

**IWA SERIES
In-Wall Powered Mixers**

Operation Manual

advantage ®

IWA SERIES

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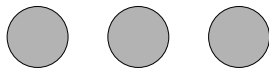
INTRODUCTION

The **IWA Series** of In-Wall Powered Mixers provides a 6 input/2 output mic/line mixer, 9-band graphic equalization, and three choices of output amplification. Single 60 Watt, Dual 60 Watt, or single 120 Watt power amplifiers are available, each with output taps for standard and distributed speaker systems. Optional remote control may be added for controlling mixer output levels and relays. Designed for in-wall or surface mounting, with integral security cover, the IWA Series carries an Advantage Five-Year "Gold Seal" Warranty.

IWA Series features include:

- ◆ five balanced microphone/line level mixer input channels
- ◆ one stereo summing line level mixer input channel
- ◆ high & low equalization on each mixer input channel
- ◆ independent main & zone level controls on each channel
- ◆ main and zone mixer outputs with master level controls
- ◆ 9-band graphic equalization for amplified outputs
- ◆ three models provide 60W, dual 60W, or 120W amplification
- ◆ output taps for standard and distributed speaker systems
- ◆ mixer inputs & outputs provided on front panel barrier strip
- ◆ +24 Volt phantom power selectable for microphone inputs
- ◆ optional remote control of mixer output levels, plus relays
- ◆ optional isolation transformers available for mixer inputs
- ◆ "in-wall" or "surface-mount" chassis with security cover
- ◆ covered by Advantage Five-Year "Gold Seal" Warranty

FRONT PANEL FEATURES



power

Channels

advantage

IWA 6/60D POWERED MIXER

BIAMP SYSTEMS

1 2 3 4 5 6

high high high high high high

low low low low low low

zone zone zone zone zone zone

main main main main main main

1 2 3 4 5 6

main equalizer

+15 0 -15

63 125 250 500 1k 2k 4k 8k 16k

zone equalizer

+15 0 -15

masters

main zone

mic com line

1 2 3 4 5 6

left com right

main out EQ in com

zone out EQ in com

Main Zone

Outputs

FRONT PANEL FEATURES

High: These controls adjust the high-frequency equalization (Treble) for the channels. High equalization is a shelving type filter, which provides $\pm 15\text{dB}$ of gain adjustment for frequencies above 15kHz. Equalization is used to compensate for tonal differences which exist between various input signals.

Low: These controls adjust the low-frequency equalization (Bass) for the channels. Low equalization is a shelving type filter, which provides $\pm 15\text{dB}$ of gain adjustment for frequencies below 50Hz. Equalization is used to compensate for tonal differences which exist between various input signals.

Zone: These controls adjust the level of channel signals sent to the Zone Master control. Zone controls are used to create an independent mix for an auxiliary sound system. On model IWA 6/60D, this mix is normally sent (via the Zone Master) to the Zone Equalizer and the Zone Amplifier (see Zone Output).

Main: These controls adjust the level of channel signals sent to the Main Master control. Main controls are used to create an independent mix for the primary sound system. This mix is normally sent (via the Main Master) to the Main Equalizer and the Main Amplifier (see Main Output).

Inputs (Channels 1~5): These screw terminals provide either microphone or line level input to Channels 1~5. Mic inputs accept signals from balanced low-impedance microphones. Line inputs accept signals from balanced (or unbalanced) line level sources. Balanced input (Mic or Line) is wired high to (+), low to (-), and ground to (com). Unbalanced Line input is wired high to (+) and ground to (-), using 2-conductor shielded cable with the shield connected to ground only at one end. Phantom Power (+24V) and Input Isolation Transformers are available for the Mic inputs (see Options on page 8).

Inputs (Channel 6): These screw terminals provide a stereo line level input to Channel 6. This input accepts unbalanced signals from line level sources, and is wired with the left & right inputs sharing a common ground terminal (com). Stereo signals are summed together into a mono signal at this input. This input will also accept unbalanced mono signals, which should be wired with high to (left & right) and ground to (com). Two independent mono signals may be connected here (wired to left & right respectively), which will be summed together providing common channel equalization and level controls.

Main Master: This control adjusts the overall level of signals sent (from the channel Main controls) to the Main Output connector. From the factory, this signal is then routed to the Main Equalizer and Amplifier. Remote control of mixer output levels is also available (see Remote Control on page 9).

Zone Master: This control adjusts the overall level of signals sent (from the channel Zone controls) to the Zone Output connector. On model IWA 6/60D, this signal is then routed to the Zone Equalizer and Amplifier. Remote control of mixer output levels is also available (see Remote Control on page 9).

Main Output: These screw terminals provide access to the mixer Main output, and to the Main Equalizer input. From the

factory, a jumper wire between "Main Out" and "EQ In" routes signal from the Main Master control to the Main Equalizer and the Main Amplifier. Signal processing may be inserted between the mixer and the equalizer by first removing the jumper wire, then wiring "Main Out" to the processor input and "EQ In" to the processor output, using a common ground (com). To access Main output from the mixer (to feed an auxiliary system or recorder) wire high to "Main Out" and ground to (com), *without removing the jumper wire*. When the jumper wire is removed, the mixer output and equalizer input are separated, and may be used independently. All Main Output connections are unbalanced, and are for line level signals only.

Zone Output: These screw terminals provide access to the mixer Zone output. On model IWA 6/60D, a jumper wire between "Zone Out" and "EQ In" routes signal from the Zone Master control to the Zone Equalizer and the Zone Amplifier. Signal processing may be inserted between the mixer and the equalizer by first removing the jumper wire, then wiring "Zone Out" to the processor input and "EQ In" to the processor output, using a common ground (com). To access Zone output from the mixer (to feed an auxiliary system or recorder) wire high to "Zone Out" and ground to (com), *without removing the jumper wire* (model IWA 6/60D only). When the jumper wire is removed, the mixer output and equalizer input are separated, and may be used independently. All Zone Output connections are unbalanced, and are for line level signal only.

Main Equalizer: This 9-band graphic equalizer adjusts the frequency response (tonal balance) of signals sent to the Main Amplifier, to compensate for room acoustics. Each control provides $\pm 15\text{dB}$ boost/cut at the designated center frequency. From the factory, the Main Equalizer receives signal from the mixer Main output. However, the Main Equalizer may instead be wired to receive signal from an external source (see Main Output above).

Zone Equalizer (model IWA 6/60D only): This 9-band graphic equalizer adjusts the frequency response (tonal balance) of signals sent to the Zone Amplifier, to compensate for room acoustics. Each control provides $\pm 15\text{dB}$ boost/cut at the designated center frequency. From the factory, the Zone Equalizer receives signal from the mixer Zone output. However, the Zone Equalizer may instead be wired to receive signal from an external source (see Zone Output above).

Power Switch: This switch applies power to the unit. *Caution: complete all connections & installation before turning power on.*

Circuit Breaker: When open, this circuit breaker will show a red switch face. To reset: turn power off, depress the black switch face into its normal position, then turn power back on. If the circuit breaker continues to open after resetting, turn the power off and contact Biamp Systems for service.

INSTALLATION

Backbox Installation: Backboxes are available for mounting the IWA Series chassis in the wall, flush with the finished wall surface ("IWB" - In Wall Box), or for mounting on the surface of the wall, with a 4" projection ("SMB" - Surface Mount Box). The mounting location should be capable of supporting a weight of at least 75 pounds. Surface mounted units ("SMB") should be located near a dedicated AC power source, capable of providing the required power for the unit being installed. When flush mounted ("IWB"), the front surface of the backbox must be flush with the finished surface. Failure to do so may cause improper fit of the chassis (or security cover).

Either IWA Series backbox ("IWB" or "SMB") should be connected to electrical service (15 Amp max.) by a licensed electrician, to ensure compliance with local electrical code. Cables should route through appropriate conduit, raceway, or service entrance cable fitting.

Mount the backbox with the internal cable tray assembly located on the right side. The "IWB" can be mounted between standard 16" center studs, using the six mounting holes on each side of the box. The "SMB" can be mounted onto standard 16" center studs, using the four outer-most "keyhole" slots, or onto other suitable surfaces, using the six inner-most "keyhole" slots.

