

# User Guide

## Clear-Com Encore® IFB System PIC-4744, MA-704, AX-704



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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. Only use attachments/accessories specified by the manufacturer.
10. 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.
11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. 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.

## 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** (next page). When you see these symbols on this product, they warn you of the potential danger of electric shock if the station is used improperly. They also refer you to important operating and maintenance instructions in the manual.



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



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*

# THE PROGRAM INTERRUPT CONTROL (PIC)

## INTRODUCTION TO THE PIC-4744

During the production of a program for transmission or recording, a director or producer frequently needs to cue the performing talent. This is done using Interruptible FoldBack (IFB), a type of simplex intercom for sending program and interrupt (cue) audio on “IFB” lines for the talent to monitor. The IFB line is comprised of three elements: **Program Audio**, **Interrupt (Cue) Audio** and the **Dip** or **Mute** control. See the signal flow diagrams, **Figures 1-1a** and **1-1b**, pgs. 6-7.

Electronic control allows the director to interrupt the program signal when addressing the talent. These IFB communications are “one-way” from an access location to the selected talent position or destination.

Clear-Com’s new stand-alone IFB components provide high performance, cost-effective answers for applications where regular intercom functions are not also required, or where space constraints require compact, versatile packaging.

The simplest stand-alone system consists of a PIC-4744, an MA-704, Goose neck Mic (or hot mic from intercom) and a PS-702 for power for the TR-50 talent receivers. This system will permit cuing of up to four talent positions from only one access location. Using “Y” cords, more TR-50 units may be added.

**Note:** Throughout this manual, “**access location**” refers to the physical place needed for someone to cue the talent. “**Talent position**” refers to the individual “talent” cue channels.

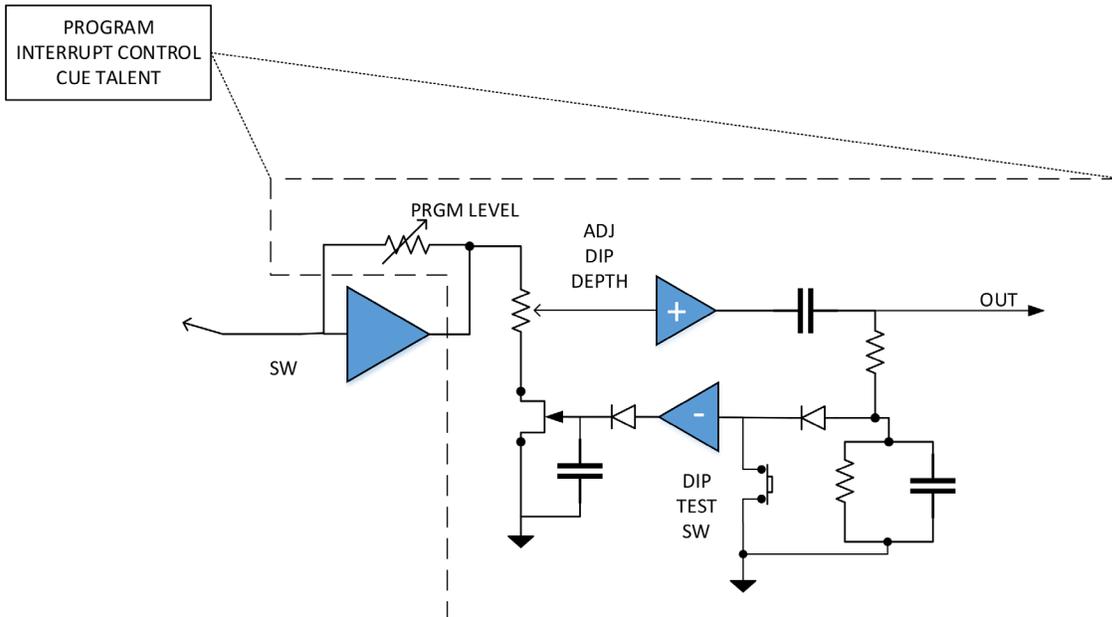
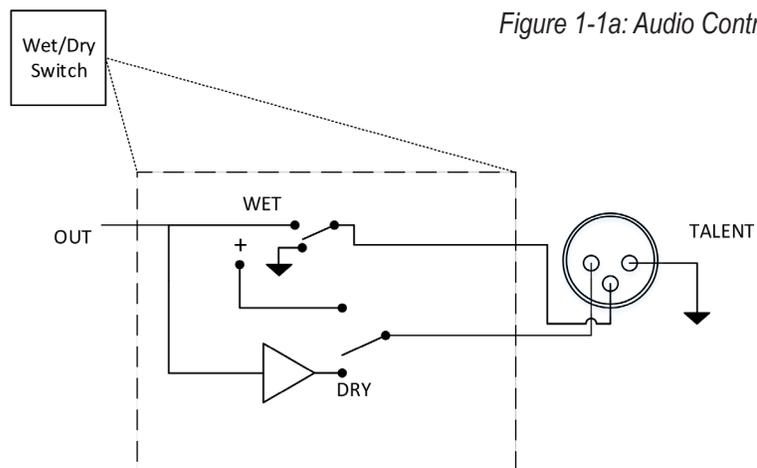


Figure 1-1a: Audio Control Paths



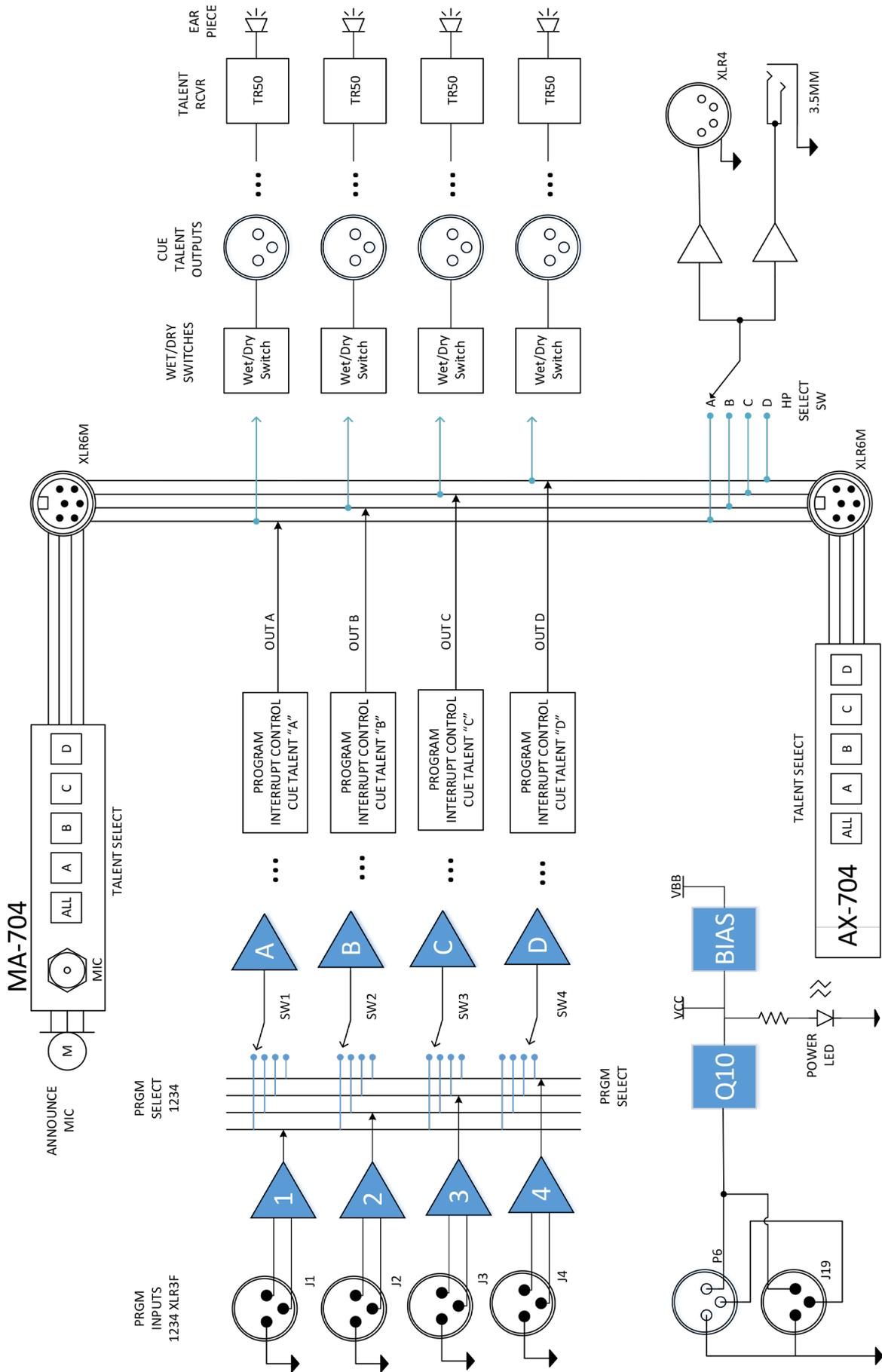


Figure 1-1b: Audio Control Paths

# The PIC-4744 Console

A **Program Interrupt Controller (PIC-4744)** unit is required for every four talent positions, or fraction thereof. For example, a system with five to eight talent positions will require two PIC-4744 units. The same IFB system with three access locations will require three MA-704 units and three AX-704 units, but it will still require only two PIC-4744 units. The PIC-4744 performs the program feed and interrupt functions for each talent position. It also adds a termination circuit to the IFB lines.

