

**INTEGRITY *TriPower*³
Powered Mixing Console**

Operation Manual



INTEGRITY *TriPower*³

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INTRODUCTION

The BIAMP **INTEGRITY *TriPower*³** powered mixing console provides a multi-channel mixer, two 9-band graphic equalizers, and *three* 150 watt power amplifiers in one easy to use package. These individual components can be assigned in various ways to handle virtually any application, *including combined power*. The **INTEGRITY *TriPower*³** requires less than 5½ square feet of table space, and a convenient connector panel allows placement flush against a wall. Discrete transistor mic/line preamps and MOSFET power amplifiers deliver excellent sonic performance. A rugged assembly, utilizing individual circuit boards and an all metal chassis, provides long term reliability. The **INTEGRITY *TriPower*³** is a complete sound system in a compact unit, designed for flexibility, dependability, and simplicity of operation. Covered by Biamp's 5-year Gold Seal Warranty.

INTEGRITY *TriPower*³ features include:



- ♦ twelve or sixteen microphone/line level input channels
- ♦ discrete transistor preamps for low noise & low distortion
- ♦ 3-band equalization on each input channel
- ♦ three auxiliary sends on each input channel
- ♦ signal present & peak indicators on each input channel
- ♦ patch insert jack on each input channel
- ♦ complete channel solo system
- ♦ stereo & mono main outputs from the mixer
- ♦ mono main switchable pre or post stereo main faders
- ♦ auxiliary send & headphone outputs from the mixer
- ♦ stereo tape output from the mixer
- ♦ two stereo returns to mains & aux 3 (for effects or tape)
- ♦ dual ten-segment meters display left/right or mono/aux 3
- ♦ +48 volt phantom power for condenser microphones
- ♦ two 9-band graphic equalizer (+/-15dB on ISO centers)
- ♦ three 150 watt MOSFET power amplifiers (two bridgeable)
- ♦ passive cooling requires no fan maintenance
- ♦ 100mm faders on channels, mains, & aux 3
- ♦ extensive system patching for various applications
- ♦ 5-year Gold Seal Warranty

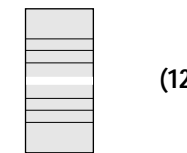
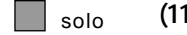
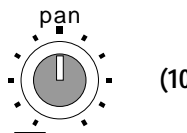
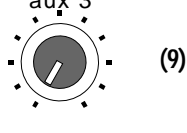
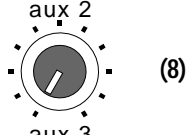
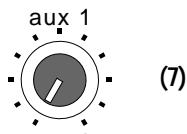
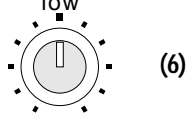
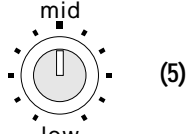
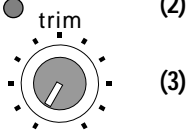


After reading this manual, if you have any questions or need technical assistance, please call Biamp Systems toll-free (1-800-826-1457).



INPUT CHANNEL CONTROLS

- (1)  +15
- (2)  -15



(1) **+15 (Peak Indicator):** This red LED indicates signal level in the channel has reached +15dB (6dB below clipping). For best performance, adjust the Trim control (3) so the Peak Indicator flashes only on occasional peaks in signal level.

(2) **-15 (Signal Present Indicator):** This green LED indicates signal level in the channel is above -15dB (normal signal level). Once the Trim control (3) has been adjusted, this indicator will remain lit whenever signal is present in the channel.

(3) **Trim:** This control provides 40dB of gain adjustment to compensate for different input signal levels. For best performance, adjust this control so the Peak Indicator (1) flashes only on occasional peaks in signal level.

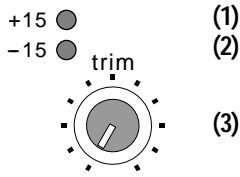
(4) **High:** This control adjusts the high frequency equalization (Treble) for the channel. High equalization is a shelving type filter, which provides +/-15dB of gain adjustment for frequencies above 10kHz. Equalization is used to compensate for tonal differences, which exist between various input signals.

(5) **Mid:** This control adjusts the mid frequency equalization for the channel. Mid equalization is a peaking type filter, which provides +/-12dB of gain adjustment for frequencies centered around 2kHz. Equalization is used to compensate for tonal differences, which exist between various input signals.

(6) **Low:** This control adjusts the low frequency equalization (Bass) for the channel. Low equalization is a shelving type filter, which provides +/-15dB of gain adjustment for frequencies below 80Hz. Equalization is used to compensate for tonal differences, which exist between various input signals.

(7) **Aux 1 (Send):** This control adjusts the level of post-fader channel signal sent to the Send 1 output (see Master Controls on page 5). Aux 1 signals are affected by equalization (4)(5)(6) and the Fader (12). Post-fader sends are normally used to create separate output mixes for effects devices, tape decks, etc. (See Modifications on page 9.) For best performance, typical settings of these controls should center around the 11 o'clock position.

