillator. The oscillator produces a square wave with both low and high harmonics, allowing testing of all frequencies. The test tone pulses approximately every 0.5 sec.
3. While listening to the test tone in the earphone, adjust the "R" control until the tone is at a minimum.
4. Repeat Step 3 with the "L" and "C" controls. Because these controls interact, steps 3 and 4 will have to be repeated several times the test tone is minimized. Continue adjustment until the tone is minimal. If a deep null cannot be obtained, it is likely that something is wrong either with the wiring in the external party line or with one of the other devices attached to it.

   Following are some troubleshooting hints if a deep null cannot be obtained. If the "R" control is turned fully counter-clockwise, the line has either more than one termination, or an excessive resistive load.

   If the "R" control is fully clockwise, then the line has no termination.
   The "L" control compensates for the low-frequency inductive and capacitive elements the wiring of the external party line presents to the line. If the "L" control is fully turned in either direction, it is likely that there is a problem in the external party line. When a Clear-Com party line is connected, the "L" control should be just to one side of its mid-pot position.

   The "C" control compensates for cable capacitance; the setting depends on the length of the line. If the "C" control is fully counter-clockwise, it indicates a very short line (under 10 ft.); this is a valid setting for a short line.
   If the "C" control is fully clockwise, it indicates an excessively long line (more than 1300m (4000 ft)).

8. FOR-22H

Four wire interface

Send Level Control

The Send level control allows adjustment of the output level of the channel from the matrix to the external device/system.

Send Level LED

The 2-colour Send Level LED lights green when an audio signal is being sent to the external device or system at a typical acceptable level. The LED lights red when the audio output signal level is too high.

Recv Control

The Recv ("Receive") level controls affect the level of signals sent from external devices or system to the matrix. The "Recv" controls have a range of ±10dB.

Relay Active LED

The yellow "Relay" LED lights whenever the relay is activated. Intermittent fast blinking on this LED is normal.

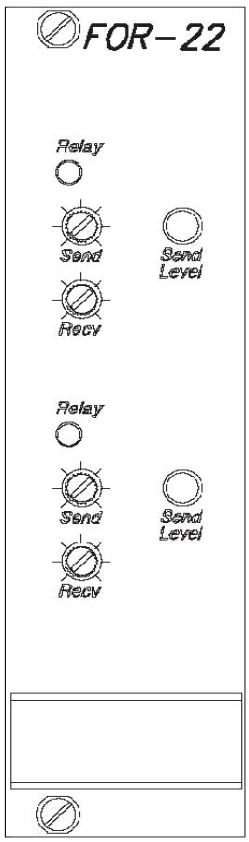


Figure 1-40: FOR-22H Front diagram

9. INTERCOM OPERATIONS

TALKING TO IFB (SOME MAPS CONTAIN IFB OPERATION)

IFB's or Interruptible Fold Backs are fixed audio routes which can be broken / interrupted by a panel keying over the audio. When an IFB is keyed, the panel replaces the original audio with his panel microphone. Therefore an IFB is made up of three elements:

- The IFB Destination - usually a 4-wire port.
- The IFB Source. This is the "normal" feed to the IFB Destination.
- The IFB Talker who keys over the source and interrupting the audio to the destination.

IFB's can be used to interrupt background music on a PA system while someone is paging. Normally in broadcasting presenters, talents, news anchors, guest, field reporters, OB Vans etc are fed a mix of program sound. The Director or Sound Engineer can then key over the program (interrupt) and talk to the talent or OB Van.

The diagram below shows a typical example of an IFB. In this example the Presenter on the Studio floor is normally listening to the program from the Sound desk. When the Director presses the speak key to the Presenter, it breaks the audio from the sound desk and replaces it with the audio command.

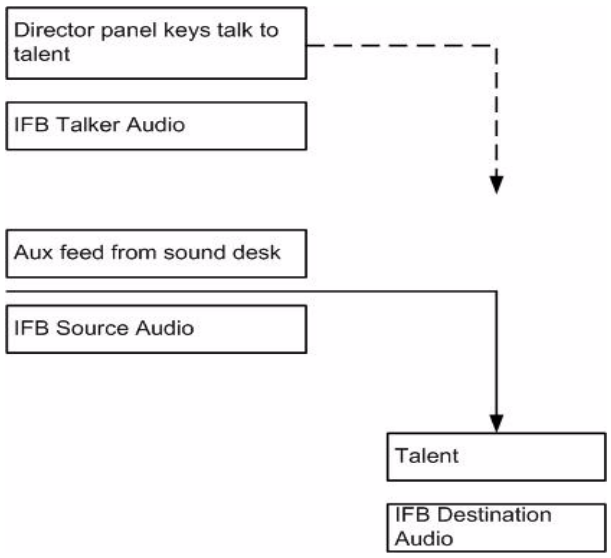


Figure 2-41: Talking to IFB

In the Easi-PiCo IFB configuration map the port assignments are:

IFB	IFB Source	IFB Destination
IFB #1	Port 7 input	port 7 output
IFB #2	port 7 input	port 8 output
IFB #3	port 10 input	port 10 output
IFB #4	port 11 input	port 11 output

All sources are "CUT" when a panel talks / keys an IFB

Conferences - (Some maps contain Partyline (conference) operation)

A party line also called a conference, allows ports to talk and listen to each other constantly (like in a telephone conference).

Partylines are normally used when several non-panel devices (such as beltpacks or cameras) need the ability to talk/listen to each other constantly.

Generally panels are never permanent members of partylines. However a panel can have a PL key assigned to allow it to occasionally talk or listen to a partyline.

Matrix ports that connect to external devices like beltpacks or camera CCUs can be made fixed members of a partyline. A fixed member is forced to hear all talkers on the Party Line and their audio is sent permanently to the Party Line.

In the Easi-PiCo basic configuration map port #8 is a fixed member of Party Line 1.

This means that any panel that talks on this Party Line 1 will send audio to the beltpacks connected to port #8, also any panel pressing a listen key to Party Line 1 will monitor any commands on the Party Line 1 (whether from other panels or from the beltpacks connected to port #8.

In the Party Line configuration map:

Port #6 is fixed member of Party Line .

Port #7 is fixed member of Party Line 2.

Port #8 is fixed member of Party Line 3.

Etc..

Groups- some maps contain Group operation

A group allows a panel to talk / listen to many ports by using 1 pushbutton (one to many).

A group maybe made up of panels and interface ports (4wires, beltpacks and externals).

In the Easi-PiCo maps in general there are a number of group buttons:

- The "ALL" key is group button made up of all 16 ports (panels and interfaces).
- The "GPE" key is group button made up of all the interface ports. The IFB map has a Camera Group button.
- The "CAMS" key is group button made up of ports 12-15.