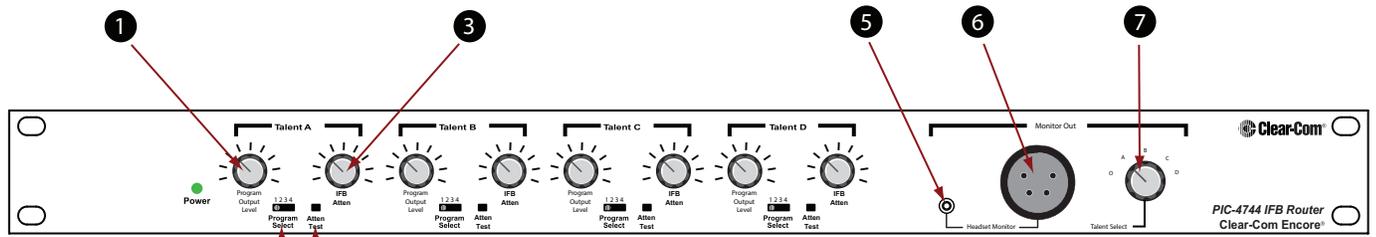
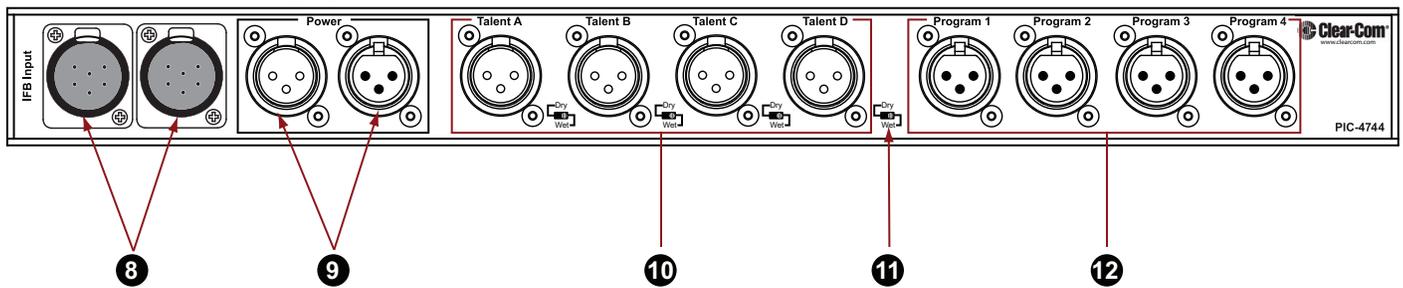


Figure 1-2: PIC-4744 Controls and Connectors



Identical controls for all Talent (A, B, C & D)	❶ Program Output Level adjustment	Adjusts the program audio level output for a specific Talent (A, B, C or D)
	❷ Program Select switch	Selects which of the program inputs (1 through 4) is connected to the indicated Talent output (A, B, C or D)
	❸ Program Audio Attenuation control	Adjusts the program audio attenuation (Dip) when a specific Talent (A, B, C or D) is selected via the MA-704 or AX-704. Turn counter-clockwise to increase Dip and clockwise to decrease.
	❹ Attenuation (Atten) Test button	Allows observation of attenuation (PRG Dip) program level as would be heard by the Talent
	❺ Monitor output (Mini)	Monitor headphone output (4 Pin headset or 3.5mm jack)
	❻ Monitor output (XLR)	
	❼ Talent Select knob	<b>Off:</b> Headphone mute <b>A, B, C or D:</b> Hear specific audio sent to one of four Talents outputs
	❽ Interrupt FoldBack (IFB) control	Connection for MA-704 or AX-704 Talent access station. Includes the audio from the microphone
Identical controls for all Talent (A, B, C & D)	❾ Power	Connection to PL power supply (both genders). Allows daisy chaining to other intercom units
	❿ Talent (A, B, C and D)	Outputs to talent receivers (typically TR-50s) or RF wireless IFBs
	⓫ Wet/Dry Switch	<b>Wet:</b> Provides phantom power to Talent beltpacks if needed (such as the TR-50) <b>Dry:</b> Allows connection for equipment that does not require phantom power (such as Clear-Com's PTX-3 Wireless IFB Transmitter)
	⓬ Program 1, 2, 3 and 4	Inputs for program audio to be sent to Talent receivers (as selected by item ❷)

## The MA-704 and AX-704

Clear-Com's stand-alone series of IFB components offers two types of talent access station.

The MA-704 includes a goose neck microphone and a pre-amplifier with line-level output, providing access to four talent positions.

Each AX-704 allows access, from the same location, to an additional group of four talent positions. It requires an external line-level signal for its interrupt (cue) audio source. The MA-704's interrupt audio and ALL control signals will feed up to 24 AX-704 units. Only one MA-704 is required at each access location.

Each talent position may be accessed independently or simultaneously with any other(s). The **ALL** button on the MA-704 simultaneously accesses all talent positions of the MA-704 and each AX-704 extension unit fed from that MA-704.

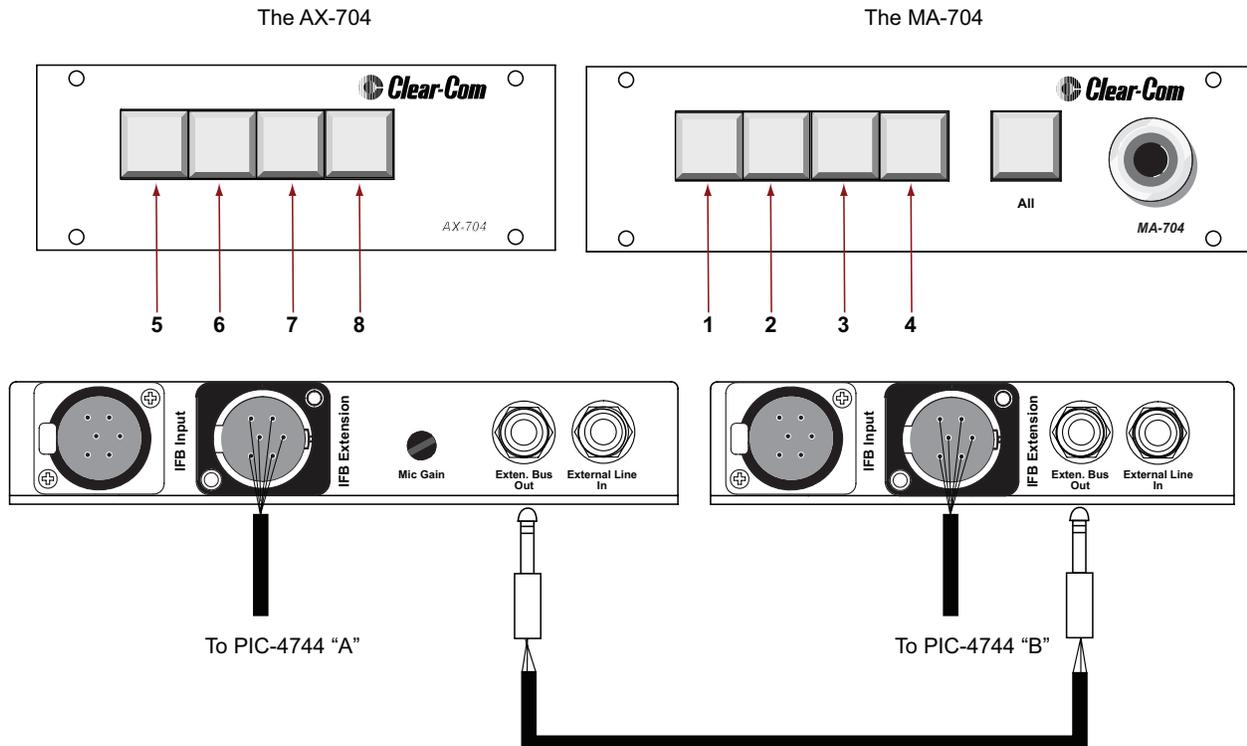


Figure 1-3: MA-704 and AX-704 Units

The connectors on the MA-704, AX-704, and PIC-4744 are designed for simple interconnection as a stand-alone system. However, all of the units' electrical characteristics are the same as the integrated IFB systems on our standard broadcast intercom line. With suitable connector adapters, both types of units can be connected in a system.