Wire Routing: Wiring that carries signals of dramatically different voltages must be separated by as much distance as possible. *Microphone and line level wiring should never be run with loudspeaker or power wiring. To reduce the potential of crosstalk or oscillations that could damage the amplifier, never bundle the microphone and line level cables with loudspeaker or power cables.*

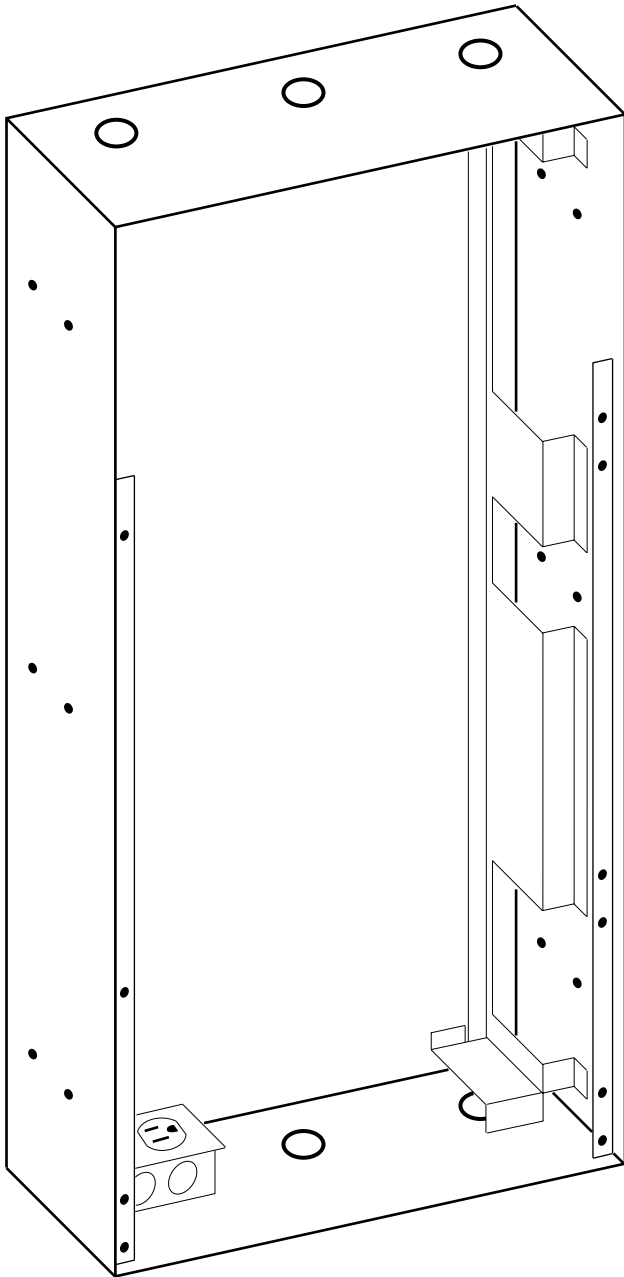
It is recommended that all loudspeaker wiring enter the backbox at the upper right "knock-out", and route through the cable tray. It is recommended that wiring for the microphone and line inputs should enter the backbox at the lower right "knock-out", and route under the bottom edge of the chassis.

NOTE: AC power should enter the backbox at the bottom left "knock-out" (a standard AC duplex outlet, with enclosure and cover, is provided). *For proper system grounding, the duplex outlet ground, enclosure, backbox, and conduit or raceway must be bonded together and connected to earth ground. For safety and conformance to codes, this bonding of all metal surfaces should be performed by a qualified electrician during installation of the backbox.*

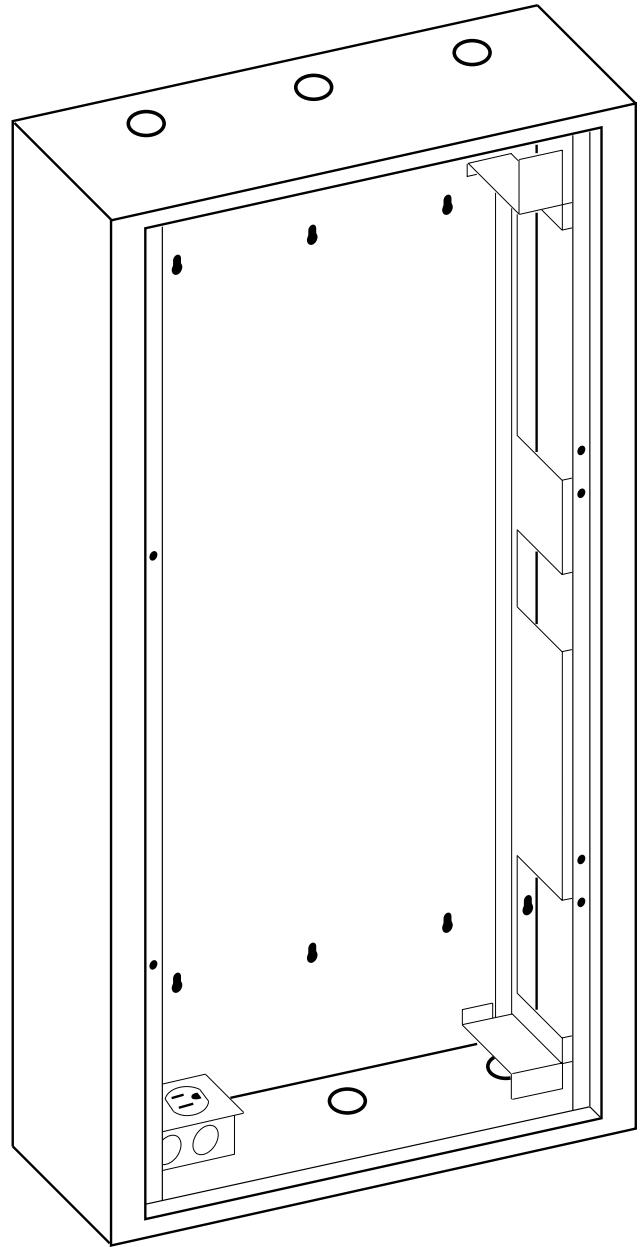
The microphone and line level inputs require shielded wire for proper operation. Loudspeaker wiring may be unshielded. Loudspeaker wire should be of a heavy gauge, to prevent cable losses from degrading the system capabilities. Cable runs using 14 gauge wire should not exceed 90 feet (for 8 ohm operation) or 45 feet (for 4 ohm operation). Longer cable lengths require heavier gauge cable (smaller wire number). Constant voltage outputs (25, 70.7, or 100 volts) can tolerate lighter gauge cables or longer cable runs (check an appropriate line loss chart for specific application requirements).

INSTALLATION

IWB
(In Wall Box)



SMB
(Surface Mount Box)



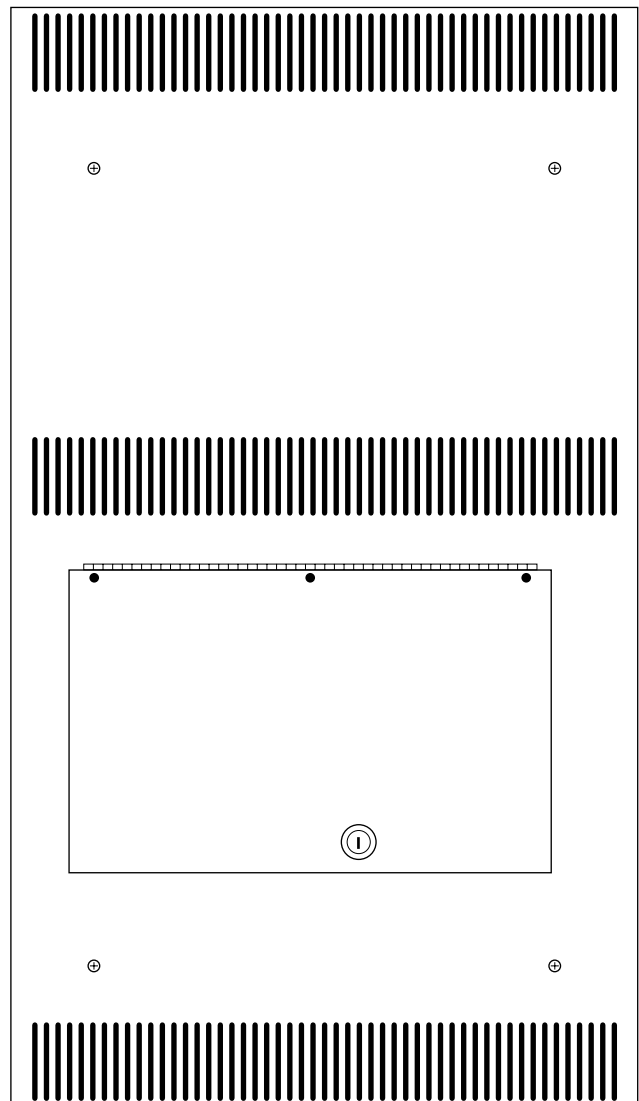
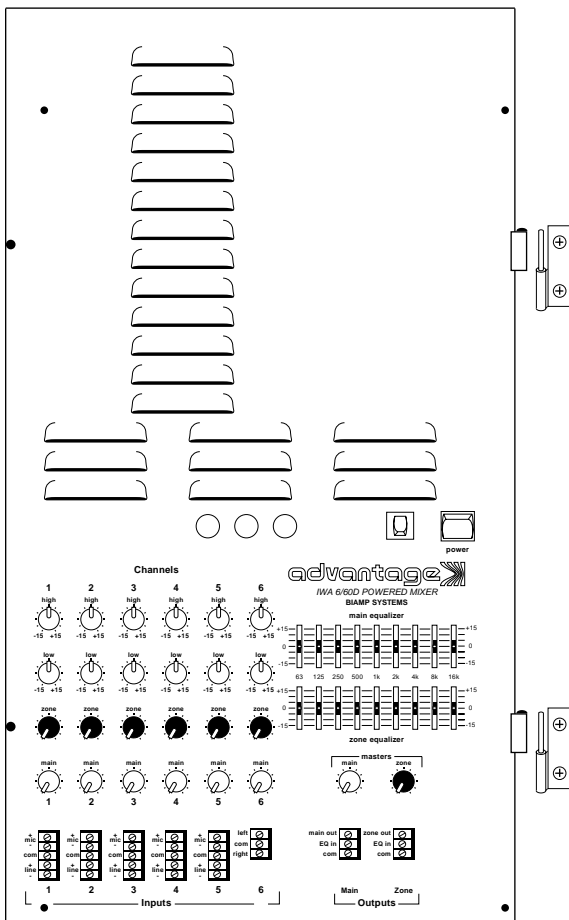
INSTALLATION