10. MAP CONFIGURATIONS

The Easi-PiCo is pre-configured with the following maps:

Basic Configuration.

Party Line Configuration.

IFB Configuration.

Panels Configuration.

BASIC CONFIGURATION

This is a straightforward configuration that gives the user access to the four standard Interfaces along with the possiblity of adding up to 4 more external interfaces via the direct RJ45 ports. This configuration can support up to eight panels.

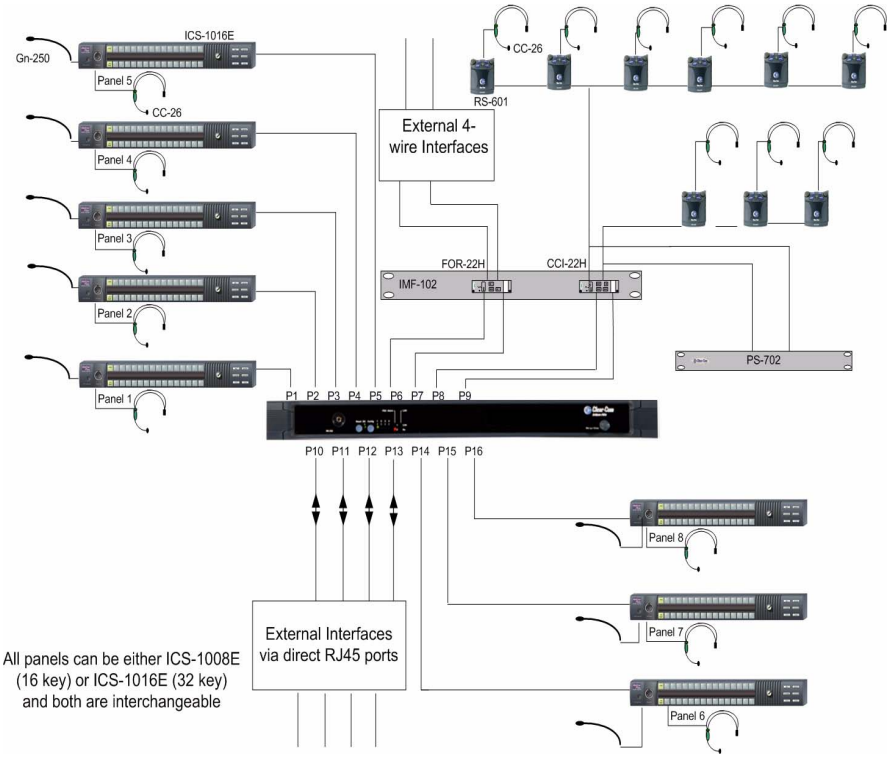


Figure 2-42: Basic Configuration Map

This diagram shows all options attached.