## The TR-50

The TR-50 Talent Receiver is a mini backpack with a volume control, earphone jack, earphone and a clip for attachment to a belt or under a desk. Talent receivers allow the talent to hear the program and cues via the IFB Electronics. The TR-50 contains an internal earphone amplifier to increase the signal from the IFB System to the earphone.

The TR-50 connects to a Clear-Com IFB System via up to 2000 feet of good quality, standard mic cable. The extension cable should have a female 3-pin XLR connector at the IFB controller and a male 3-pin XLR connector at the TR-50 end.

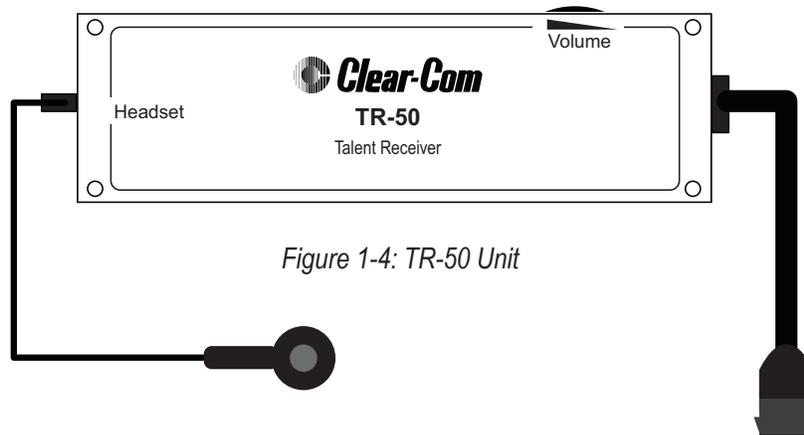


Figure 1-4: TR-50 Unit

### TIP: How to take audio from the PL line and “dry it out” to send to a recording device:

Use the TR-50 as an interface between the wet analog intercom line by sending from the headset 3.5mm tip/sleeve/ring jack to your recording jack. Use the volume control on the TR-50 to adjust the gain level to an appropriate level for your device. This will dry out intercom voltage on pin 2 and any CALL SIGNAL voltage that is carried on the audio circuit appearing on pin 3.

## Earphone Jack

The earphone jack is a standard, stereo mini jack with no connection to the ring contact. This provides for use with mono-aural earpiece, including Clear-Com’s CC010 or other 3.5mm connected earpiece.

**NOTE:** If stereo earphones are used, only one earphone will operate.

## Volume Control

The Volume control adjusts the listen level of the incoming audio signal. The range is from full OFF (clockwise) to full ON (counter-clockwise). Adjust the sound level using interrupt (cue) audio from an IFB access station such as an MA/AX-4 station. Do not use program audio for this adjustment. Mount the TR-50 if it will be used in a fixed location.

**NOTE:** While the TR-50 is designed specifically for the IFB System, this unit may be used as a “listen-only” backpack with any standard Clear-Com 2-wire network.

**WARNING:** Excessive sound pressure level from earphones or headphones can cause hearing loss.

## XLR Connection

The XLR connection includes Common, Power and Audio pin-out and receives audio from the Talent outputs on the PIC-4744.

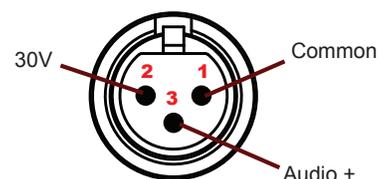


Figure 1-5: XLR 3-F Connection

# OPERATION

The system is operated by engaging the desired IFB buttons on the access stations. A control voltage on the IFB line allows the PIC-4744 to dip the channel's program feed, so that the cues from the director can be heard clearly.

1. Press the **IFB** button (1, 2, 3 or 4) on the access station corresponding to the talent position(s) you wish to cue, then speak into the MA-704's microphone or externally connected PL Hot Mic.
2. Press the MA-704's **All** button to simultaneously activate every IFB line, including those on any accompanying AX-704 units.

When pressed, the buttons for IFB lines in use change from blue to amber.

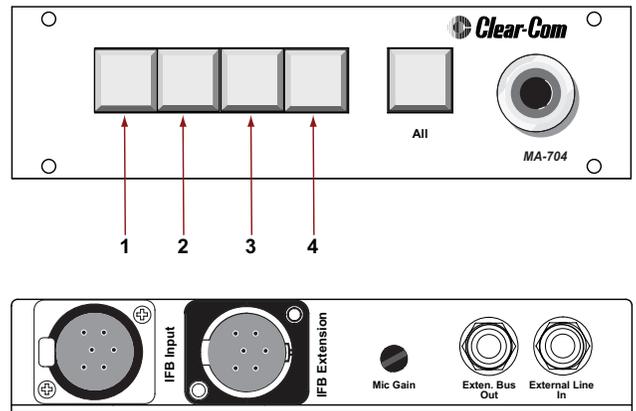


Figure 1-6: MA-704

# INSTALLATION

## System Capacity

A system may have up to 50 access locations. Interrupt (cue) audio from the MA-704 can drive up to 23 AX-704 units, thus permitting a maximum of 96 talent positions.

In order for the IFB system to be used at maximum capacity, two factors must be considered: **system wiring** (architecture) and **power requirements**.

The MA-704 consumes a maximum of 180 mA (idle current 140 mA), and the AX-704 consumes a maximum of 150 mA (idle current 120 mA). The resistance of the conductors in the interconnect cable is about 5 to 10 Ohms per 1000 feet. It's best to avoid having too many stations on one long cable run.

Unit	Maximum mA	Idle mA
MA-704	180	140
AX-704	150	120

For example: you have a system with two MA-704 units connected with a 2000 foot cable containing ~16 Ohms cumulative resistance in the power conductor, another ~10 Ohms in the common conductor and a voltage drop with a maximum of 9 volts.

If another two MA-704 units were to be added to this cable run, the voltage drop would be an unacceptable 18 volts. Therefore, the other set of access stations would have to be connected on separate cable run from the PIC-4744.

## Determining Power Supply Requirements

To determine the number and type of power supplies a system requires, add up the number of Unit Loads (1 Unit Load = 50 mA) while considering that the PS-702 power supply has a capacity of 24 unit loads.

Quantity	Unit	Unit Loads
1	PIC-4744	1
1	MA-704	4
1	AX-704	3
4	TR-50	1

# SYSTEM ARCHITECTURE

Two basic cabling methods for connecting the system may be used: “Daisy-chain (or loop-through)” and “Hub.” Both methods may be combined in any system.

Since the PIC-4744 has only two IFB line connectors, a hub-type system is limited to two branches unless a splitter box is used. Generally, *resistance-buildup effects* and *resultant voltage drop* are worse when using the Daisy-chain approach. The Hub approach minimizes voltage-drop effects at the expense of greater cumulative cable capacitance. Cable capacitance in this system isn’t quite the problem it is in a regular intercom system. This is because there is no sidetone null change, only a degradation of high-frequency response.

Referring to the typical system block diagrams shown below, only the system in **Figure 2-2** is connected using the “Hub” method; all other systems are shown connected via the “Daisy-chain” method.