INPUT CHANNEL CONTROLS



(1)

+15 ●
-15 ●

trim

(2)



high



(4)



mid

(5)



low

(6)



aux 1



(7)

aux 2



(8)

aux 3



(9)



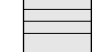
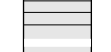
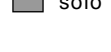
pan

(10)



■ solo

(11)



(12)



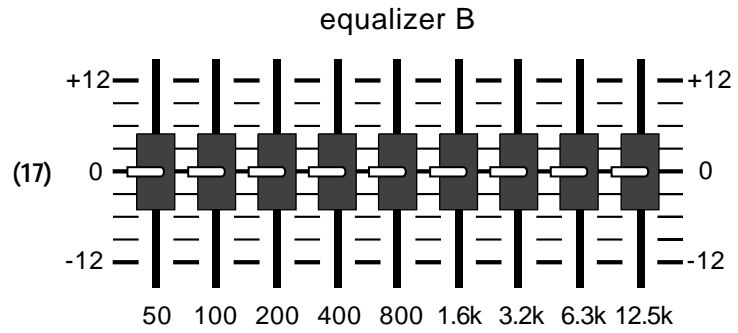
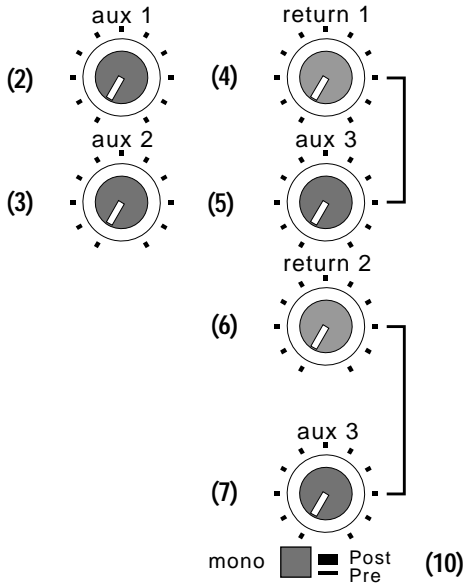
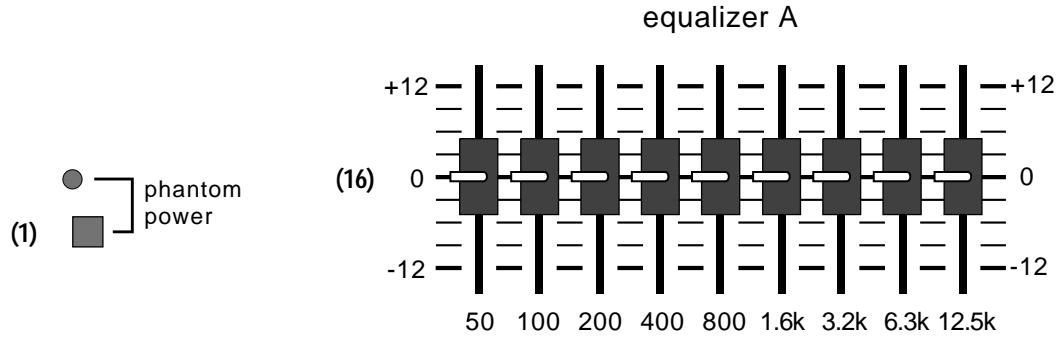
(8)(9) Aux 2 & Aux 3 (Sends): These controls adjust the level of pre-fader channel signal sent to the Aux 2 & Aux 3 outputs (see Master Controls on page 5). Aux 2 & Aux 3 signals are affected by equalization (4)(5)(6), but not by the Fader (12). Pre-fader sends are normally used to create separate output mixes for stage monitors, other sound systems, etc. (See Modifications on page 9.) For best performance, typical settings of these controls should center around the 11 o'clock position. **NOTE:** During normal operation, the Aux 3 output is the factory default "MONITOR" sound system feed (see Applications on page 10).

(10) Pan: This control determines the amount of channel signal received by the Left or Right output (see Master Controls on page 5). With the Pan control fully counter-clockwise, only the Left output receives channel signal. With the Pan control fully clockwise, only the Right output receives channel signal. With the Pan control centered, the Left & Right outputs receive equal amounts of channel signal. When mixing for stereo, Pan determines the relative position of channel signal between the Left & Right outputs. However, the Mono output provides a sum of the Left & Right output signals. Therefore, when mixing for mono...Pans may be centered to provide mono output from the Left & Right outputs as well...or...Pans may be set full-left and full-right to route related signals to the Left or Right output, functioning much like submasters (i.e...instruments on Left fader & vocals on Right fader)...or...Pans may be set to create a stereo mix in the Left & Right outputs (for recording) while the Mono output continues to feed the mono sound system (live mix). **NOTE:** During normal operation, the Mono output is the factory default "MAIN" sound system feed (see Applications on page 10).