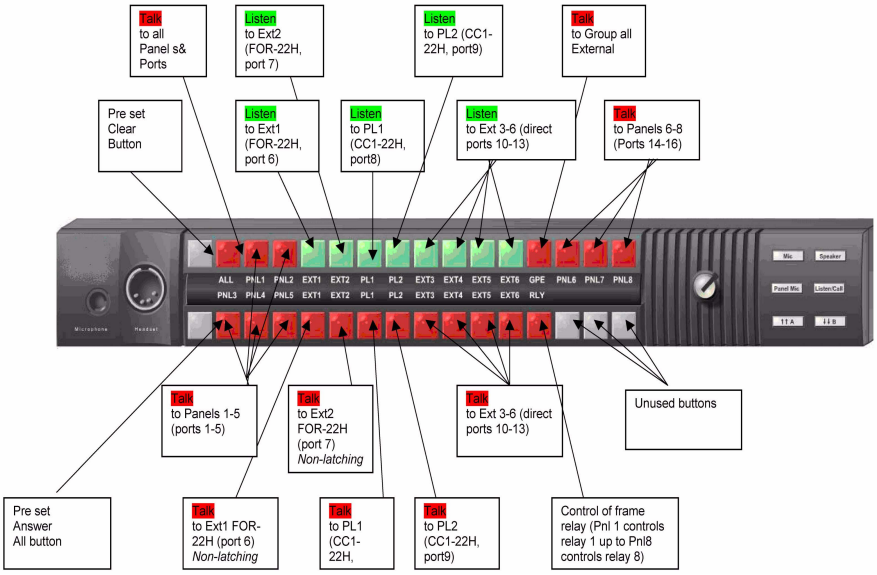


Figure 2-43: ICS-1016E Panel in Basic Configuration

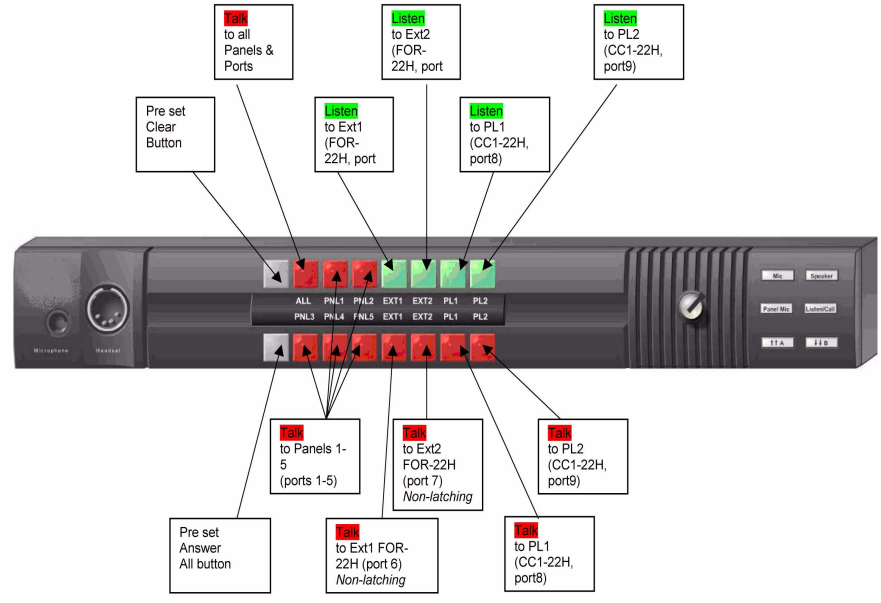


Figure 2-44: ICS-1008E Panel in Basic Configuration

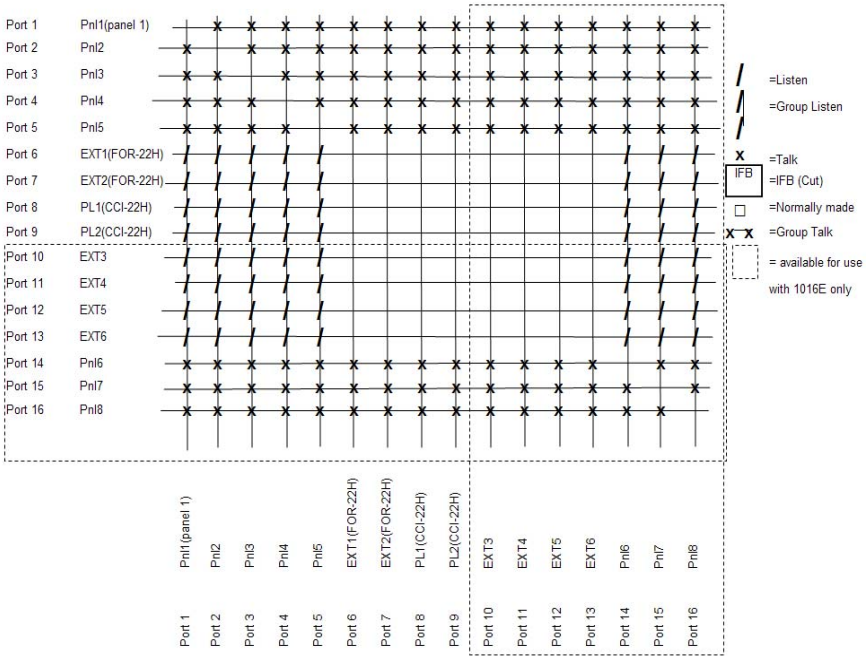


Figure 2-45: Basic Configuration Cross Point Map

Port Number	Port Function	Talk Label	Listen Label	Description
1	ICS 1016	PnI1	PnI1	Director Panel
2	ICS 1016	PnI2	PnI2	Assistant Panel
3	ICS 1016	PnI3	PnI3	Lighting Panel
4	ICS 1016	PnI4	PnI4	Sound Panel
5	ICS 1016	PnI5	PnI5	Production Panel
6	FOR-22	Ext1	Ext1	Aux 1
7	FOR-22	Ext2	Ext2	Aux 2
8	CCI-22	PL1	PL1	Party line 1
9	CCI-22	PL2	PL2	Party line 2
10	Direct	Ext3	Ext3	Direct External
11	Direct	Ext4	Ext4	Direct External
12	Direct	Ext5	Ext5	Direct External
13	Direct	Ext6	Ext6	Direct External
14	ICS 1016	PnI6	PnI6	VT Panel
15	ICS 1016	PnI7	PnI7	Graphics Panel
16	ICS 1016	PnI8	PnI8	Equipment Room Panel

Figure 2-46: Basic Configuration Ports

Party Line Configuration

The party line configuration map is designed to give the user the up to 8 party line channels in one system; this gives the panel operators the option to speak to eight different party line rings individually or simultaneously. This configuration can support up to eight panels.

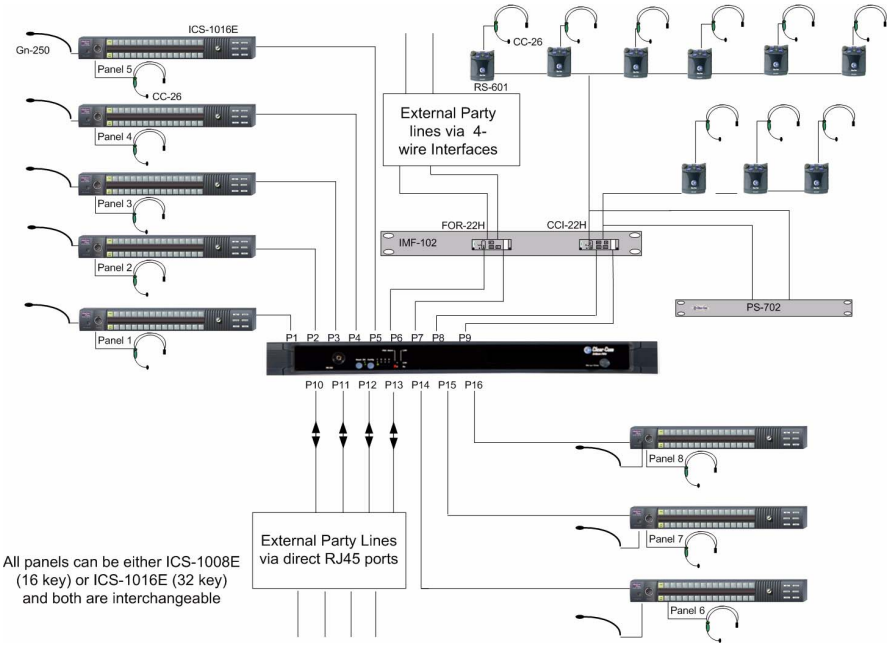


Figure 2-47: Party Line Configuration

This diagram shows all options attached.