Figure 2-1: One Access Location to up to Four Independent Talent Positions

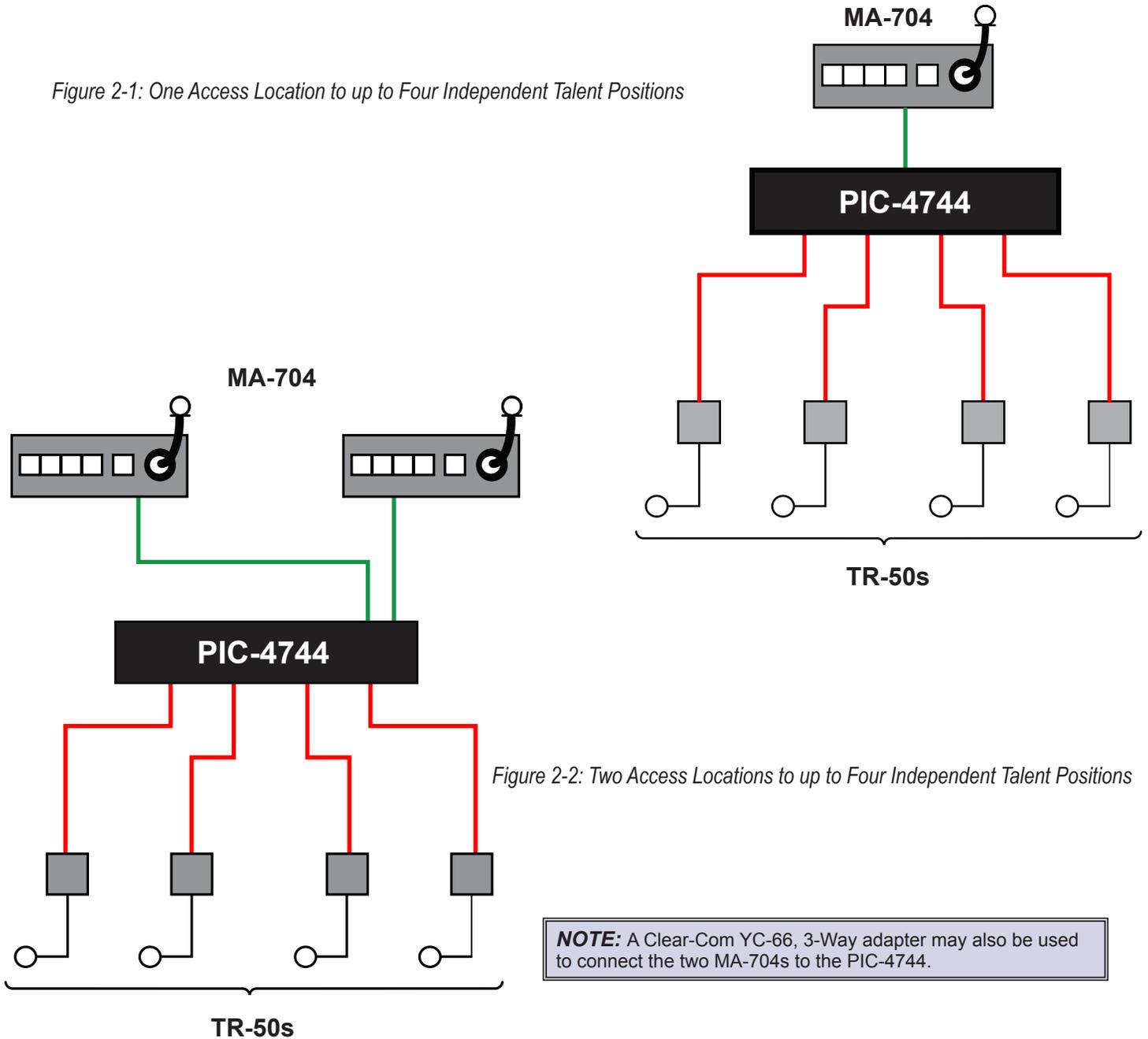


Figure 2-2: Two Access Locations to up to Four Independent Talent Positions

**NOTE:** A Clear-Com YC-66, 3-Way adapter may also be used to connect the two MA-704s to the PIC-4744.

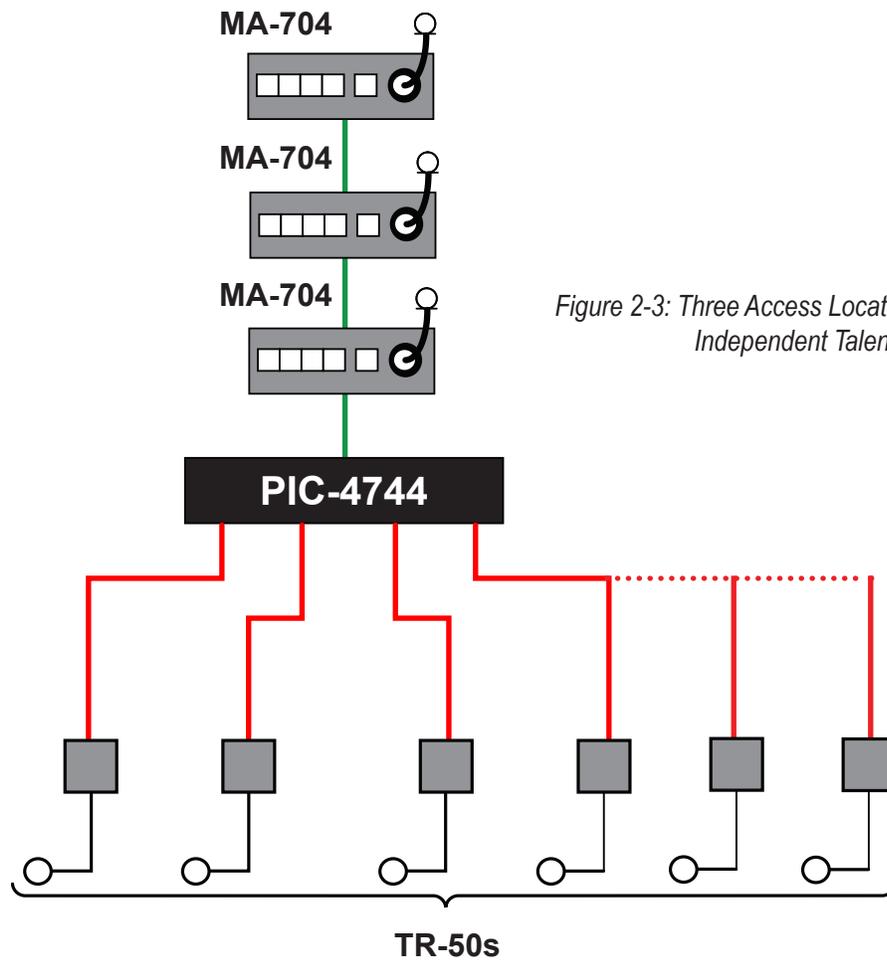


Figure 2-3: Three Access Locations to up to Four Independent Talent Positions

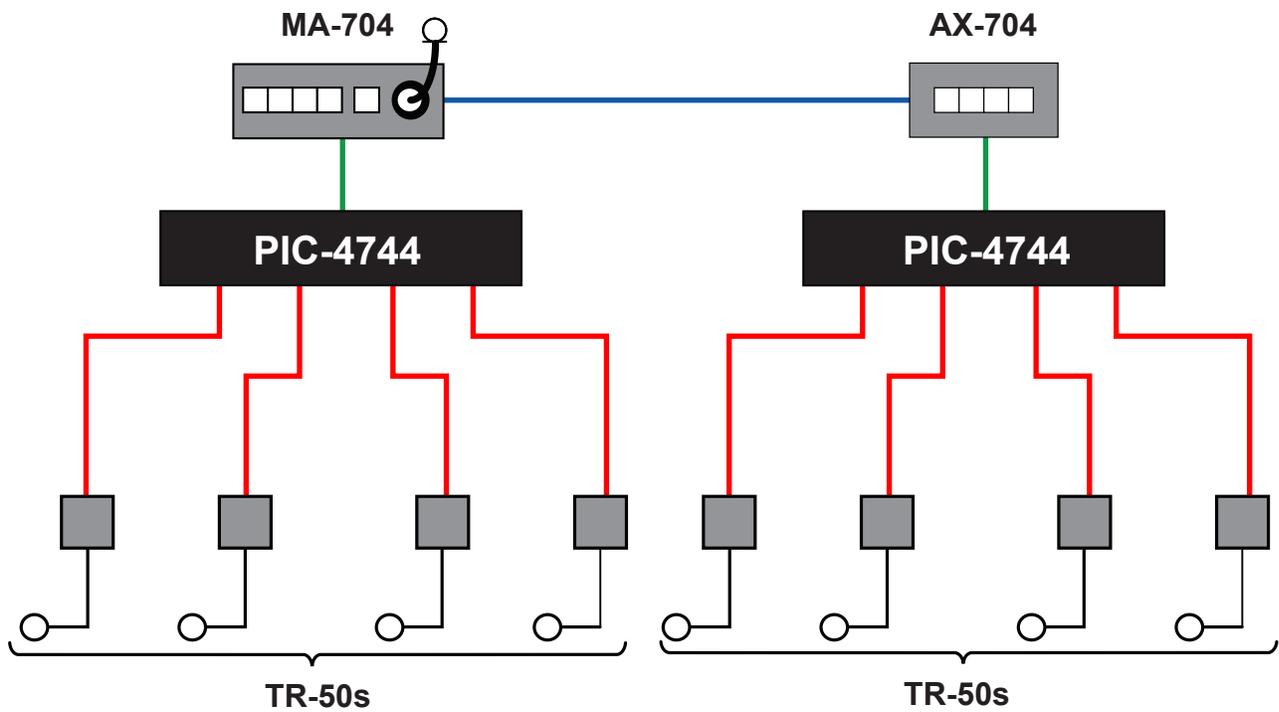


Figure 2-4: One Access Location to up to Eight Independent Talent Positions

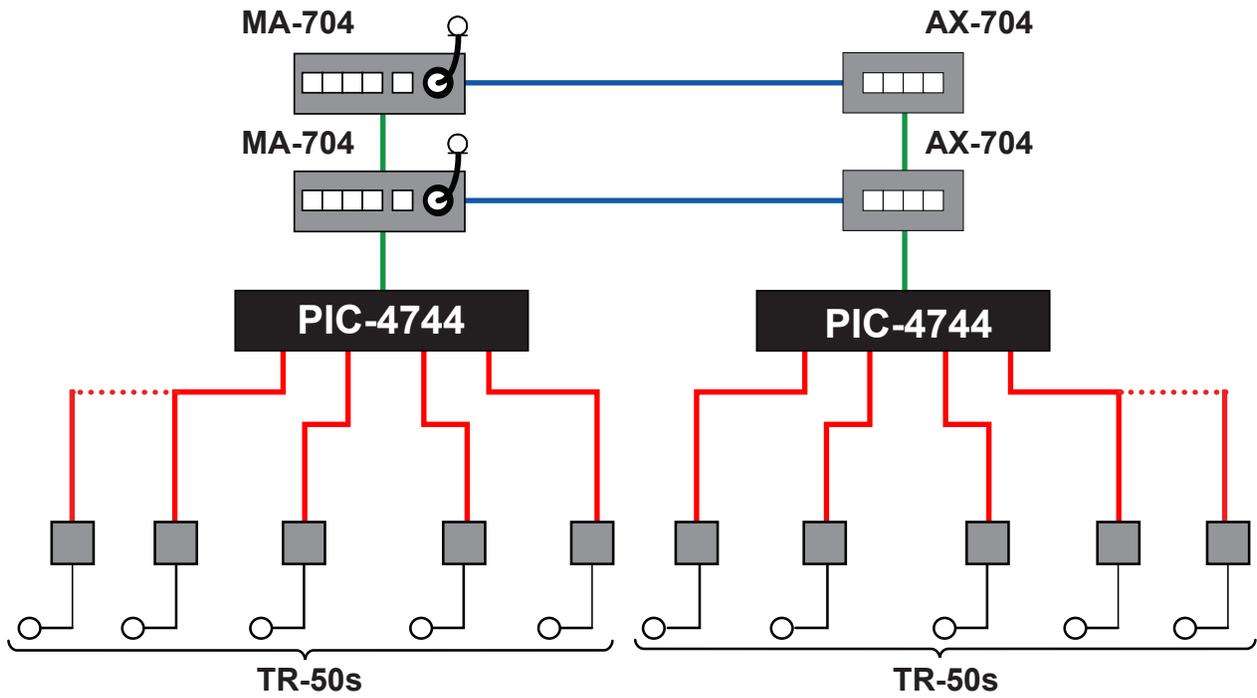


Figure 2-5: Two Access Locations to up to Eight Independent Talent Positions

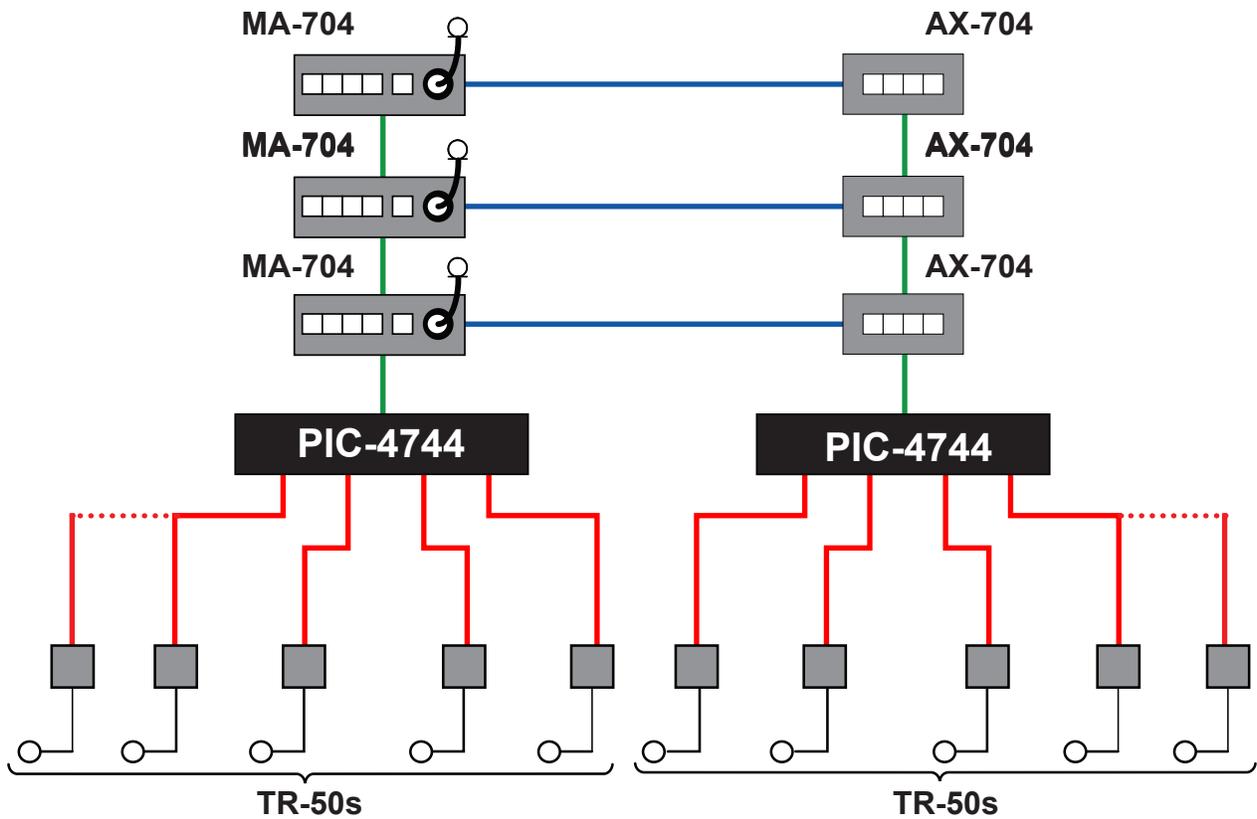


Figure 2-6: Two Access Locations to up to Eight Independent Talent Positions

## INTERCONNECT CABLING

Use one multi-pair cable for each group of four channels when connecting the IFB lines between the access stations and their associated component (other MA-704 or AX-704 units and the PIC-4744). This cable must have four separately shielded pairs of conductors to prevent crosstalk. Suitable cable types are: *Alpha #6054*, *Belden #8725* or *#9330* and *Mogami #2602*.