Chassis Installation: The chassis front panel includes two male hinges, which must be secured to the right side-rail of the backbox (use the screws, lock-washers, and nuts provided). Be sure to install the male hinges with the pin pointing up and towards the inside of the backbox. The chassis front panel (with two female hinges on its right side) is then lowered onto the male hinges. This allows the chassis to swing open for access to internal connections, modifications, and for servicing. It is recommended that all loudspeaker wiring enter the backbox at the upper right "knock-out", and route through the cable tray. It is recommended that wiring for the microphone and line inputs should enter the backbox at the lower right "knock-out", and route under the bottom edge of the chassis. Mounting hardware for the security cover must be installed before proceeding (see below). Install the two speed nuts (provided with chassis) in the holes on the left side-rail of the backbox, directly across from the hinges. Two tapping screws with washers (provided with chassis) install through the holes in the left side of the chassis front panel (into the speed nuts) to secure the chassis to the backbox.

Security Cover Installation: Before the chassis front panel is secured to the backbox, mounting hardware for the security cover must be installed. The security cover is attached to the chassis front panel using four stand-offs (provided with chassis). First, the stand-offs must be secured to the chassis front panel, using four screws with lock-washers. Be sure to use the chassis front panel holes which align with the holes in the security cover. Once the chassis is secured to the backbox, the security cover is then secured to the four stand-offs, using the remaining four screws with lock-washers. The security cover also includes keys for the locking/hinged control access panel.

CHASSIS FRONT

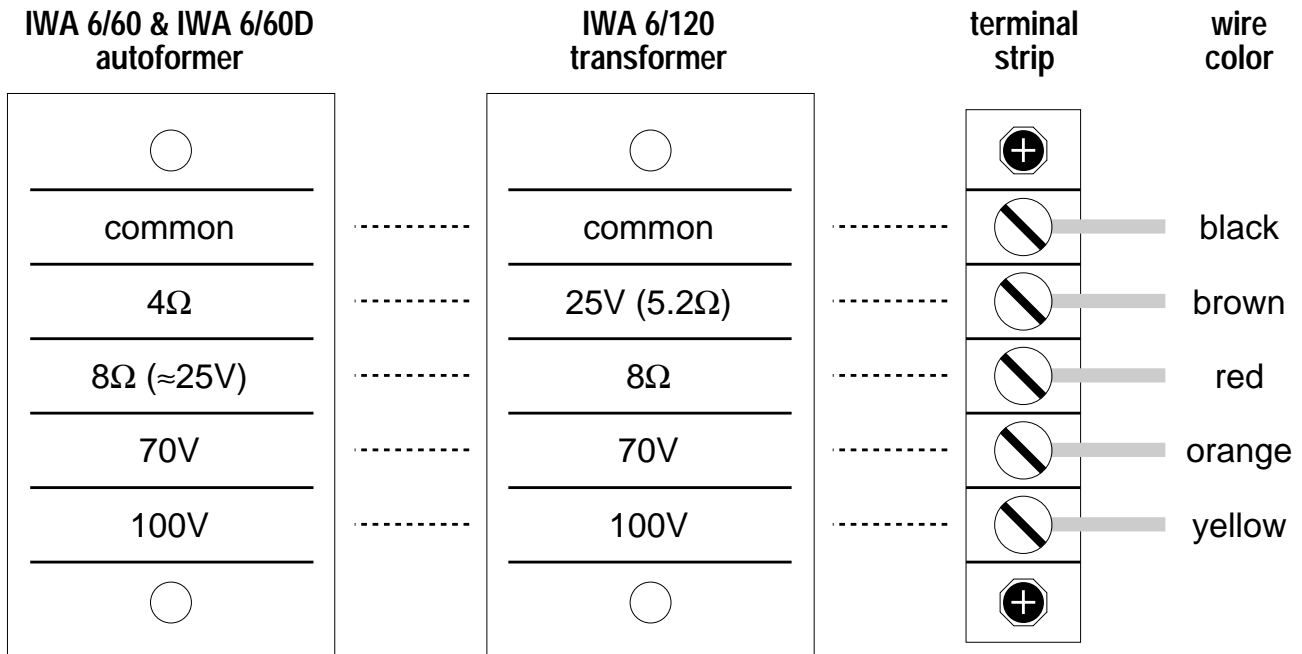
SECURITY COVER



INSTALLATION

Loudspeaker Wiring: Model IWA 6/60 provides a single 60 Watt amplifier (Main), model IWA 6/60D provides two 60 Watt amplifiers (Main & Zone), and model IWA 6/120 provides a single 120 Watt amplifier (Main). To help offset the inductance of certain speaker matching transformers, all amplifiers include a high-pass filter (12dB/octave @ 60Hz). To help protect speakers against catastrophic amplifier failure, all amplifiers include a 4 Amp Normal-Blow (4A NB) output fuse. Loudspeaker wiring is connected to the screw-terminal block(s) located on the inside of the chassis front panel, at the upper left-hand corner. These screw-terminal blocks accept wires of #12 AWG (or smaller) gauge, or 1/4" spade-lug wire connectors. In models IWA 6/60 and IWA 6/120 a single screw-terminal block is provided for the Main amplifier. In model IWA 6/60D two screw-terminal blocks are provided, with the Main amplifier terminals above and the Zone amplifier terminals below. The following table and diagram show proper loudspeaker connections for the three models.

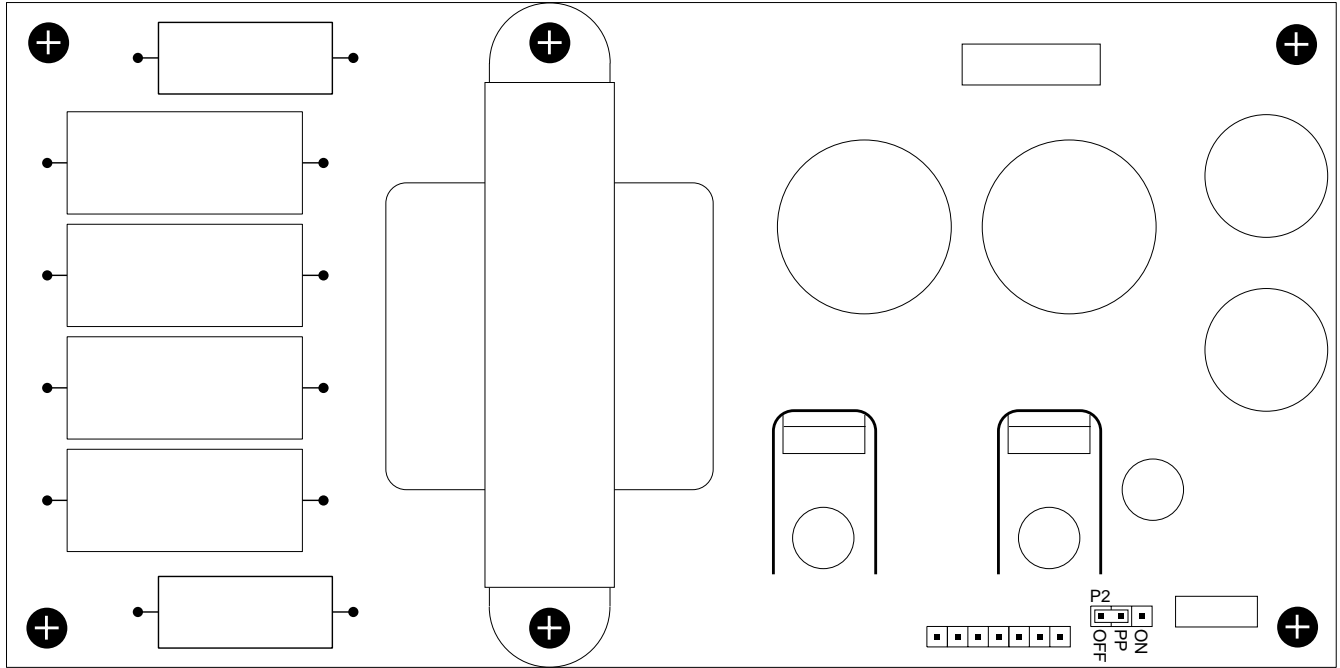
<u>Wire Color</u>	<u>IWA 6/60 & IWA 6/60D</u>	<u>IWA 6/120</u>
Black	Common	Common
Brown	4 Ohms	25 Volts (5.2 Ohms)
Red	8 Ohms (\approx 25 Volts)	8 Ohms
Orange	70.7 Volts	70.7 Volts
Yellow	100 Volts	100 Volts