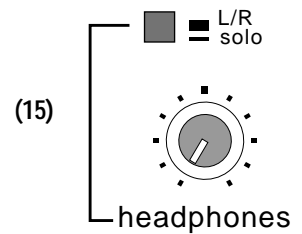
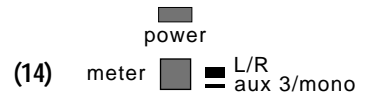
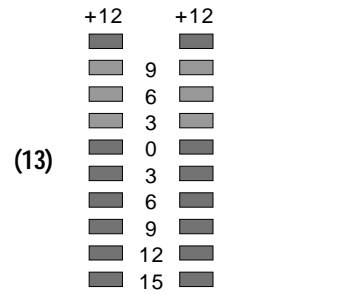
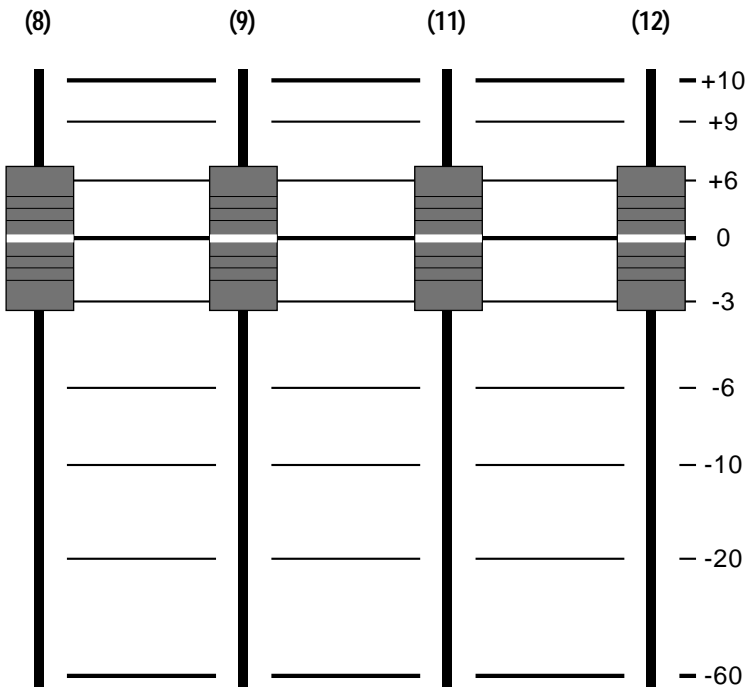
(11) Solo: When depressed, this switch routes pre-fader channel signal to the Solo section for headphone monitoring (see Master Controls on page 5). Solo signal is affected by equalization (4)(5)(6), but not by the Fader (12). Therefore, channel signal may be monitored even when the channel is turned down.

(12) Fader: This 100mm slide control adjusts the level of channel signal sent to the Left & Right outputs, as well as to all post-fader Aux outputs. Fader settings will vary from channel to channel, depending upon the desired mix. However, for best performance, the higher Fader settings should center around the "0" mark (unity gain).

MASTER CONTROLS



AUX 3 MONO LEFT RIGHT



MASTER CONTROLS

(1) Phantom Power: When depressed, this switch supplies +48 volt DC Phantom Power to both pins 2 & 3 of the channel Mic input jacks (see Connectors on page 7). Phantom Power allows operation of condenser microphones and active direct boxes, which require power from the mixing console. Normal dynamic microphones will not be affected by the Phantom Power voltage. Phantom Power does not appear at the Line input jacks. The adjacent red LED indicates when Phantom Power is on. *CAUTION: To avoid possible damage to the sound system, always turn levels down before switching Phantom Power or making connections to the mixing console.*

(2)(3) Aux 1 & Aux 2: These controls adjust the overall level of signals sent from the respective channel Aux sends to their associated Aux outputs on the rear panel (see Connectors on page 7). Aux 1 contains post-fader channel signals and is normally used as an effects send. Aux 2 contains pre-fader channel signals and is normally used as a monitor send. (See Modifications on page 9.) For best performance, typical settings of these controls should center around the 2 o'clock position.

(4)(6) Return 1 & Return 2: These controls adjust the level of signals returned to the Left & Right outputs from the respective stereo Return inputs on the rear panel (see Connectors on page 7). Returns are normally for effects or tape decks.

(5)(7) Aux 3: These controls adjust the level of signals sent from the respective Returns to the Aux 3 output. This allows a mono sum of stereo effects and tape signals to be sent to the Aux 3 output for monitoring purposes.