As noted in the previous section, the resistance buildup in both the power and common (or ground) conductors must be kept to a minimum for proper operation. Resistance buildup in the common conductor will also increase crosstalk. Follow the diagram below for best results in connecting the cable to the XLR connectors.

Notice that all four of the spare conductors in each pair are tied together to Pin 2 (DC power), and all shields are tied together to Pin 1 (common). This arrangement minimizes resistance buildup effects in long cable runs.

Clear-Com has ready-made cables in **25ft** (# IC-25-6), **50ft** (# IC-50-6), and **100ft** (# IC-100-6) length to fit the cabling and system architecture needs.

### 6 Pin XLR Connector

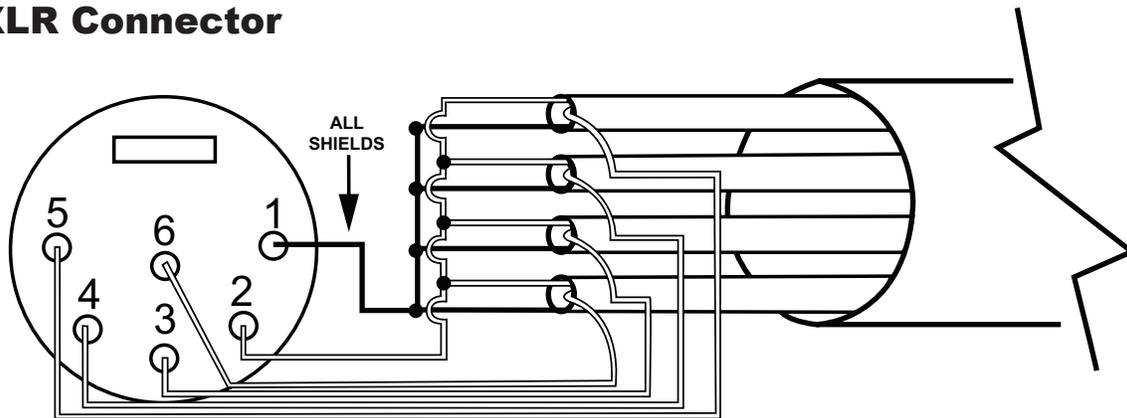


Figure 2-7: XLR6 Cable Wiring

In a system with more than four talent positions (one group), the interrupt (cue) audio from the MA-704's mic preamp and the ALL control signal must be bussed from each MA-704 to each AX-704 unit. A two-conductor shielded mic cable with 1/4-inch TRS phone plugs at each end is used for this purpose. Refer to **Figure 2-8** for pin-out details.