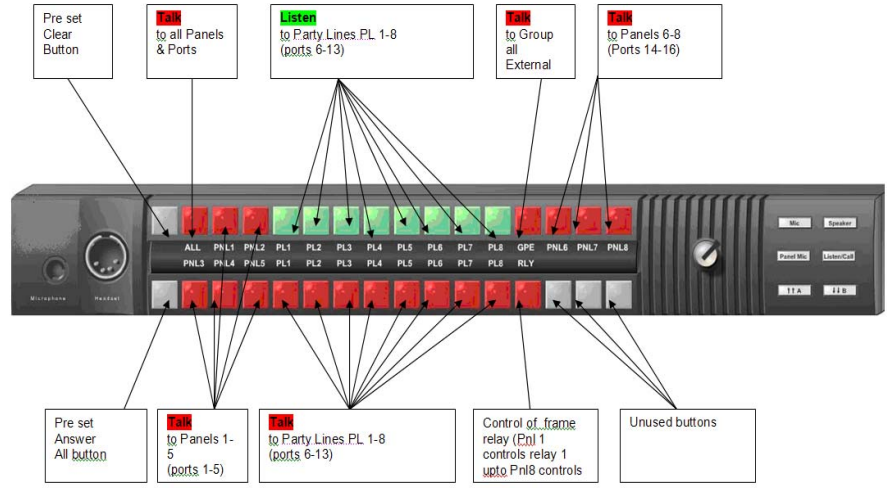


Figure 2-48: ICS-1016E for Party Line Configuration

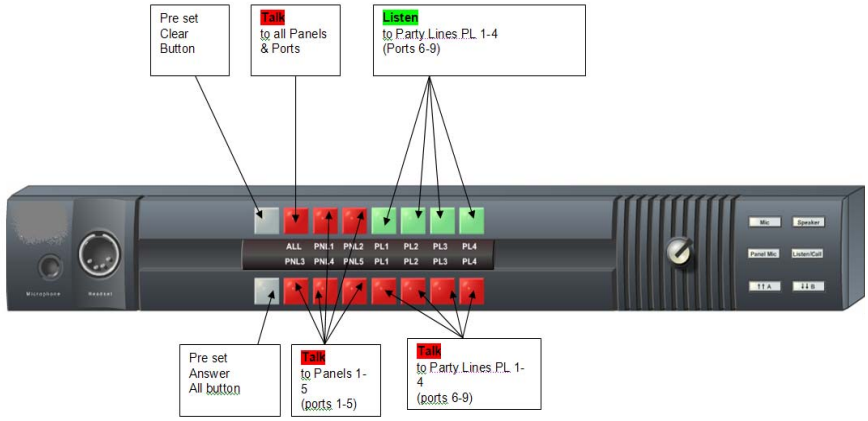


Figure 2-49: ICS-1008E for Party Line Configuration

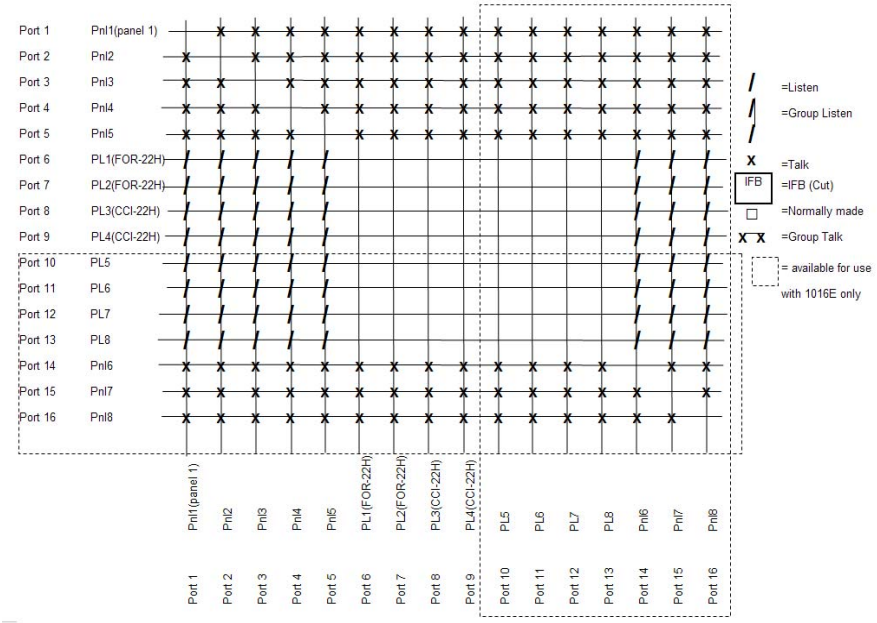


Figure 2-50: Party Line Configuration Cross Point Map

Port Number	Port Function	Talk Label	Listen Label	Description
1	ICS 1016	Pnl1	Pnl1	Director Panel
2	ICS 1016	Pnl2	Pnl2	Assistant Panel
3	ICS 1016	Pnl3	Pnl3	Lighting Panel
4	ICS 1016	Pnl4	Pnl4	Sound Panel
5	ICS 1016	Pnl5	Pnl5	Production Panel
6	FOR-22	PL1	PL1	Party line 1
7	FOR-22	PL2	PL2	Party line 2
8	CCI-22	PL3	PL3	Party line 3
9	CCI-22	PL4	PL4	Party line 4
10	Direct	PL5	PL5	Party line 5
11	Direct	PL6	PL6	Party line 6
12	Direct	PL7	PL7	Party line 7
13	Direct	PL8	PL8	Party line 8
14	ICS 1016	Pnl6	Pnl6	VT Panel
15	ICS 1016	Pnl7	Pnl7	Graphics Panel
16	ICS 1016	Pnl8	Pnl8	Equipment Room Panel

Figure 2-51: Party Line Configuration Ports

IFB Configuration

The IFB configuration map is designed around a TV studio set-up with four IFB (Interrupted Fold back) channels, one party line channel, one 4 wire interface and a camera group which allows single or full group communications. This configuration can support up to six panels.