(8) Aux 3 Fader: This 100mm slide control adjusts the overall level of signals sent from the channel Aux 3 sends to the Aux 3 output on the rear panel (see Connectors on page 7). Aux 3 contains pre-fader channel signals and is normally used as the primary monitor send. (See Modifications on page 9.) For best performance, typical settings of this control should be at, or below, the "0" mark (unity gain). **NOTE:** Aux 3 is internally connected to Equalizer B and Amplifier 3, through switching jacks on the rear panel (see Connectors on page 7). This represents the factory default "MONITOR" sound system (see Applications on page 10).

(9) Mono Fader: This 100mm slide control adjusts the overall level of signals sent to the Mono output on the rear panel (see Connectors on page 7). Mono contains a sum of the Left & Right signals and is normally used as the main output for live applications. For best performance, typical settings of this control should be at, or below, the "0" mark (unity gain). **NOTE:** Mono is internally connected to Equalizer A and Amplifiers 1 & 2, through switching jacks on the rear panel (see Connectors on page 7). This represents the factory default "MAIN" sound system (see Applications on page 10).

(10) Mono Pre/Post Switch: When depressed, this switch routes pre-fader Left & Right signals to Mono. This allows independent level adjustments of Left, Right, & Mono signals. When this switch is released, post-fader Left & Right signals are routed to Mono. This allows Mono signal level to be affected by Left & Right fader adjustments. Depress this switch when Left &

Right are being used as independent outputs for recording or separate sound systems. Release this switch when Left & Right are being used as submasters to the Mono output (i.e...instruments on Left fader & vocals on Right fader).

(11)(12) Stereo Left & Right Faders: These 100mm slide controls adjust the overall level of signals sent to the Stereo Left & Right outputs, as well as the Tape Left & Right outputs, on the rear panel (see Connectors on page 7). Left & Right contain post-fader channel signals, as determined by the channel Pan controls. Left & Right may be used to provide independent stereo or mono outputs, or to act as submasters to the Mono output. For best performance, typical settings of these controls should be at, or below, the "0" mark (unity gain).

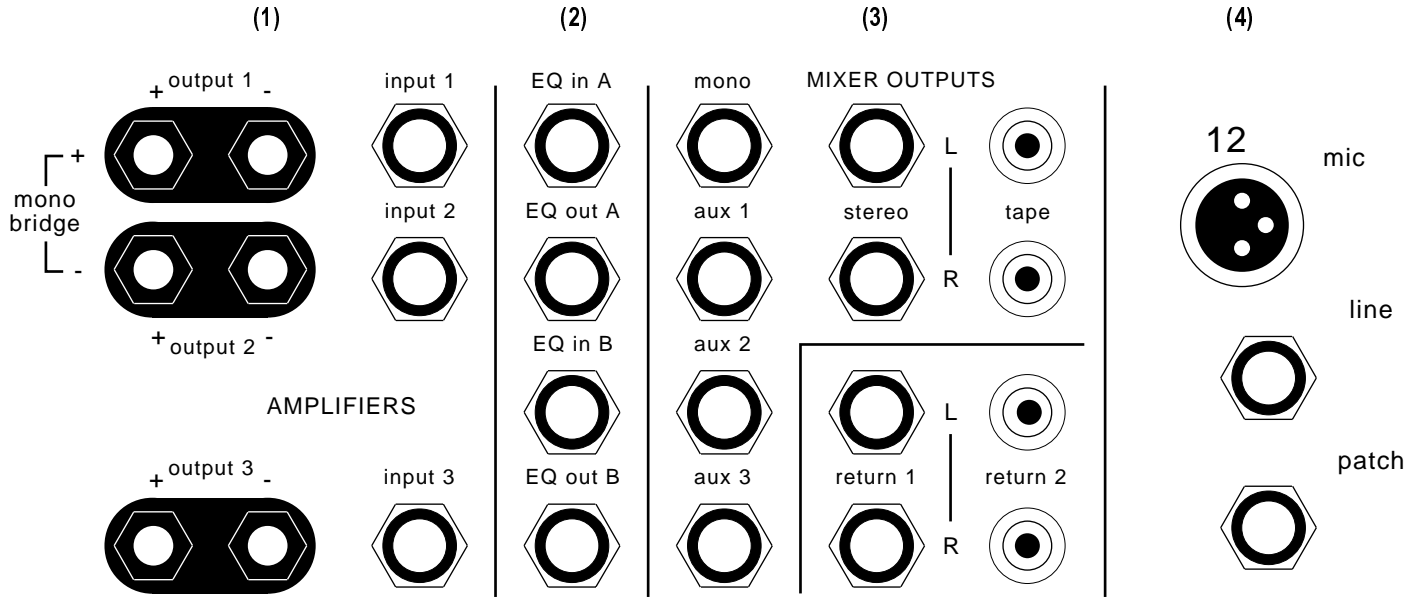
(13) Meters: These ten-segment, peak reading LED meters display signal levels either at the Stereo Left & Right outputs, or at the Aux 3 & Mono outputs, depending upon the position of the Meter switch (14). Meter readings of "0" indicate output levels of +4dBu. When the red "+12" indicator flashes, 9dB of headroom remains before clipping. Directly below the meters is a Power indicator, which remains lit while the unit is turned on.