Connect single channel talent receivers to the PIC-4744 using standard two-conductor mic cable. Only two conductors are necessary for cabling between the power supply and any PIC-4744 unit. If any section of this cable is more than a few feet long, be certain to use heavy-gauge wire.

**HELPFUL TIP:** An RS-701 may be used as a monitoring station and communicate with Talent if required. Pressing the **TALK** button will dip the program if the "Call-On" talk function is enabled. Otherwise, you will need to press the **CALL** button to dip the program. The Wet IFB line operates in the same manner as a standard Clear-Com PL line.

# SYSTEM CONNECTION

1. Determine the architecture for your IFB system.
2. Decide upon a location for the PIC-4744(s).
3. Connect the PIC-4744(s) to Clear-Com power supply(s) such as the PS-702 or PS-704.
4. Connect the program sources(s) to the PIC-4744(s) as required. A balanced program source is connected to pins 2 and 3 of the program input. The common pin can be connected to the common or ground point of the source, if necessary, to eliminate any residual hum. If a single-ended source is used, either pin 2 or 3 must be connected to the common point of the source. The “high” side is connected to the other pin (2 or 3).
5. Use standard multi-pair shielded cables and two-conductor shielded mic cables to interconnect the access stations as described in the preceding section.
6. Route all cables from the access locations and the talent receivers to the PIC-4744(s) using either or both of the methods discussed in the previous section. Pin assignments for the rear panel IFB XLR connectors are: Pin 1, Common; Pin 2, power; Pins 3–6, talent channels 1–4 respectively.
7. Route cables away from heavy AC power sources such as lighting panels, coiled cables carrying electricity or electric motors.
8. In permanent installations, cables should be installed in accordance with approved local building codes.

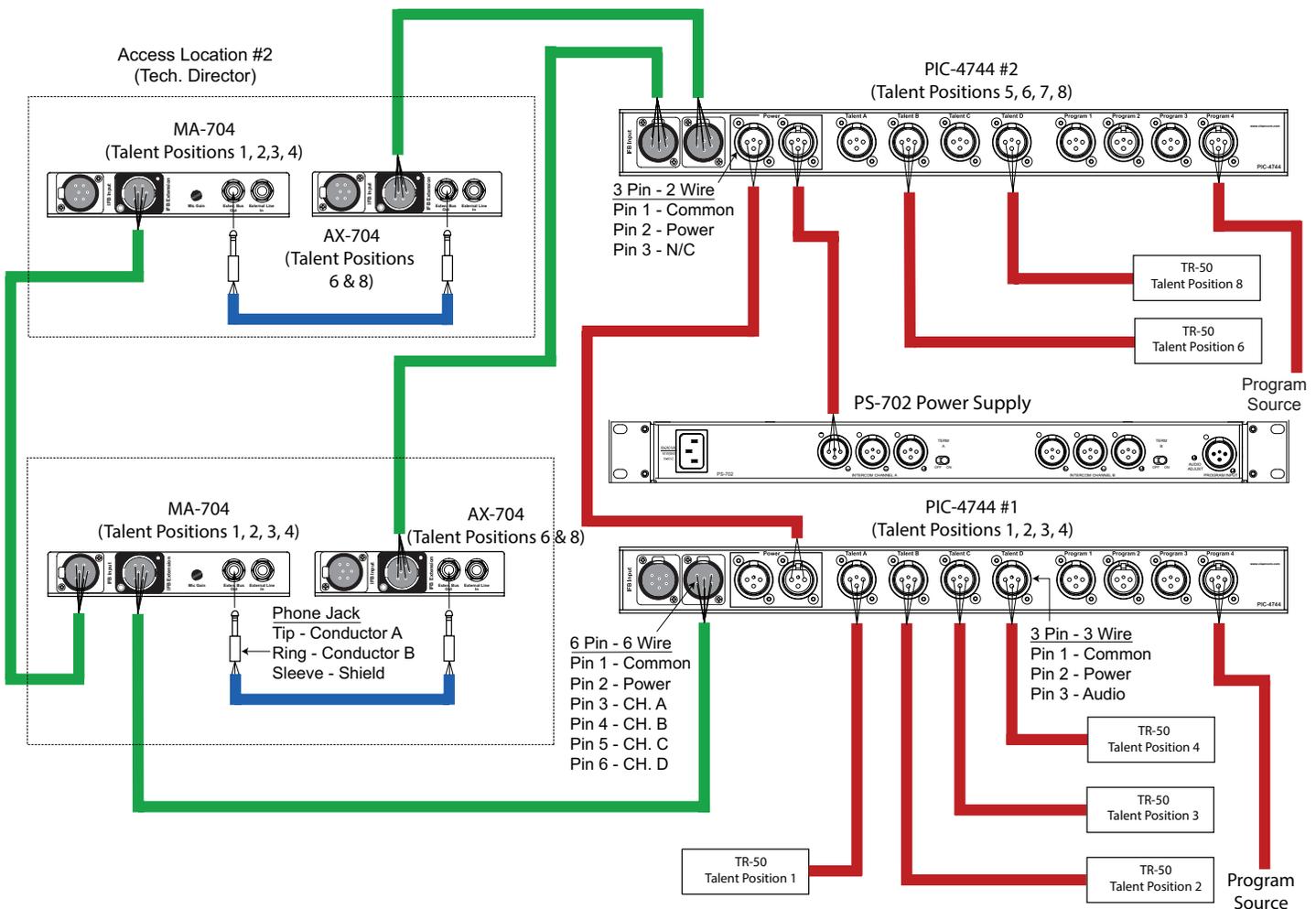


Figure 2-8: IFB Wiring Example

**Important:** The TRS audio cable (displayed in blue) connects the MA-704 “External Bus Out” to the AX-704 “External Bus Out”.

TRS Audio Cable
6-Pin Control Cable
3-Pin XLR Cable

# PHYSICAL MOUNTING

The PIC-4744 is designed for mounting in a standard 19-inch rack. It requires only one 1.75-inch rack space, and is 7.5-inches deep.

The MA-704 and AX-704 may be mounted in a console or desk, or in a standard 19-inch rack using the optional model CEP-RK rack kit. Refer to the diagrams below for mounting dimensions when installing in a desk or console. There are no special constraints on relative positioning of MA and AX units, though it is expected that the extension bus cable (the one with phone plugs) will be no more than 10 feet (normally 18 inches long). Be sure to make allowance for the XLR connectors to be plugged into the back of each access station.