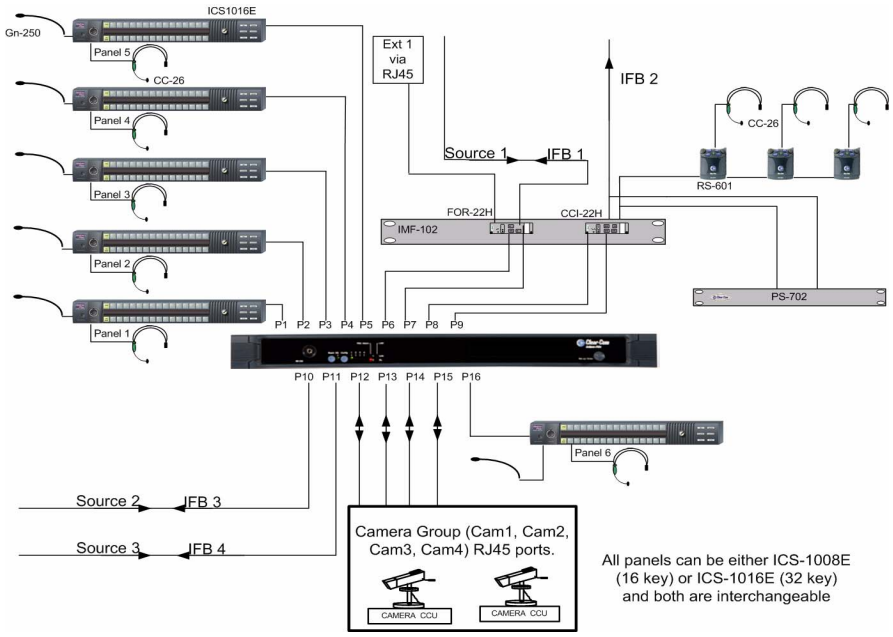


Figure 2-52: IFB Configuration

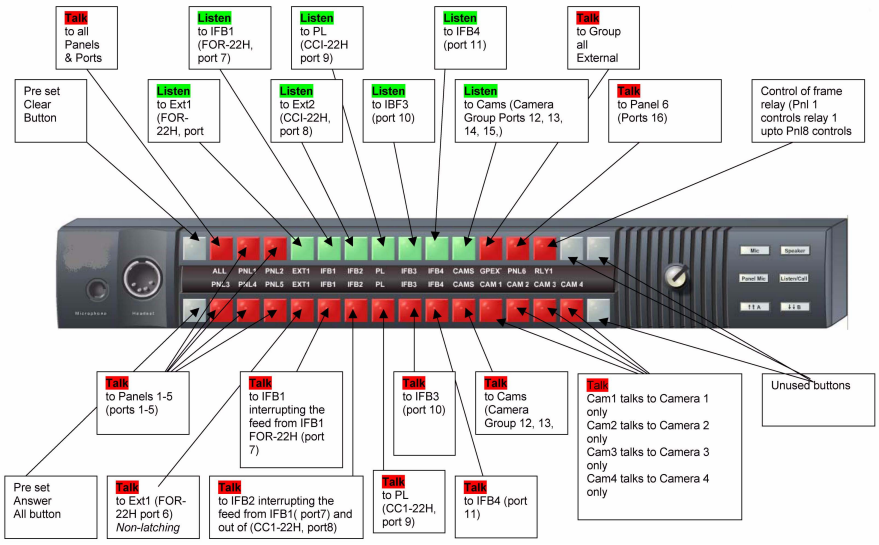


Figure 2-53: ICS-1016E for IFB Configuration

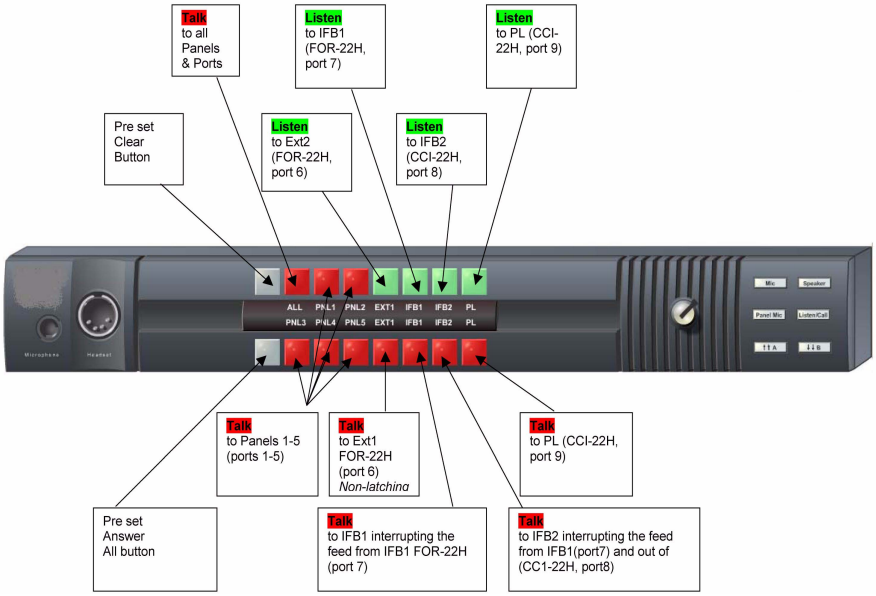


Figure 2-54: ICS-1008E for IFB Configuration

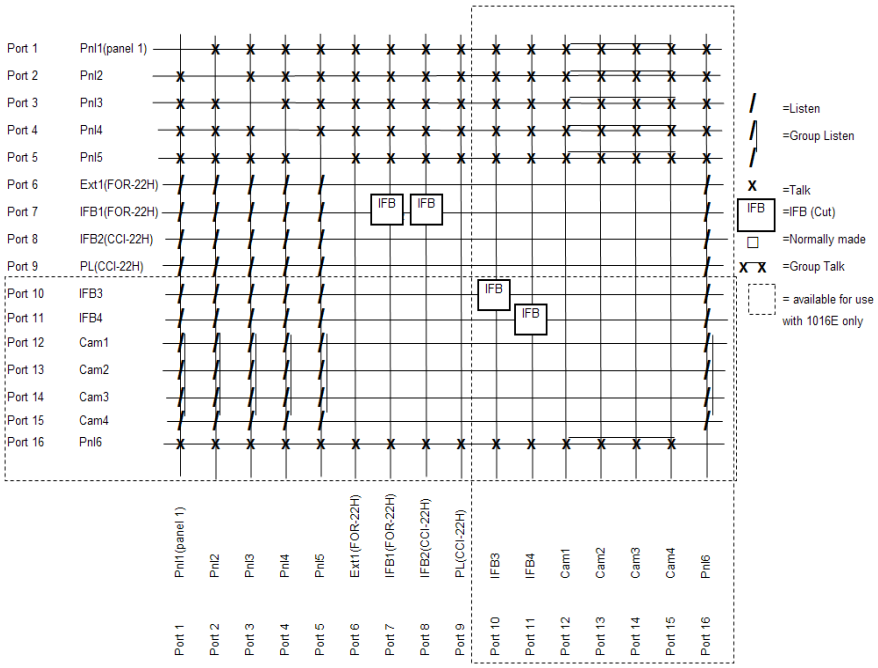


Figure 2-55: IFB Configuration Cross Point Map

Port Number	Port Function	Talk Label	Listen Label	Description
1	ICS 1016	Pnl1	Pnl1	Director Panel
2	ICS 1016	Pnl2	Pnl2	Assistant Panel
3	ICS 1016	Pnl3	Pnl3	Lighting Panel
4	ICS 1016	Pnl4	Pnl4	Sound Panel
5	ICS 1016	Pnl5	Pnl5	Production Panel
6	FOR-22	Ext1	Ext1	Aux 1
7	FOR-22	IFB1	IFB1	Interruptible FoldBack 1
8	CCI-22	IFB2	IFB2	Interruptible FoldBack 2
9	CCI-22	PL	PL	Party line 1
10	Direct	IFB3	IFB3	Interruptible FoldBack 3
11	Direct	IFB4	IFB4	Interruptible FoldBack 4
12	Direct	Cam 1	Cam 1	Camera Group
13	Direct	Cam 2	Cam 2	Camera Group
14	Direct	Cam 3	Cam 3	Camera Group
15	Direct	Cam 4	Cam 4	Camera Group
16	ICS 1016	Pnl6	Pnl6	VT Panel

Figure 2-56: IFB Configuration Ports

Panels Config

The panels' configuration is designed to offer the most amount of panels with the four standard interfaces (two party lines and two 4-wires). This configuration can support up to twelve panels.