(14) Meter Switch: When depressed, this switch routes Aux 3 output signal to the left meter and Mono output signal to the right meter. When released, Stereo Left & Right signals are routed to the respective meters.

(15) Headphones Section: This control adjusts the overall level of signal sent to the Headphone output, on the front panel (not shown). The adjacent switch, when depressed, routes monaural signal from channel Solo switches to the Headphone output. When this switch is released, stereo signal from the Left & Right outputs is routed to the Headphone output. The Headphone output is a 3-conductor 1/4" phone jack and is designed for use with 600 Ohm headphones. However, by using a special "Patch" cable, it may instead be used to feed a stereo sound system for control room monitoring (see Cables on page 13).

(16)(17) Equalizer A & Equalizer B: These 9-band graphic equalizers adjust the frequency response (tonal balance) of the signals routed through them, to compensate for room acoustics. Each 30mm slide control can boost or cut up to 12dB at the designated frequency. When the controls are centered, the frequency response is "flat" (no boost or cut). **NOTE:** Equalizer A is internally connected between the Mono output and Amplifiers 1 & 2. This represents the factory default "MAIN" sound system. Equalizer B is internally connected between the Aux 3 output and Amplifier 3. This represents the factory default "MONITOR" sound system. (See Applications on page 10.) The internal connections are made through switching jacks on the rear panel (see Connectors on page 7).

CONNECTORS



(1) AMPLIFIERS

Output 1 & Output 2: These 5-way binding posts provide outputs from Amplifiers 1 & 2, for driving speakers. When in Mono-Bridge, Amplifiers 1 & 2 operate in a combined mode, delivering 300 Watts into a minimum load of 8 Ohms (see Mono Bridge on page 8). Proper connection for Mono-Bridge operation is: Output 1 (+) terminal to speaker positive (+); Output 2 (+) terminal to speaker negative (-). This is the factory default mode of operation, with these outputs representing the "MAIN" sound system (see Applications on page 10). When in Normal, Amplifiers 1 & 2 operate independently, delivering 150 Watts each into minimum loads of 4 Ohms. Proper connection to either amplifier for Normal operation is: Output (+) terminal to speaker positive (+); Output (-) terminal to speaker negative (-).

Output 3: This 5-way binding post provides output from Amplifier 3, for driving speakers. Amplifier 3 operates independently, delivering 150 Watts into minimum loads of 4 Ohms. Proper connection to Amplifier 3 is: Output 3 (+) terminal to speaker positive (+); Output 3 (-) terminal to speaker negative (-). This represents the factory default "MONITOR" sound system (see Applications on page 10).

Input 1 & Input 2: These 2-conductor 1/4" phone "switching" jacks provide unbalanced input to Amplifiers 1 & 2. Inputs 1 & 2 are internally connected to Mono and Equalizer A, through these jacks. When in Mono-Bridge, Input 1 is the input for both amplifiers, and Input 2 is non-functional (see Mono Bridge on page 8). This represents the factory default "MAIN" sound system (see Applications on page 10). Inserting a plug into Input 1 disconnects Equalizer A, as the input to Amplifiers 1 & 2, and replaces it with signal from the plug. When in Normal, Amplifiers 1 & 2 operate independently. Inserting a plug into either Input 1 or Input 2 will disconnect Equalizer A, as the input to that amplifier, and replace it with signal from the plug.

Input 3: This 2-conductor 1/4" phone "switching" jack provides unbalanced input to Amplifier 3. Input 3 is internally connected to Aux 3 and Equalizer B, through this jack. This represents the factory default "MONITOR" sound system (see Applications on page 10). Inserting a plug here disconnects Equalizer B, as the input to Amplifier 3, and replaces it with signal from the plug.

(2) EQUALIZERS

EQ in A: This 2-conductor 1/4" phone "switching" jack provides unbalanced input to Equalizer A. EQ in A is internally connected to Mono, through this jack. This represents the factory default "MAIN" sound system (see Applications on page 10). Inserting a plug here disconnects Mono, as the input to Equalizer A, and replaces it with signal from the plug.

EQ out A: This 2-conductor 1/4" phone jack provides unbalanced output from Equalizer A. EQ out A is internally connected to Amplifiers 1 & 2. This represents the factory default "MAIN" sound system (see Applications on page 10). Inserting a plug here provides access to Equalizer A output signal, without disconnecting it from Amplifiers 1 & 2.

EQ in B: This 2-conductor 1/4" phone "switching" jack provides unbalanced input to Equalizer B. EQ in B is internally connected to Aux 3, through this jack. This represents the factory default "MONITOR" sound system (see Applications on page 10). Inserting a plug here disconnects Aux 3, as the input to Equalizer B, and replaces it with signal from the plug.