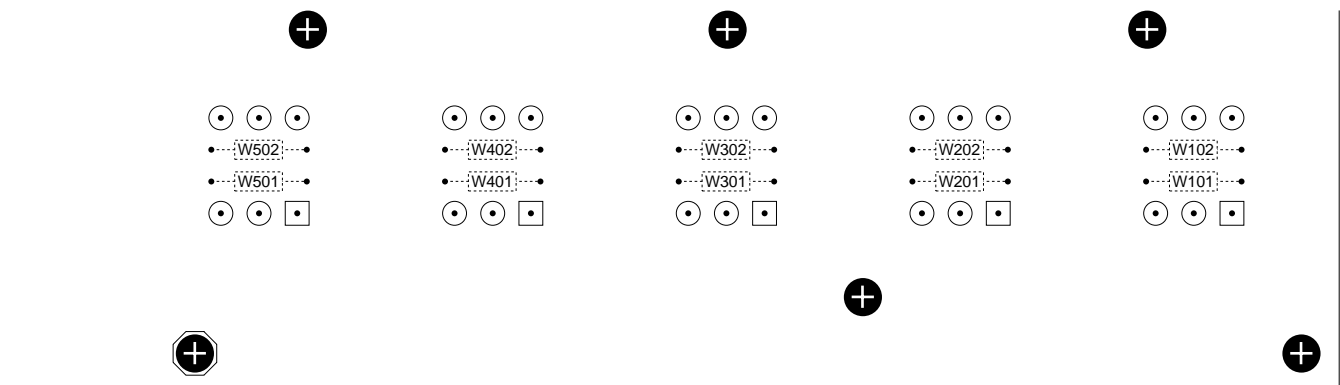
Wire Routing: Wiring that carries signals of dramatically different voltages must be separated by as much distance as possible. *Microphone and line level wiring should never be run with loudspeaker or power wiring. To reduce the potential of crosstalk or oscillations that could damage the amplifier, never bundle the microphone and line level cables with loudspeaker or power cables.* It is recommended that all loudspeaker wiring enter the backbox at the upper right "knock-out", and route through the cable tray. Loudspeaker wire should be of a heavy gauge, to prevent cable losses from degrading the system capabilities. Cable runs using 14 gauge wire should not exceed 90 feet (for 8 ohm operation) or 45 feet (for 4 ohm operation). Longer cable lengths require heavier gauge cable (smaller wire number). Constant voltage outputs (25, 70.7, or 100 volts) can tolerate lighter gauge cables or longer cable runs (check an appropriate line loss chart for specific application requirements).

OPTIONS

Phantom Power: Phantom Power for condenser microphones is available by moving the "PP" jumper (P2), located on the lower right of the power supply printed circuit board (accessible from the rear of the chassis), from the OFF position to the ON position (see diagram below). In the ON position, this jumper applies 24 Volts DC phantom power to all of the microphone inputs simultaneously.



Mic Input Transformers: Mic Input Transformers are available as a user installed option. Positions are provided on the lower right of the mixer printed circuit board (accessible from the rear of the chassis), for installation of the transformers (see diagram below). Any or all of Channels 1~5 may have transformers installed. To install transformers, solder them into the respective positions, with Pin 1 (black stripe) located at the square pad. When transformers are installed, two jumpers (0 ohms resistors) must be removed from each channel. These jumpers (W101 & W102 for Channel 1; W201 & W202 for Channel 2; etc.) are located on the component side of the mixer printed circuit board, and require disassembly of the mixer printed circuit board for removal. Biamp Systems Input Transformer #909-0010-01.



REMOTE CONTROL

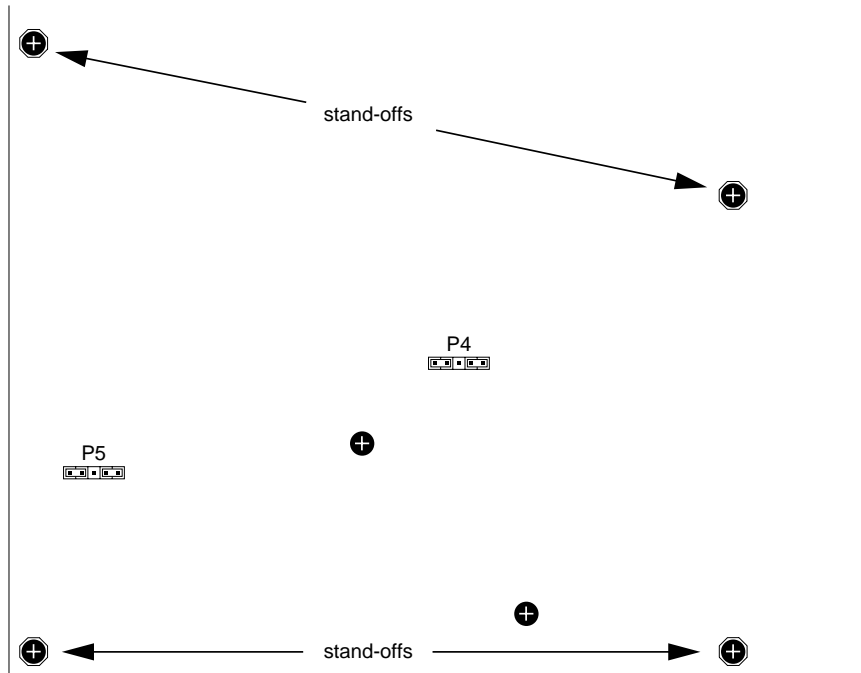
REMOTE CONTROL PCB

The IWA Series can be remotely controlled via infrared, wall-mount, or custom controls (see pages 10 & 11). Remote control capability is provided by an optional (user installed) Remote Control PCB (printed circuit board). The Remote Control PCB allows remote control of Main & Zone Output levels, as well as switching of three relays (included on circuit board). Connections are provided for up to two remote controls, which may then be assigned the necessary functions for a specific location or application. A non-volatile memory allows storage & recall of up to eight presets (levels & relays).

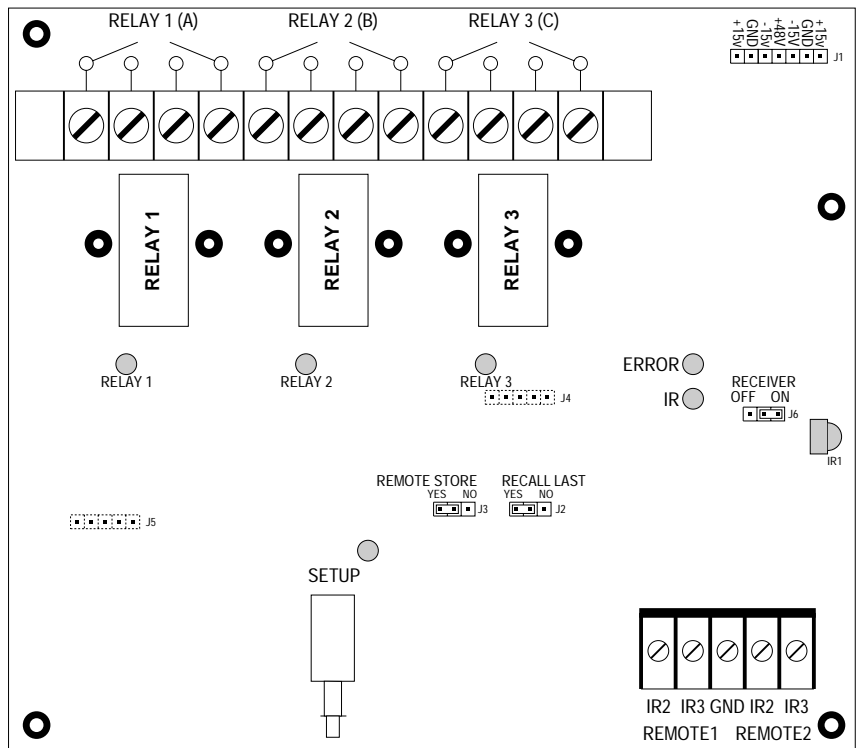
The Remote Control PCB is installed at the lower-left of the mixer PCB (see diagrams). Remove two jumpers from both P4 & P5 (on mixer PCB), and screws from the four stand-offs. Mate receptacles J4 & J5 (on rear of Remote Control PCB) to P4 & P5, and secure the PCB with the four screws. A power wire harness is tie-wrapped to the mixer wire harness. Cut tie-wrap and push connector onto J1 (at upper-right of PCB). Connections for remote controls are provided at the lower-right. The "normally open" contacts for three DPDT relays are provided at the upper-left ("normally closed" contacts are provided as wiring pads next to each relay). The relay contacts are rated for 5 Amps max.

The Remote Control PCB provides an infrared receiver at the right edge (IR1) for "set-up" purposes (see page 10). After set-up, this receiver may be disabled via the adjacent jumper (J6). Two jumpers are provided near the center of the PCB (J2 & J3). Once presets have been stored, jumper J3 allows remote control "store" buttons to be disabled. When power is turned on, the most current settings will be recalled, however, jumper J2 allows preset #1 to be recalled instead. LEDs indicate status of each relay, as well as reception and errors from remote controls. A switch and LED (at bottom edge) are used to enter "set-up" mode.