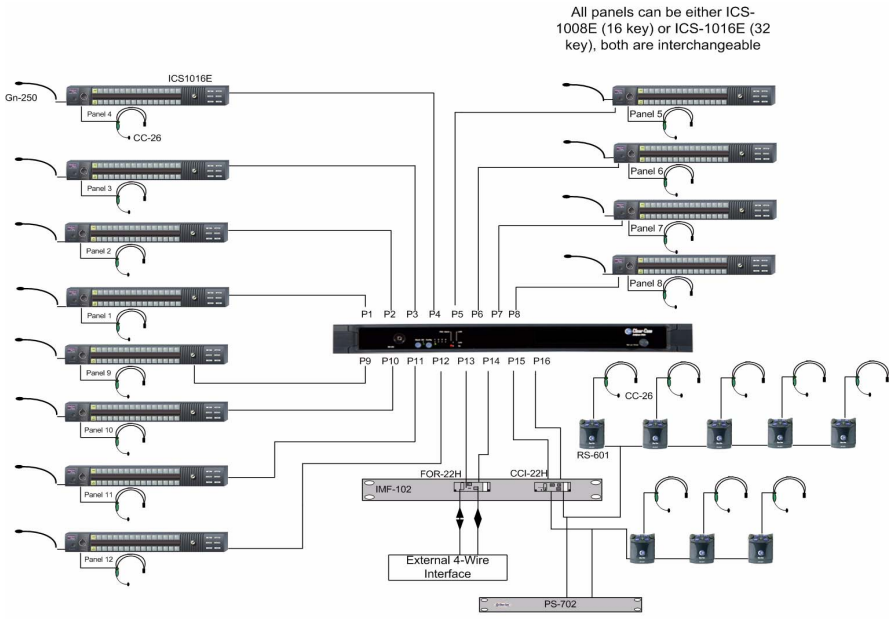


Figure 2-57: Panels Configuration

This diagram shows all options attached.

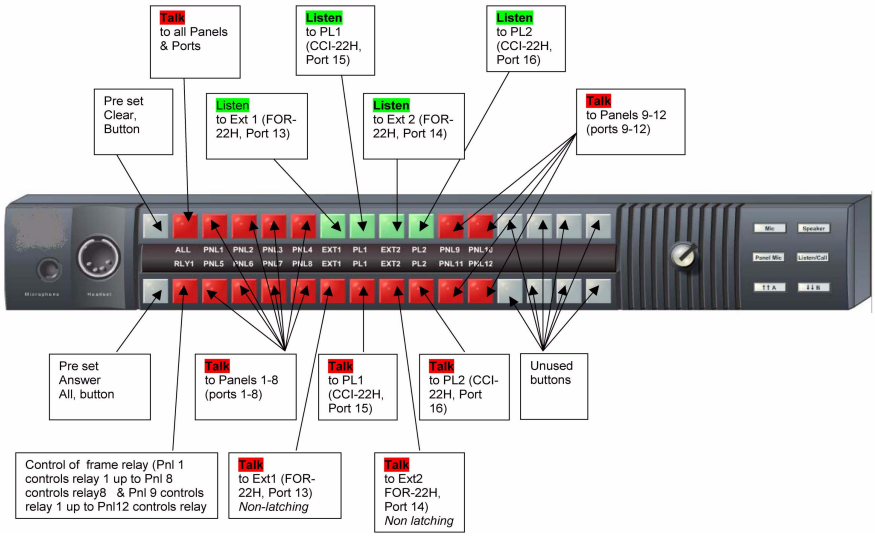


Figure 2-58: ICS-1016E for the Panels Configuration

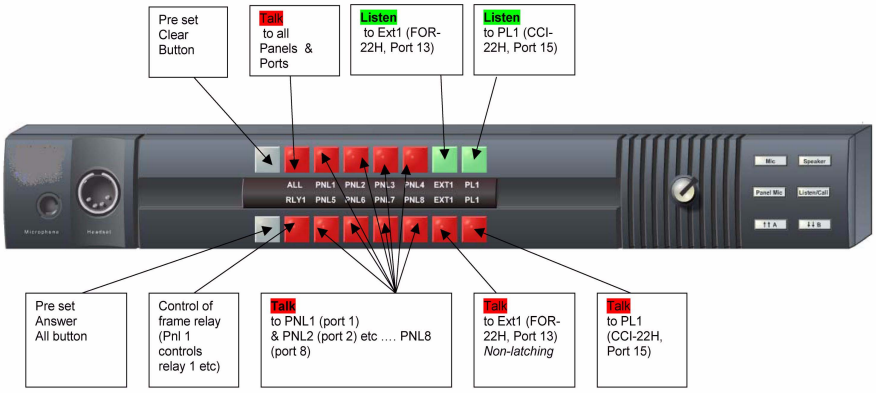


Figure 2-59: ICS-1008E for the Panels Configuration

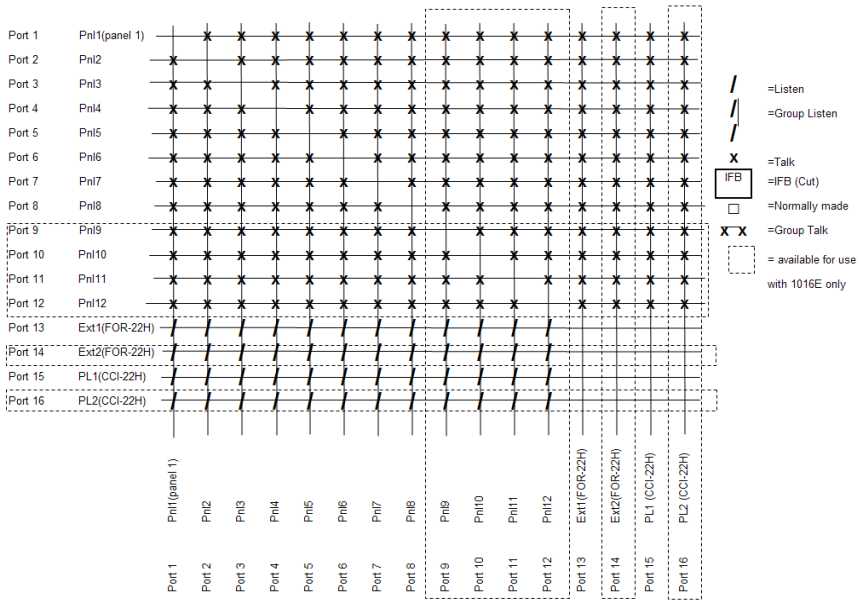


Figure 2-60: Panels Configuration Cross Point Map

Port Number	Port Function	Talk Label	Listen Label	Description
1	ICS 1016	Pnl1	Pnl1	Director Panel
2	ICS 1016	Pnl2	Pnl2	Assistant Panel
3	ICS 1016	Pnl3	Pnl3	Sound 1 Panel
4	ICS 1016	Pnl4	Pnl4	Sound 2 Panel
5	ICS 1016	Pnl5	Pnl5	Production 1 Panel
6	ICS 1016	Pnl6	Pnl6	Production 2 Panel
7	ICS 1016	Pnl7	Pnl7	VT Panel
8	ICS 1016	Pnl8	Pnl8	Graphics Panel
9	ICS 1016	Pnl9	Pnl9	Lighting 1 Panel
10	ICS 1016	Pnl10	Pnl10	Lighting 2 Panel
11	ICS 1016	Pnl11	Pnl11	Equipment Room Panel
12	ICS 1016	Pnl12	Pnl12	Spare
13	FOR-22	Ext1	Ext1	Aux 1
14	FOR-22	Ext2	Ext2	Aux 2
15	CCI-22	PL1	PL1	Party line 1
16	CCI-22	PL2	PL2	Party line 2