EQ out B: This 2-conductor 1/4" phone jack provides unbalanced output from Equalizer B. EQ out B is internally connected to Amplifier 3. This represents the factory default "MONITOR" sound system (see Applications on page 10). Inserting a plug here provides access to Equalizer B output signal, without disconnecting it from Amplifier 3.

CONNECTORS

(3) MIXER

Mono: This 2-conductor 1/4" phone jack provides unbalanced output from the Mono Fader, on the front panel. Mono is internally connected to Equalizer A and Amplifiers 1 & 2. This represents the factory default "MAIN" sound system (see Applications on page 10). Inserting a plug here provides access to Mono output signal, without disconnecting it from Equalizer A.

Aux 1: This 2-conductor 1/4" phone jack provides unbalanced output from the Aux 1 control, on the front panel. Aux 1 contains post-fader channel signals and is typically used as a feed for effects devices, tape decks, etc. (see Installation Diagram on page 12.)

Aux 2: This 2-conductor 1/4" phone jack provides unbalanced output from the Aux 2 control, on the front panel. Aux 2 contains pre-fader channel signals and is typically used as a feed for monitor or zone sound systems (see Installation Diagram on page 12).

Aux 3: This 2-conductor 1/4" phone jack provides unbalanced output from the Aux 3 Fader, on the front panel. Aux 3 is internally connected to Equalizer B and Amplifier 3. This represents the factory default "MONITOR" sound system (see Applications on page 10). Inserting a plug here provides access to Aux 3 output signal, without disconnecting it from Equalizer B.

Stereo (Left & Right): These 2-conductor 1/4" phone jacks provide unbalanced output from the Stereo Left & Right Faders, on the front panel. Stereo Left & Right contain post-fader channel signals, as determined by the channel Pan controls, and are typically used as feeds for stereo sound systems (see Applications on page 10).

Tape (Left & Right): These 2-conductor RCA phono jacks provide unbalanced output from the Stereo Left & Right Faders, on the front panel. Tape Left & Right contain post-fader channel signals, as determined by the channel Pan controls, and are typically used as feeds for stereo tape recorders (see Installation Diagram on page 12).

Return 1 (Left & Right): These 2-conductor 1/4" phone jacks provide unbalanced input to the Return 1 control, on the front panel. Return 1 signal can then be sent to the Left & Right, Mono, and Aux 3 outputs. Return 1 is typically used as a return for stereo or monaural signals from effects devices, tape decks, etc. (see Installation Diagram on page 12). Monaural signals, when connected at either the Left or Right jack, will be sent equally to the Left & Right outputs.

Return 2 (Left & Right): These 2-conductor RCA phono jacks provide unbalanced input to the Return 2 control, on the front panel. Return 2 signal can then be sent to the Left & Right, Mono, and Aux 3 outputs. Return 1 is typically used as a return for stereo signals from tape decks, effects devices, etc. (see Installation Diagram on page 12).

CAUTION: *When using the same tape deck for both recording & playback (i.e...input from Tape and output to Return 2), the playback signal (Return 2) must be turned down during recording. This will prevent annoying feedback problems.*

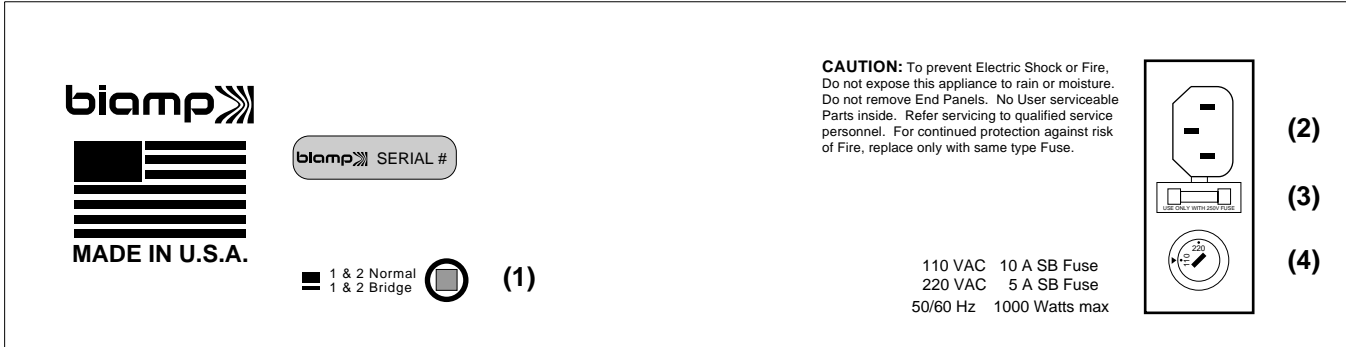
(4) INPUT CHANNELS

Mic: These 3-pin XLR jacks are for connection of signals, from low-impedance microphones and direct boxes, to the respective channel inputs. Mic inputs provide a balanced transformerless input wired to DIN standard, with pin 2 high (+), pin 3 low (-), and pin 1 common (ground) (see Cables on page 13). Phantom Power voltage may be sent to the Mic input jacks, to allow operation of condenser microphones and active direct boxes (see Master Controls on page 5). **CAUTION:** To avoid possible damage to the sound system, *always turn levels down before switching Phantom Power or making connections to the mixer.*