MIXER PCB



REMOTE CONTROL PCB



REMOTE CONTROL

SET-UP

The Remote Control PCB provides connections for two remote controls (Remote 1 & Remote 2). From the factory, universal control (recall presets, store presets, switch relays, Main level, and Zone level) is possible from both Remote 1 and Remote 2. However, "set-up" mode allows specific functions to be assigned to Remote 1 and Remote 2 independently. For example, Remote 1 might be assigned to recall presets, switch relays, and adjust Main level, while Remote 2 is assigned only to adjust Zone level. The actual remote controls could then be installed in their respective areas (Main & Zone), providing localized control.

To enter "set-up" mode, and assign specific functions to Remote 1 & Remote 2, press and hold the SETUP button (at bottom edge of Remote Control PCB) while turning on power to the IWA unit. Continue to hold the SETUP button (2 seconds), until the adjacent LED flashes once, then release the button immediately. In "set-up" mode, the ON & OFF buttons (A,B, or C) on a remote control are used to assign functions. There are five possible functions, each of which may be assigned to Remote 1 and/or Remote 2 (see table).

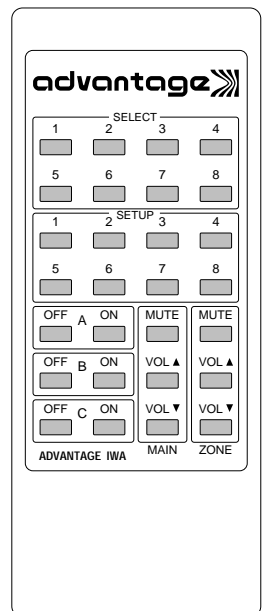
The table shows the exact sequence in which assignments must be made (use the table as a worksheet to plan assignments). Choose either ON or OFF for each function. The IR indicator will flash whenever a selection is made. The ERROR indicator will flash only if a wrong button is pressed. When all ten selections have been made, the SETUP indicator will light (1 second) and the Remote Control PCB will automatically return to normal operation. The Remote Control PCB may be returned to the factory default assignments (universal control) at any time. **CAUTION:** *Returning to factory defaults also erases presets.* To return to factory defaults, press and hold the SETUP button while turning on power. Instead of releasing the SETUP button after the adjacent LED flashes once, continue to hold the button (7 seconds) until the LED flashes twice. Release the button. The LED will light (1 second) and the Remote Control PCB will return to normal operation. **NOTE:** *The SETUP LED will flash occasionally during normal operation. This is only an indication that the Remote Control PCB is automatically storing the current settings in non-volatile memory.*

1) Remote 1 - RECALL PRESETS	OFF	ON
2) Remote 1 - STORE PRESETS	OFF	ON
3) Remote 1 - SWITCH RELAYS	OFF	ON
4) Remote 1 - MAIN LEVEL	OFF	ON
5) Remote 1 - ZONE LEVEL	OFF	ON
6) Remote 2 - RECALL PRESETS	OFF	ON
7) Remote 2 - STORE PRESETS	OFF	ON
8) Remote 2 - SWITCH RELAYS	OFF	ON
9) Remote 2 - MAIN LEVEL	OFF	ON
10) Remote 2 - ZONE LEVEL	OFF	ON

REMOTE CONTROLS

The IWA Series can be remotely controlled via infrared, wall-mount, and/or custom controls. An internal infrared receiver is provided on the Remote Control PCB (for set-up purposes only). The actual remote controls are offered optionally. This allows the user to select the type and quantity of remote controls necessary for a particular application. Remote controls affect mixer output volumes, relay switching, and memory presets. Two remote controls may be added, and may be configured for control of independent functions. Optional remote controls are: **Infrared Transmitters, External Infrared Receivers, Wall-Mount Panels, & Remote Interface Kits.**

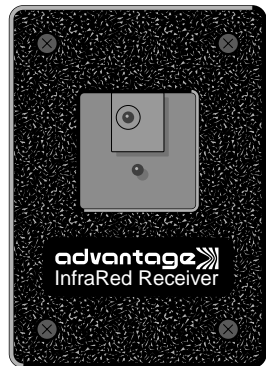
Infrared Transmitter (Biamp #909-0063-00): The transmitter is a hand-held remote control, which transmits infrared codes unique to Biamp. Therefore, the transmitter should not affect any other infrared controlled equipment (such as TVs or VCRs). Likewise, other infrared controllers will not provide proper control of Biamp equipment. The transmitter requires two AAA batteries, which are included with the unit (user installed). The Select 1~8 buttons choose a desired preset from non-volatile memory. The Setup 1~8 buttons create presets by storing current settings (levels & relays) in non-volatile memory. Once presets have been established, the Setup 1~8 buttons may be disabled. The MUTE, VOL ▲, and VOL ▼ buttons (Main & Zone) provide volume up, volume down, and volume off functions for the mixer outputs. The ON and OFF buttons (A, B, & C) provide switching of the respective relays (on Remote Control PCB). For best results, there should be an unobstructed line-of-sight from transmitter to receiver. The transmitter will operate up to 30 feet from a receiver. When infrared information is transmitted to a receiver, the IR LED indicators on the Remote Control PCB, and inside the receiver, will flash.



Infrared Transmitter
(Biamp #9090063-00)

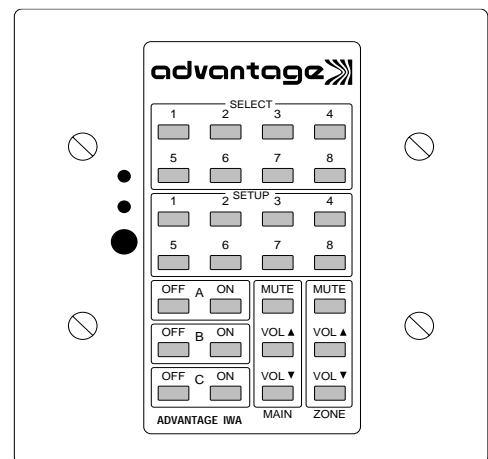
REMOTE CONTROL

External Infrared Receiver (Biamp #909-0030-00): The receiver consists of a black plastic box, which contains an infrared photo detector, an LED indicator, and three screw terminals. To install the receiver, first take off the front cover by removing the four screws. Mount the receiver to a wall or other surface, using the two screw holes on the back cover (screws not included). The receiver should not be mounted in direct sunlight, or pointed directly at fluorescent lighting. For best results, there should be an unobstructed line-of-sight from transmitter to receiver. The receiver may be wired up to 2000 feet from the IWA unit, using 2-conductor shielded cable (not included). Route the cable through the access hole on the bottom of the receiver. The three screw terminals inside the receiver ("GND", "IR2", & "IR3") directly correspond to the Remote 1 and Remote 2 terminals on the Remote Control PCB (Remote 1 and Remote 2 share a common "GND" terminal). Remote Infrared Receivers may be connected to Remote 1 and/or Remote 2, depending upon the particular application. Connect the cable shield to the "GND" terminal at each end. Use the two conductors to connect "IR2" to "IR2" and "IR3" to "IR3". Replace the receiver front cover. When the IWA unit is turned on, power is delivered to the receiver. The LED indicator inside the receiver, and the IR LED indicator on the Remote Control PCB, will flash whenever infrared information is detected. **NOTE:** The Infrared Receiver includes a "Remote Translator", which allows remote control of Advantage products via third-party controllers (instructions included with receiver).



Infrared Receiver
(Biamp #909-0030-00)

Wall-Mount Panel (Biamp #909-0073-00): The wall-mount is a "hard-wired" control panel, which receives power from the Remote Control PCB. There are no batteries to wear out, and it is not easily lost or stolen. The wall-mount may be wired up to 2000 feet from the IWA unit, using 2-conductor shielded cable (not included). Remove the mounting box from the front panel. Route the cable through a "knock-out" hole on the rear of the mounting box. Install the mounting box in a wall or panel. The three screw terminals on the Wall-Mount Panel circuit board ("GND", "IR2", & "IR3") directly correspond to the Remote 1 and Remote 2 terminals on the Remote Control PCB (Remote 1 and Remote 2 share a common "GND" terminal). Wall-Mount Panels may be connected to Remote 1 and/or Remote 2, depending upon the particular application. Connect the cable shield to the "GND" terminal at each end. Use the two conductors to connect "IR2" to "IR2" and "IR3" to "IR3". Install the front panel in the mounting box. The wall-mount has twenty-eight buttons. The Select 1~8 buttons choose a desired preset from non-volatile memory. The Setup 1~8 buttons create presets by storing current settings (levels & relays) in non-volatile memory. Once presets have been established, the Setup 1~8 buttons may be disabled. The MUTE, VOL ▲, and VOL ▼ buttons (Main & Zone) provide volume up, volume down, and volume off functions for the mixer outputs. The ON and OFF buttons (A, B, & C) provide switching of the respective relays (on Remote Control PCB). When the IWA unit is turned on, power is delivered to the Wall-Mount Panel and the green LED indicator will light. The red LED indicator on the Wall-Mount, and the IR LED indicator on the Remote Control PCB, will flash whenever infrared information is detected. The Wall-Mount Panel includes an infrared detector (below LED indicators), which allows it to operate as an External Infrared Receiver as well. The infrared detector may be disabled via a circuit board jumper strap. Complete instructions are included with the Wall-Mount Panel.