Figure 2-61: Panels Configuration Port Map

11. UPGRADING

The Easi-PiCo can be upgraded to a standard 36 port Eclipse PiCo by purchasing the upgrade pass code and ECS package.

By upgrading the user will have the ability to:

- Programme the panel keys to suit their requirement.
- Change any of the default maps to suit their requirement.
- Gain full access to all of the features found in the ECS configuration software.
- Ability to use any panel or interface in the Eclipse range including the new 10 digit display V-series panels.

Additional features after upgrade:

- DTMF Inward Access.
- Programmable VOX.
- Intuitive ECS Programming Software.
- Remote Frame Access via Internet/Ethernet.
- Telephone Interface.

The upgrade provides the following items:

- 1 x Easi-PiCo passcode.
- 1 x ECS configuration software.

The upgrade gives the user access to all 36 ports at the rear of the PiCo matrix (note the ports 17-36 will be plugged in Easi-PiCo mode, these are easily removed).

Pass codes

Each Easi-PiCo matrix has a unique matrix ID encryption.

The Matrix ID number can be found on the System information screen, The user will need to supply this ID number to their respective sales person when placing an order for the Easi-PiCo upgrade password & ECS package.

This Pass code can then be entered in the Pass code entry screen, using the set up knob,

Once the upgrade is complete the matrix will reset and the splash screen will read "Eclipse PiCo" this confirms the upgrade.

The user will then have access to a standard 36 port Eclipse PiCo

ECS software

The upgraded Easi-PiCo gives the user the full access to ECS v4.1 or above, ECS (Eclipse Configuration Software) is a software package that gives the user

complete control of the map configurations, key allocation on panels, routing and control of external interfaces.

The Easi-PiCo upgrade Licence can be purchased from your local dealer/distributor or by visiting the ClearCom website at:

www.clearcom.com/SalesDistribution/salesdist_index.html

12. BASIC TERMINOLOGY

Here is a collection of terms used in this user guide and the package manuals.

Matrix (**intercom system**) - Digital Matrix Intercoms simplify the design of a communications system by using a small set of hardware components to ease the specification, installation, and operation of the system. Communications features are implemented in software and are available to every user without the need to physically change the wiring of the system. A wide variety of communications options, from point-to-point to party line to IFB/cue can be accomplished within the same system. (Easi-PiCo MTX).

Beltpacks- The beltpack used with the Easi-PiCo is a partyline beltpack, which is a wired handheld communications device (RS-601). This connects the operator using a headset, to the partyline interface CCI-22H. It is powered by the connection to the power supply unit (PS-702).

Panels (**communication panels**)- Panels are fixed position user communications instrument with keys, a loudspeaker, microphone and headset connections, (that work on a 4-wire based system) (ICS-1008E, ICS-1016E).

IFB- IFB (Interrupted Fold back) allows the normal fold back audio to the talent (presenter) to be interrupted when someone to speaks to the talent. The normal audio returns once the person stops keying to the talent.

Party line- In a party-line system, all of the people on a given channel can talk and listen to each other simultaneously.

In the Easi-PiCo the CCI-22H can be used as a partyline interface (partyline is a 2 wire based system).

Party-line intercom systems are widely used in live theatre, live performance, performance lighting, and auditoriums/stadiums/facilities that host live events. They are also found in small to mid-sized TV/broadcast studios, smaller broadcast production trucks, industrial settings, simulation and medical theatre applications.

Interface Frame- The frame used inside the Easi-PiCo is an IMF- 102 this is a one rack unit 1RU frame that holds and powers the external interfaces CCI-22H and FOR-22H.

Headset - A head phone and microphone combination that allows the user to talk and listen using the beltpacks or the panels.

2 wire - A 2-wire system provides both send and return audio signals over a single screened or shielded single pair cable.

4 wire - A 4-wire circuit provides individual cable pairs for send and return signals. There is no need to reduce the balanced loudspeaker amplifier feed to a single wire as in 2-wire systems.

XLR - Audio industry standard connector.

GPI- A General Purpose Interface is a series of DC control lines comprising both inputs and outputs which allows the connection and control of third party pieces of equipment.

LIMITED WARRANTY

Vitec Group Communications (VGC) warrants that at the time of purchase, the equipment supplied complies with any specification in the order confirmation when used under normal conditions, and is free from defects in workmanship and materials during the warranty period.

During the warranty period VGC, or any service company authorized by VGC, will in a commercially reasonable time remedy defects in materials, design, and workmanship free of charge by repairing, or should VGC in its discretion deem it necessary, replacing the product in accordance with this limited warranty. In no event will VGC be responsible for incidental, consequential, or special loss or damage, however caused.

WARRANTY PERIOD

Return Material Authorization (RMA) numbers are required for all returns.

Both warranty and non-warranty repairs are available.

The product may consist of several parts, each covered by a different warranty period. The warranty periods are:

- Cables, accessories, components, and consumable items have a limited warranty of 90 days.
- Headsets, handsets, microphones, and spare parts have a limited warranty of one year.
- UHF wireless IFB products have a limited warranty of one year.
- UHF wireless intercom systems have a limited warranty of three years.
- All other Clear-Com and Drake brand systems and products, including beltpacks, have a limited warranty of two years.

The warranty starts at the time of the product's original purchase. The warranty start date for contracts which include installation and commissioning will commence from the earlier of date of the Site Acceptance Test or three months from purchase.

TECHNICAL SUPPORT

To ensure complete and timely support to its customers, VGC's User Support Center is staffed by qualified technical personnel. Telephone and email technical support is offered worldwide by the User Support Center.

The User Support Center is available to VGC's customers during the full course of their warranty period.