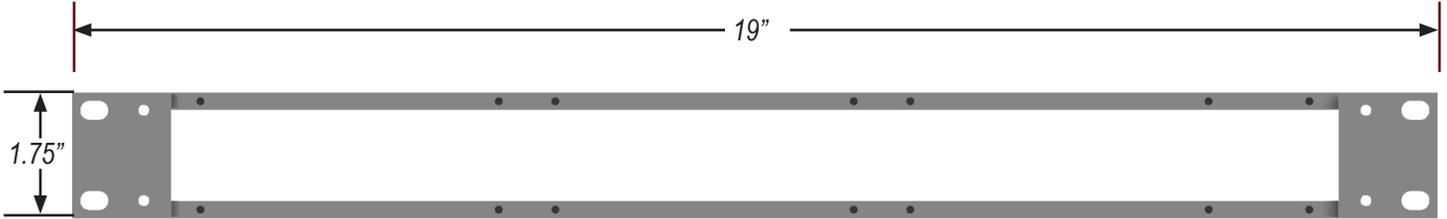


Figure 2-9: CEP-RK Rackmount Kit Dimensions

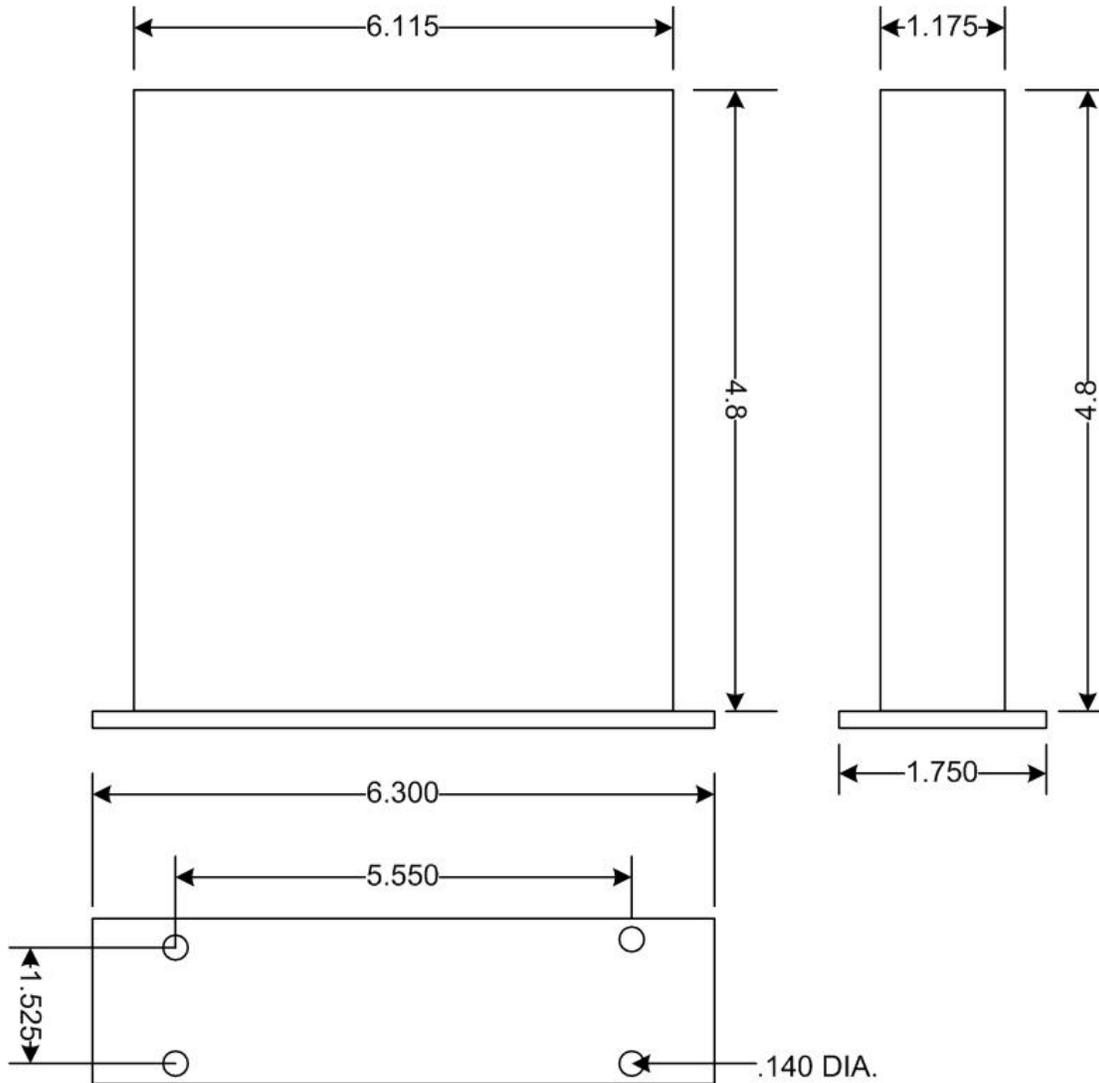


Figure 2-10: MA-704 Mounting Dimensions

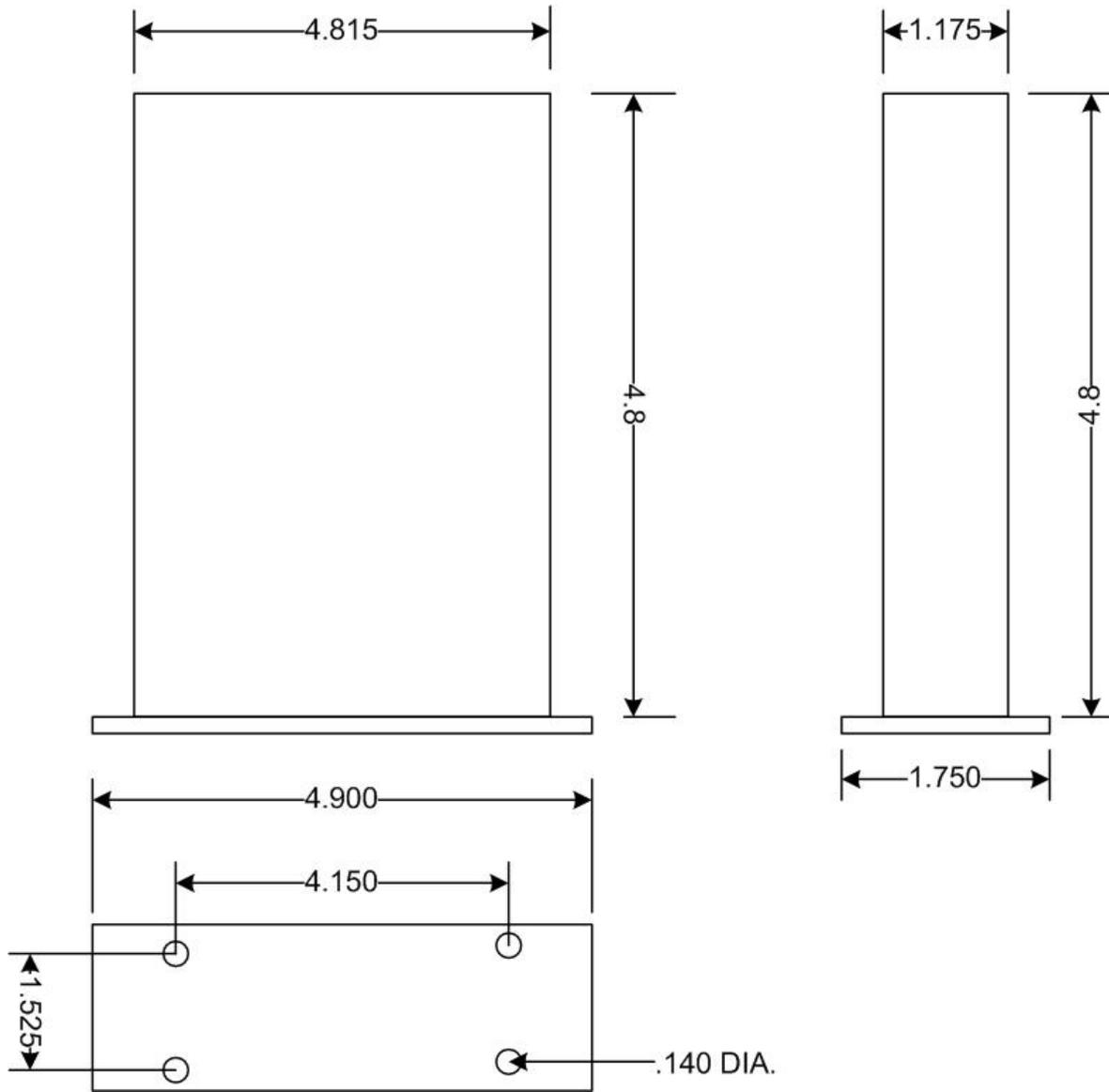
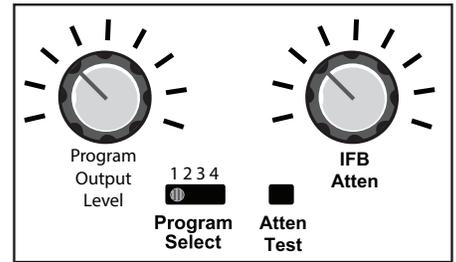


Figure 2-11: AX-704 Mounting Dimensions

## SETUP AND SYSTEM CHECK

After program sources are connected to the appropriate XLR jacks on the back panel, assign them at the PIC-4744 to the talent channels with the Program (Source) select switches for each channel's talent feeds (see **Figure 1-2**). Set the Program Select switch to select source 1, 2, 3 or 4.

Set the attenuation (or dip) of the program feed during cuing with the attenuation adjustment trims (see **Figure 1-2**). They can be set from no attenuation (fully CW) to greater than 50 dB (fully CCW).



Before adjusting the **Program Output Level**, the volume at the **Talent Receivers** must be adjusted (via the control on the Receiver) for a comfortable interrupt (cue) audio balance in the earpiece or headset while someone is cuing that talent position from one of the access locations.

The Program Output Level controls permit use of program levels ranging from  $-20$  dBu to  $+20$  dBu. At full clockwise rotation, the gain from program input to the IFB line is approximately unity. So at maximum gain setting, a program level of  $-20$  dBu will be roughly the same volume on the IFB line as the interrupt audio. If the program source level is around 0 dBu, the controls will have to be set near full counter-clockwise rotation to match the interrupt (cue) audio level on the IFB lines.

The only adjustment possible at the MA-704 is a trim ( $\pm 5$  dB) of the mic gain found on the back plane.

Adjusting this gain should be necessary only in unusual circumstances, because of the mic preamp's limiter.