Line: These 3-conductor 1/4" phone jacks are for connection of signals, from line level devices, to the respective channel inputs. Line level devices include effects units, tape decks, wireless microphones, synthesizers, drum machines, other mixers, etc. Line input jacks provide for proper connection of either balanced (3-conductor) or unbalanced (2-conductor) signals, with Tip high (+), Ring low (-), and Sleeve common (ground) (see Cables on page 13).

Patch: These 3-conductor 1/4" phone jacks are post-EQ/pre-fader insert points, for connection of outboard signal processing devices to the respective channels. Signal processing devices include compressors, limiters, expanders, noise gates, outboard equalizers, enhancers, etc. Patch jacks are wired with Tip send (output), Ring return (input), and Sleeve common (ground). Special "Patch" cables are required, which allow signal to leave the channel, be processed, and then return to the channel (see Cables on page 13). Patch jacks also may be used as pre-fader direct outputs to feed other devices, such as multi-track tape recorders. To accomplish this, without interrupting the channel signal, connect to Patch with Tip & Ring high (+) and Sleeve common (ground). A standard 2-conductor 1/4" phone cable may be used to extract signal from Patch, however, this will interrupt the channel signal before it reaches the Fader. (See Cables on page 13.) Patch signals are not affected by the channel Faders.

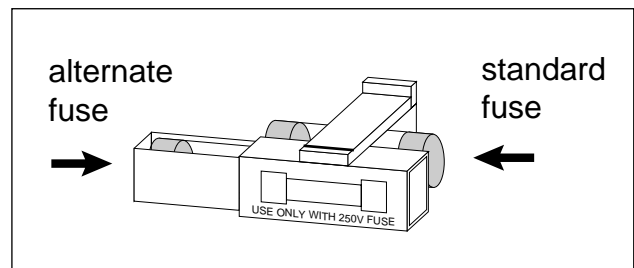
POWER



(1) Mono Bridge Switch: When depressed, this switch assigns Amplifiers 1 & 2 to "Mono-Bridge" operation. When in Mono-Bridge, Amplifiers 1 & 2 operate in a combined mode, delivering 300 Watts into a minimum load of 8 Ohms (see Amplifiers on page 6). This is the factory default mode of operation, with these outputs representing the "MAIN" sound system (see Applications on page 10). When released, this switch assigns Amplifiers 1 & 2 to "Normal" operation. When in Normal mode, Amplifiers 1 & 2 operate independently, delivering 150 Watts each into minimum loads of 4 Ohms (see Amplifiers on page 6). (See also Applications on page 10.) The Mono Bridge switch is recessed to prevent accidental switching during operation or transport.

(2) Power Cord Receptacle: This three-prong receptacle is for connection of the detachable AC Power Cord. The AC Power Cord is for connection to three-prong grounded AC outlets. *CAUTION: Do not remove or defeat the AC ground prong on the plug, as this constitutes a shock hazard.*