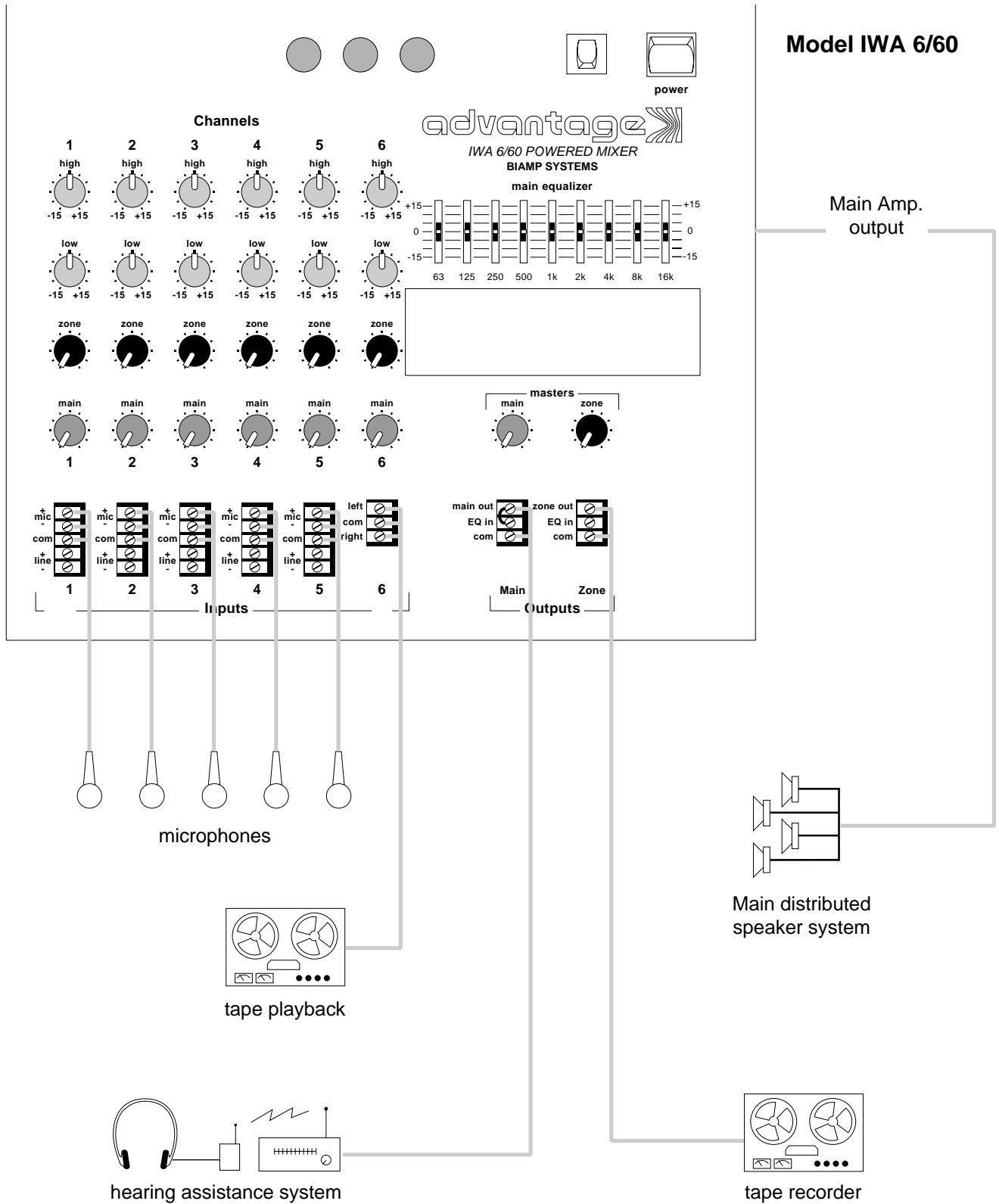


Wall-Mount Panel
(Biamp #909-0073-00)

Remote Interface Kit (Biamp #909-0041-00): The Remote Interface Kit allows the user to create a customized control panel, using his own switches, enclosure, and panel. It can provide up to 40 buttons (12 more than standard remote controls). The Remote Interface Kit is a tested circuit board assembly, which includes two wiring harnesses. The circuit board connects to the Remote Control PCB in exactly the same way the External Infrared Receiver does, using 2-conductor shielded cable (not included), and may be wired up to 2000 feet from the IWA unit. The three screw terminals on the Remote Interface Kit circuit board ("GND", "IR2", & "IR3") directly correspond to the Remote 1 and Remote 2 terminals on the Remote Control PCB (Remote 1 and Remote 2 share a common "GND" terminal). Remote Interface Kits may be connected to Remote 1 and/or Remote 2, depending upon the particular application. When the IWA unit is turned on, power is delivered to the circuit board. The circuit board is 2.27"W by 2.65"H, with four mounting holes (2" centers) and #6 mounting hardware provided. Complete instructions are included with the Remote Interface Kit.