## MAINTENANCE

The table of possible problems on the next page, which generally involves system wiring, covers only the most likely problems. In any troubleshooting effort, keep these points in mind:

1. The power for all units in the system is routed from the power supplies through the PIC-4744.
2. All access stations (MA and AX units) and the talent receivers are connected across the IFB lines in a bridging configuration (high impedance).
3. Each IFB line is terminated by its associated PIC-4744. The termination is about 220 Ohms AC, and approximately 5,000 Ohms DC.
4. Three different types of signals are present on the IFB line:
  - a. Interrupt audio, which originates from an access station's microphone.
  - b. Program audio, from the associated PIC-4744.
  - c. Interrupt control signal, a DC voltage which also originates at an access station.
5. The interrupt (cue) audio and all control signals for operation of the AX-704 stations at any given location are supplied by the MA-704 station at that location.
6. Using a Wet output, a Clear-Com beltpack may be used for troubleshooting by pressing the CALL button, causing the program audio to dip.
7. An RS-701 may be used as a monitoring station and communicate with Talent if required. Pressing the **TALK** button will dip the program if the "Call-On" talk function is enabled. Otherwise, you will need to press the **CALL** button to dip the program. The Wet IFB line operates in the same manner as a standard Clear-Com PL line.

## TROUBLESHOOTING TIPS

SYMPTOM	CAUSE	SOLUTION
Channel access button not lit or too dim.	(a) No power. (b) Insufficient power	(a) Check that power supply is operating and connected to the PIC-4744  (b) Increase power capacity or connect fewer stations on each cable run.
Access button won't light amber when engaged at any station.	(a) Excessive DC load on affected IFB line. (b) IFB line shorted in cabling.	(a) Isolate and replace faulty module on affected line.  (b) Isolate and repair cable.
Access button remains lit in amber after being released.	IFB line not terminated.	Insure that station connections to PIC-4744 are intact.
No cue from an AX-704 station.	(a) Associated MA-704 not operating. (b) Faulty or missing connection to MA-704 or AX-704 unit.	(a) Insure that MA-704 is connected to a PIC-4744.  (b) Verify connection of extension bus to affected AX-704 unit.
Hum or buzz from program (program control affects loudness).	Mis-connection of program source to output.	Program inputs are balanced. If single-ended source is used, one of inputs must be referenced to common.
Interrupt is constantly engaged.	Pin 2&3 of that module are shorted.	Isolate and repair the faulty cabling.

# SPECIFICATIONS

## PIC-4744, AX-704 and MA-704 Technical Specifications

dBu is an absolute measurement. 0 dBu is referenced to 0.775 V RMS.

<b>Panel Microphone Input (MA-704)</b> Input Type Input Impedance Mic Limiter Threshold Mic Limiter Range Output Phantom Power Voltage (unloaded)	Electret $\geq 2K\Omega$ $0dB \pm 3dB$ $\geq 15dB$ 8.0 VDC
<b>Program Line Input</b> Maximum Level before Clipping Input Impedance	$\geq 20dBu$ $< 10K\Omega$
<b>Frequency Response</b> Panel Mic - Talent (MA-704 only) Program Input - Talent Extension Line - Talent	$200 - 18KHz \pm 3dB$ $200 - 18KHz \pm 3dB$ $200 - 18KHz \pm 3dB$
<b>Max Distortion</b> Panel Mic - Talent (MA-704 only) Program Input - Talent Extension Line - Talent	$\leq 0.5\%$ $\leq 0.1\%$ $\leq 0.1\%$
<b>Noise</b> Panel Mic - Talent (MA-704 only) Program Input - Talent Extension Line - Talent	$< -65dBu$ $< -85dBu$ $< -85dBu$
<b>Max Gain</b> Panel Mic - Talent (MA-704 only) Program Input - Talent Extension Line - Talent	$\geq 30dB$ $\geq -14dB$ $-14dB \pm 3dB$
<b>Min Gain</b> Panel Mic - Talent (MA-704 only) Program Input - Talent	$\leq 40dB$ $\leq -45dB$
<b>Power (PIC-4744)</b> Input Voltage Range Input Current	20-30 VDC $< 40mA$ max
<b>Power (MA-704)</b> Input Voltage Range Input Current (Idle) Input Current (Max)	20-30 VDC $\leq 140mA$ $\leq 180mA$

<b>Power (AX-704)</b> Input Voltage Range Input Current (Idle) Input Current (Max)	20-30 VDC <= 120mA <= 150mA
<b>Rear Panel (PIC-4744)</b> IFB Input Power In Power Out Talent Out Program In Wet/Dry Switch	(2) XLR6F (1) XLR3F (1) XLR3M (4) XLR3M (4) XLR3F (4)
<b>Rear Panel Connectors and Controls (MA-704)</b> IFB Input IFB Extension Extension Bus Out External Line In Mic Gain	(1) XLR6F (1) XLR6M (1) ¼" jack (1) ¼ jack (1) Gain adjust
<b>Front Panel Connectors, Controls &amp; Indicators (PIC-4744)</b>	(1) Power indicator LED (4) Program Output Level controls (4) Program Select input switches (4) Attenuation (Atten) Test buttons (4) Audio Attenuation (Atten) Adjust level controls (2) Headset Monitor ports (3.5mm and XLR) (1) Monitor select switch
<b>Front Panel Connectors, Controls &amp; Indicators (MA-704)</b>	(5) Talk buttons (1) ¼" microphone jack socket
<b>Front Panel Controls &amp; Indicators (AX-704)</b>	(4) Talk buttons
<b>Environmental</b>	<b>32 - 122° F (0 - 50° C)</b>
<b>Dimensions (H x W x D)</b>	PIC-4744 1.75 in. x 19 in. x 7.5 in. MA-704 1.75 in. x 6.3 in. x 5.5 in. AX-704 1.75 in. x 4.9 in. x 5.5 in.
<b>Weight</b>	PIC-4744 5.76 lbs. (2.62 kg) MA-704 1.71 lbs. (.78kg) AX-704 1.35 lbs. (.61 kg)
<b>Notice About Specifications</b> While Clear-Com makes every attempt to maintain the accuracy of the information contained in its product manuals, that information is subject to change without notice. Performance specifications included in this manual are design-center specifications and are included for customer guidance and to facilitate system installation. Actual operating performance may vary.	

# GLOSSARY OF TERMS

TERM	DESCRIPTION
<b>3-Pin XLR Cable</b>	A standard XLR mic cable.
<b>6-Pin Control Cable</b>	A standard 6-Pin XLR connectors wired ( <a href="#">see page 14</a> ).
<b>Attn Test</b>	The button that allows the attenuation (DIP) level to be monitored via headset, while adjusting program audio attenuation ( <a href="#">see IFB Attn</a> ).
<b>AX-704</b>	A four button panel (connected to <a href="#">MA-704</a> ) that allows up to four additional Talent positions to be added to the IFB system.
<b>IFB / Interrupted Fold Back</b>	A method of using a single channel or cable to provide intermittent one-way communication from the director to an on-air talent. The existing program audio signal is dimmed.
<b>IFB Attn</b>	Program audio attenuation (DIP) level adjustment. It controls the volume in Talent's earpiece when director is communicating to talent.
<b>MA-704</b>	The talent access station from which a Director addresses any one of the four Talents (or all Talents) connected to <a href="#">PIC-4744</a> .
<b>Program Output Level</b>	Audio level output to a Talent's earpiece.
<b>Program Select</b>	A switch that assigns one of four programs to a Talent's earpiece.
<b>Talent</b>	The person wearing the earpiece through which one-way communication from the director is heard.
<b>TRS Audio Cable</b>	An audio cable using Tip/Ring/Sleeve connectors (also known as 1/4" phono plugs).
<b>Wet/Dry Switch</b>	The <a href="#">Wet</a> position sends phantom power to Talent beltpacks. The <a href="#">Dry</a> position is used if the Talent equipment does not require a connection to a power source.

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## EMC AND SAFETY

The PIC-4744, MA-704 and AX-704 products meet all relevant CE and FCC specifications set out below:

IEC/EN/CSA/UL 60950-1 : 2005; Information technology equipment – Safety – Part 1: General requirements

EN 55022:2010 Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement

EN 55024:2010 Information technology equipment – Immunity disturbance characteristics – Limits and methods of measurement (C I S P R 24:2010)

Low Voltage Directive (LVD) 2014/35/EU

Electro-magnetic Compatibility (EMC) Directive 2014/30/EU



## WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

The European Union (EU) WEEE Directive (2002/96/EC) places an obligation on producers (manufacturers, distributors and/or retailers) to take-back electronic products at the end of their useful life. The WEEE Directive covers most Clear-Com products being sold into the EU as of August 13, 2005. Manufacturers, distributors and retailers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

### Instructions for Disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging which indicates that this product was put on the market after August 13, 2005 and must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of the user's waste equipment by handing it over to a designated collection point for the recycling of WEEE. The separate collection and recycling of waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local authority, your household waste disposal service or the seller from whom you purchased the product.



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