Instructions for reaching VGC's User Support Centers are given below.

Telephone for Europe, Middle East and Africa: +49 40 6688 4040 or +44 1223 815000

Telephone for the Americas and Asia: +1 510 337 6600

Email: vitec.support@AVC.de

Once the standard warranty period has expired, the User Support Center will continue to provide telephone support if you have purchased an Extended Warranty.

For latest contact information please refer to the Service and Support section at www.clearcom.com.

WARRANTY REPAIRS AND RETURNS

Before returning equipment for repair, contact a User Support Center to obtain a Return Material Authorization (RMA). VGC representatives will give you instructions and addresses for returning your equipment. You must ship the equipment at your expense, and the support center will return the equipment at VGC's expense.

For out-of-box failures, use the following contact information:

Europe, Middle East and Africa

Tel: +44 1223 815000 Email: customerservicesEMEA@vitecgroup.com

North America, Canada, Mexico, Caribbean & US Military

Tel: +1 510 337 6600 Email: customerservicesUS@vitecgroup.com

Asia Pacific & South America

Tel: +1 510 337 6600 Email: customerservicesAPAC@vitecgroup.com

VGC has the right to inspect the equipment and/or installation or relevant packaging.

For latest contact information please refer to the Service and Support section at www.clearcom.com.

NON-WARRANTY REPAIRS AND RETURNS

For items not under warranty, you must obtain an RMA by contacting the User Support Center. VGC representatives will give you instructions and addresses for returning your equipment.

You must pay all charges to have the equipment shipped to the support center and returned to you, in addition to the costs of the repair.

EXTENDED WARRANTY

You can purchase an extended warranty at the time of purchase or at any time during the first two years of ownership of the product. The purchase of an extended warranty extends to five years the warranty of any product offered with a standard two-year warranty. The total warranty period will not extend beyond five years.

Note: VGC does not offer warranty extensions on UHF wireless intercom systems, or on any product with a 1-year or 90-day warranty.

LIABILITY

THE FOREGOING WARRANTY IS VGC'S SOLE AND EXCLUSIVE WARRANTY. THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY OTHER REQUIRED IMPLIED WARRANTY SHALL EXPIRE AT THE END OF THE WARRANTY PERIOD. THERE ARE NO OTHER WARRANTIES (INCLUDING WITHOUT LIMITATION WARRANTIES FOR CONSUMABLES AND OTHER SUPPLIES) OF ANY NATURE WHATSOEVER, WHETHER ARISING IN CONTRACT, TORT, NEGLIGENCE OF ANY DEGREE, STRICT LIABILITY OR OTHERWISE, WITH RESPECT TO THE PRODUCTS OR ANY PART THEREOF DELIVERED HEREUNDER, OR FOR ANY DAMAGES AND/OR LOSSES (INCLUDING LOSS OF USE, REVENUE, AND/OR PROFITS). SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR THE LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. IN ANY EVENT, TO THE MAXIMUM EXTENT PERMITTED UNDER APPLICABLE LAW, VGC'S LIABILITY TO CUSTOMER HEREUNDER SHALL NOT UNDER ANY CIRCUMSTANCES EXCEED THE COST OF REPAIRING OR REPLACING ANY PART(S) FOUND TO BE DEFECTIVE WITHIN THE WARRANTY PERIOD AS AFORESAID.

This warranty does not cover any damage to a product resulting from cause other than part defect and malfunction. The VGC warranty does not cover any defect, malfunction, or failure caused beyond the control of VGC, including unreasonable or negligent operation, abuse, accident, failure to follow instructions in the manual, defective or improperly associated equipment, attempts at modification and repair not approved by VGC, and shipping damage. Products with their serial numbers removed or defaced are not covered by this warranty.

This warranty does not include defects arising from installation (when not performed by VGC), lightning, power outages and fluctuations, air conditioning failure, improper integration with non-approved components, defects or failures of customer furnished components resulting in damage to VGC provided product.

This limited warranty is not transferable and cannot be enforced by anyone other than the original consumer purchaser.

This warranty gives you specific legal rights and you may have other rights which vary from country to country.

Easi-PiCo Panel key labelling tabs

Basic Config	Clear	All	Pnl1	Pnl2	Ext1	Ext2	PL1	PL2	Ext3	Ext4	Ext5	Ext6	GPE	Pnl6	Pnl7	Pnl8
ICS1016E	Ans	Pnl3	Pnl4	Pnl5	Ext1	Ext2	PL1	PL2	Ext3	Ext4	Ext5	Ext6	Rly			
Basic Config	Clear	All	Pnl1	Pnl2	Ext1	Ext2	PL1	PL2								
ICS1008E	Ans	Pnl3	Pnl4	Pnl5	Ext1	Ext2	PL1	PL2								
Partyline Config	Clear	All	Pnl1	Pnl2	PL1	PL2	PL3	PL4	PL5	PL6	PL7	PL8	GPE	Pnl6	Pnl7	Pnl8
ICS1016E	Ans	Pnl3	Pnl4	Pnl5	PL1	PL2	PL3	PL4	PL5	PL6	PL7	PL8	Rly			
Partyline Config	Clear	All	Pnl1	Pnl2	PL1	PL2	PL3	PL4								
ICS1008E	Ans	Pnl3	Pnl4	Pnl5	PL1	PL2	PL3	PL4								
IFB Config	Clear	All	Pnl1	Pnl2	Ext1	IFB1	IFB2	PL	IFB3	IFB4	Cams	GPE	Pnl6	Rly		
ICS1016E	Ans	Pnl3	Pnl4	Pnl5	Ext1	IFB1	IFB2	PL	IFB3	IFB4	Cams	Cam1	Cam2	Cam3	Cam4	
IFB Config	Clear	All	Pnl1	Pnl2	Ext1	IFB1	IFB2	PL								
ICS1008E	Ans	Pnl3	Pnl4	Pnl5	Ext1	IFB1	IFB2	PL								
Panel Config	Clear	All	Pnl1	Pnl2	Pnl3	Pnl4	Ext1	PL1	Ext2	PL2	Pnl9	Pnl10				
ICS1016E	Ans	Rly	Pnl5	Pnl6	Pnl7	Pnl8	Ext1	PL1	Ext2	PL2	Pnl11	Pnl12				
Panel Config	Clear	All	Pnl1	Pnl2	Pnl3	Pnl4	Ext1	PL1								
ICS1008E	Ans	Rly	Pnl5	Pnl6	Pnl7	Pnl5	Ext1	PL1								

Excel Sizes

Cell Height	10	(points)
Cell Width	7.14	(points)
Font size	9 (bold)	
Font type	Arial