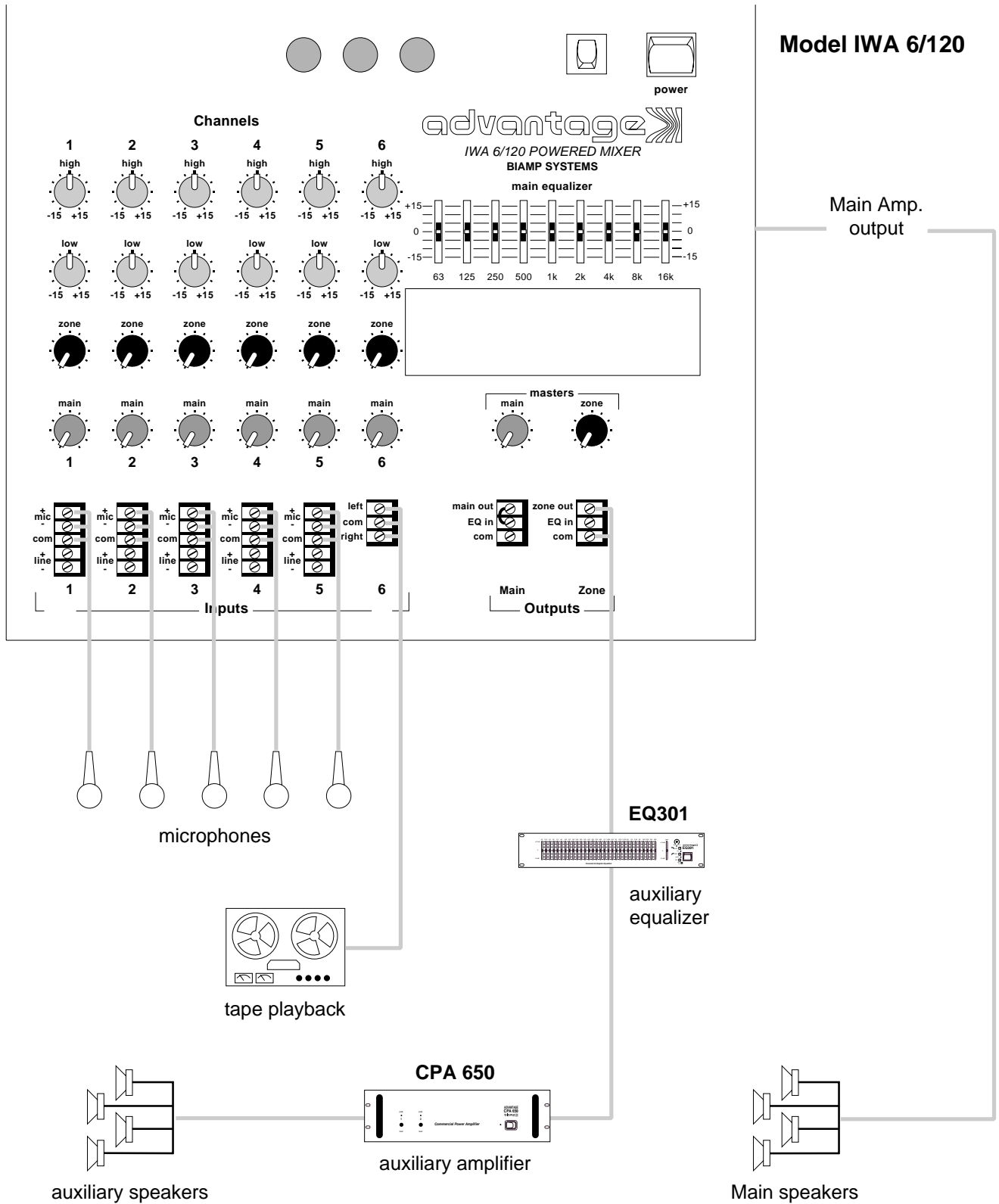
APPLICATIONS

60 Watt Distributed System plus Hearing Assistance & Recording Outputs



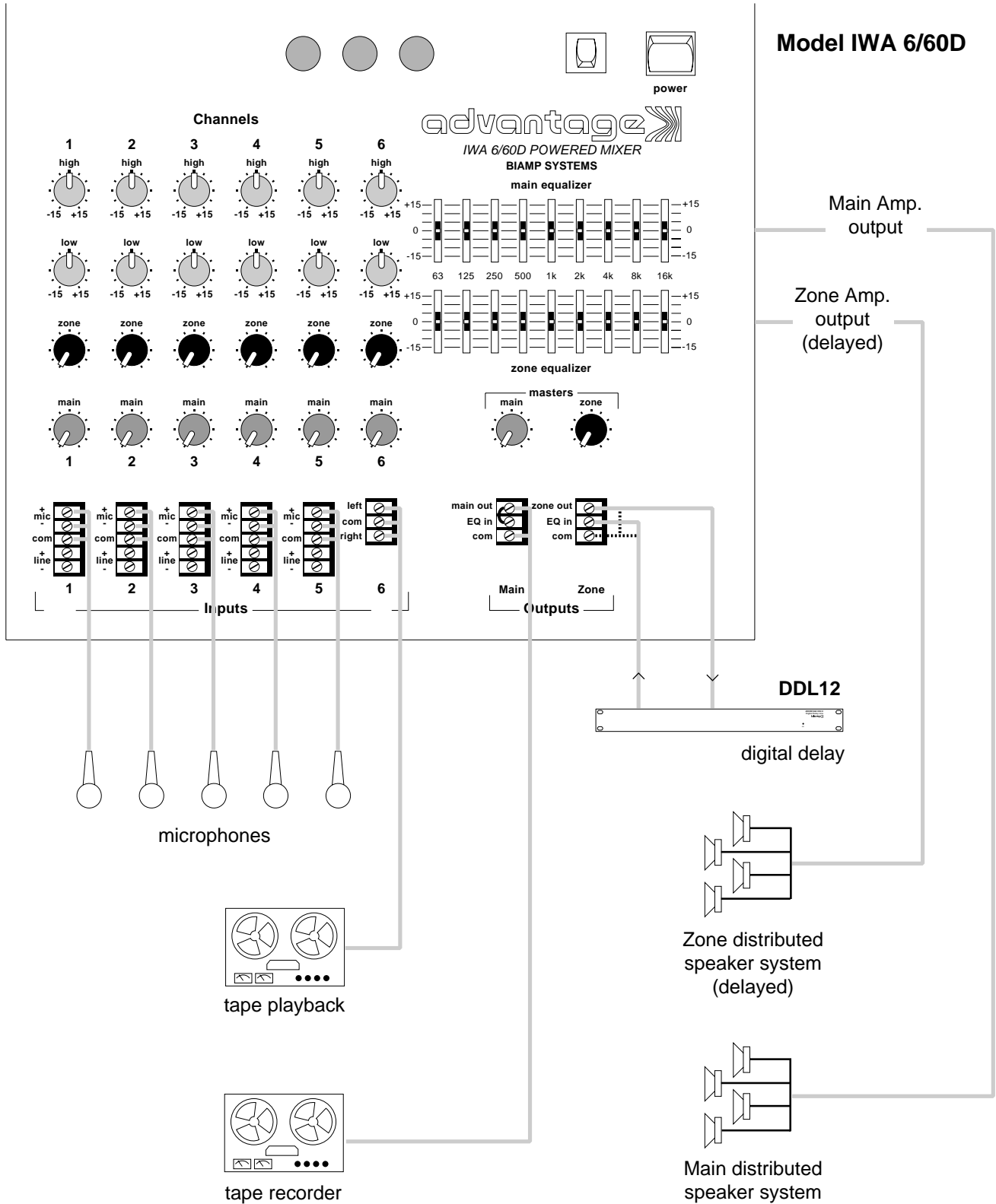
APPLICATIONS

120 Watt Speaker System plus Auxiliary Sound System



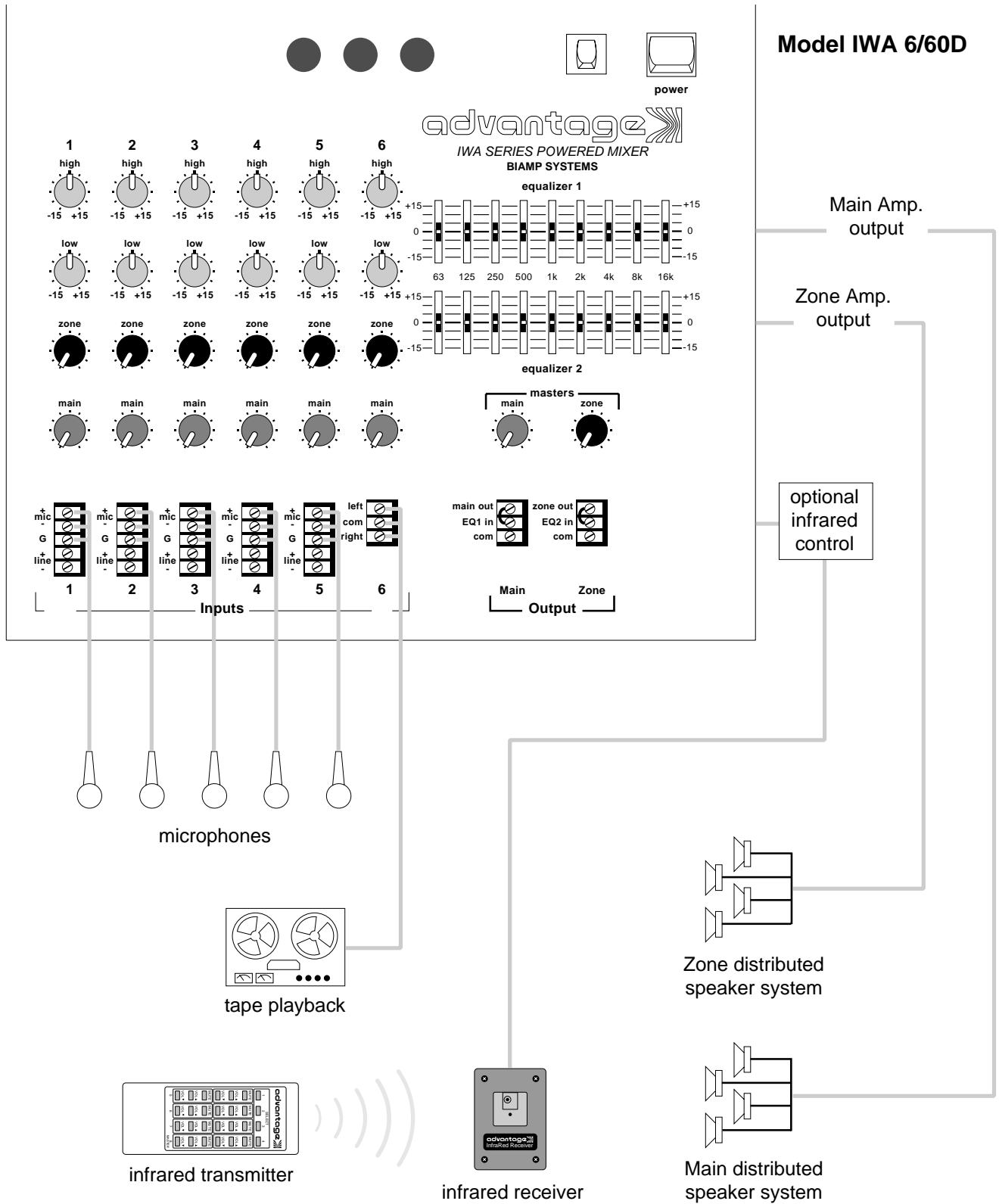
APPLICATIONS

Two 60 Watt Distributed Systems plus Recording Output & Zone Delay



APPLICATIONS

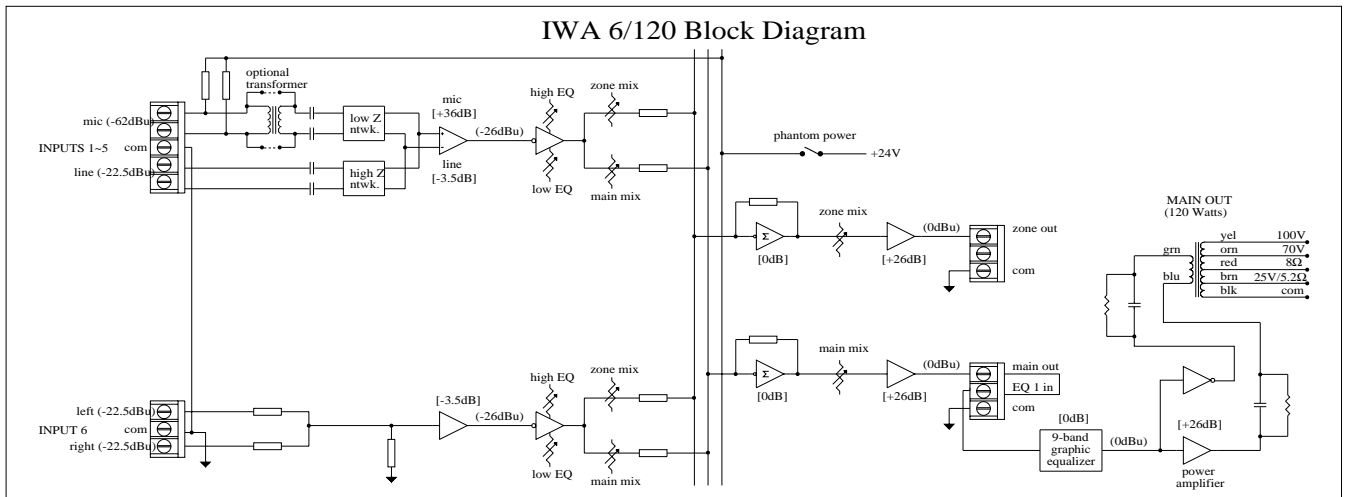
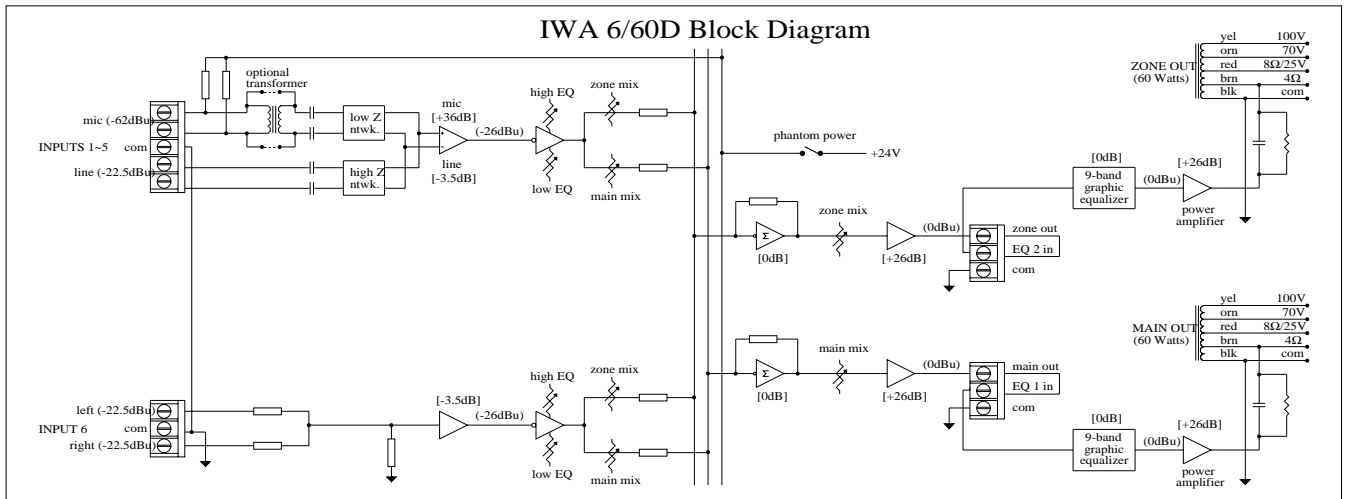
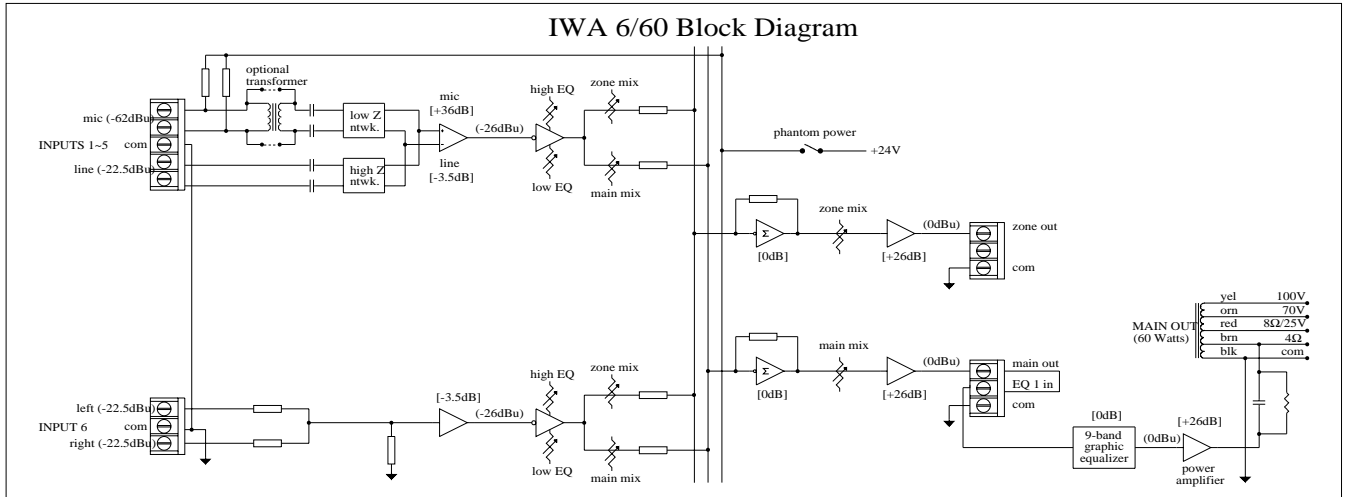
Two 60 Watt Distributed Systems plus Remote Control



SPECIFICATIONS

POWER (continuous RMS, 180Hz~20kHz, THD < 0.5%): model 6/60 60 Watts model 6/60D (dual channel) 60 Watts model 6/120 120 Watts FREQUENCY RESPONSE (180Hz~20kHz @ rated power): +0,-3dB	SIGNAL-TO-NOISE (20Hz~20kHz @ rated power): <u>6/60</u> <u>6/60D</u> <u>6/120</u> all controls centered, EQ in & flat > 66dB > 66dB > 66dB all controls off, EQ in & flat > 82dB > 85dB > 87dB <hr/> THD + NOISE (180Hz~20kHz @ rated power): < 0.2% INTERMODULATION DISTORTION : < 0.35%										
MIXER INPUTS: mic input sensitivity -62dB (615µV) mic input impedance 2k ohms line input sensitivity -22.5dB (58mV) line input impedance 58k ohms stereo line input impedance 150k ohms equalizer input sensitivity -0dB (.775V) equalizer input impedance 15k ohms	MIXER OUTPUTS (Main & Zone): maximum output level +21dBu (8.7V) output impedance < 50 ohms GAIN: mic input to main/zone output 62dB line input to main/zone output 22.5dB equalizer input to amplifier output (models 6/60 & 6/60D) 26dB equalizer input to amplifier output (model 6/120) 32dB										
EQUALIZATION: low-frequency input channel EQ: ±15dB @ 50Hz high-frequency input channel EQ: ±15dB @ 15kHz	9-band graphic output EQ: ±15dB @ 64Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, 16kHz										
AMPLIFIER OUTPUTS:	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><u>models 6/60 & 6/60D</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>model 6/120</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4 ohms (15 Volts)</td> <td style="text-align: center;">25 Volts (5.2 ohms)</td> </tr> <tr> <td style="text-align: center;">8 ohms (22 Volts)</td> <td style="text-align: center;">8 ohms (31 Volts)</td> </tr> <tr> <td style="text-align: center;">70 Volts (83.3 ohms)</td> <td style="text-align: center;">70 Volts (41 ohms)</td> </tr> <tr> <td style="text-align: center;">100 Volts (167 ohms)</td> <td style="text-align: center;">100 Volts (83 ohms)</td> </tr> </tbody> </table>	<u>models 6/60 & 6/60D</u>	<u>model 6/120</u>	4 ohms (15 Volts)	25 Volts (5.2 ohms)	8 ohms (22 Volts)	8 ohms (31 Volts)	70 Volts (83.3 ohms)	70 Volts (41 ohms)	100 Volts (167 ohms)	100 Volts (83 ohms)
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POWER CONSUMPTION (120/240VAC 50/60Hz):	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><u>model 6/60</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>models 6/60D & 6/120</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">< 160 Watts</td> <td style="text-align: center;">< 290 Watts</td> </tr> </tbody> </table>	<u>model 6/60</u>	<u>models 6/60D & 6/120</u>	< 160 Watts	< 290 Watts						
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DIMENSIONS (H x W x D):	<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center; border-bottom: 1px solid black;"><u>security cover</u>: 28.6" x 16.25" x .9"</td> <td style="text-align: center; border-bottom: 1px solid black;"><u>in-wall box</u>: 26.6" x 14.25" x 4"</td> <td style="text-align: center; border-bottom: 1px solid black;"><u>surface box</u>: 28.6" x 16.25" x 4"</td> </tr> </tbody> </table>	<u>security cover</u> : 28.6" x 16.25" x .9"	<u>in-wall box</u> : 26.6" x 14.25" x 4"	<u>surface box</u> : 28.6" x 16.25" x 4"							
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WEIGHTS:	<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center; border-bottom: 1px solid black;"><u>chassis + cover</u>: < 34 lbs. (15.42kg)</td> <td style="text-align: center; border-bottom: 1px solid black;"><u>in-wall box</u>: < 14 lbs. (6.35kg)</td> <td style="text-align: center; border-bottom: 1px solid black;"><u>surface box</u>: < 17 lbs. (7.71kg)</td> </tr> </tbody> </table>	<u>chassis + cover</u> : < 34 lbs. (15.42kg)	<u>in-wall box</u> : < 14 lbs. (6.35kg)	<u>surface box</u> : < 17 lbs. (7.71kg)							
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BLOCK DIAGRAMS



WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL.

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