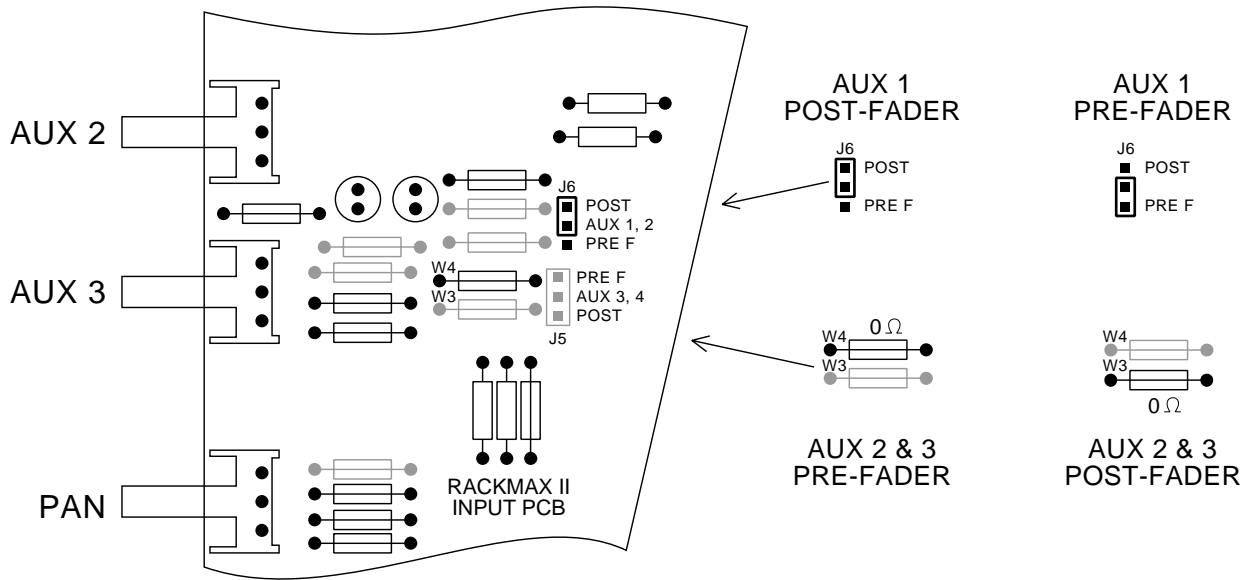
(3) Fuse Clip: The Fuse Clip may be removed by first removing the detachable AC Power Cord, then prying the fuse clip out from above, using a flat-blade screwdriver in the notch provided. The Fuse Clip contains both the standard fuse and an alternate fuse (see diagram below). The standard fuse is held in the clip. When the Fuse Clip is installed, this is the actual AC fuse. Replace the standard fuse only with the same value and type (10A SB for 110V operation or 5A SB for 220V operation). If the AC fuse continues to blow, the mixer may require service. The alternate fuse is held in a convenient drawer, inside the Fuse Clip. From the factory, this fuse is supplied strictly for use at the alternative 220VAC setting (see AC Voltage Selector Switch). When consistently operating at one AC voltage setting, the alternate fuse drawer may instead be used to store a spare fuse of the standard value.



(4) AC Voltage Selector Switch: This switch is factory set to "110" for operation with line voltages of 110-120VAC. For operation with line voltages of 220-240VAC, set this switch to "220" and replace the standard AC fuse with a 5A SB fuse (accessory item included in Fuse Clip drawer).

MODIFICATIONS

NOTE: Modifications require removing the top panel (mixer, jacks, & vents) from the bottom panel. Be careful to disconnect internal harnesses before separating panels. Modifications do not require removal of circuit boards. Please disregard labelling on the channel circuit boards (i.e., "Aux 1, 2", "Aux 3, 4", "RACKMAX II", etc.). These circuit boards are common to various Biamp products, such as Rackmax II, Newport, Cascade, and Integrity Series mixers. Refer only to the labelling mentioned in the modification instructions.



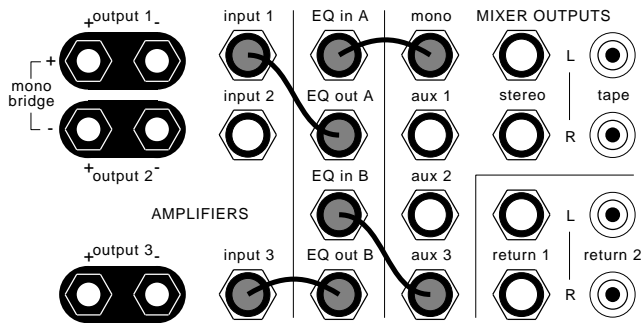
Input Channels

Aux 1 and Aux 2 & 3 (Post-Fader or Pre-Fader): Aux 1 is factory set for post-fader operation. Aux Sends 2 & 3 are factory set for pre-fader operation. These sends may be modified on the input channels. (See NOTE below.) **Aux 1 to Pre-Fader:** On the input channel circuit boards, behind the Aux 3 level control, there is a movable jumper strap labelled "J6" (see Diagram A). Using a pair of needle-nose pliers, remove jumper strap "J6" from the "POST" position (center and top pins) and reinstall the jumper strap at the "PRE" position (center and bottom pins). This modification changes Aux 1 from Post-Fader operation to Pre-Fader operation. **Aux 2 & 3 to Post-Fader:** On the standard input channel circuit boards, behind the Aux 3 level control, there is a soldered jumper (0 ohm resistor) labelled "W4" (see Diagram A). Using a lower wattage (35W) soldering iron, remove the jumper from the "W4" position and reinstall the jumper at the "W3" position (directly below). This modification changes both Aux 2 and Aux 3 from Pre-Fader operation to Post-Fader operation.

NOTE: Additional jumpers and wiring pads are provided on these circuit boards, which facilitate more complex modifications (i.e., accessing Aux Sends individually; sourcing channel Pre-EQ signal; etc.). Please contact Biamp Systems for technical assistance.

CAUTION: Modifications should be performed only by a qualified technician. To avoid damage, do not use excessive heat or solder. Restrict soldering to the rear side of the circuit boards. Some modifications may require removal of the individual channel circuit boards.

APPLICATIONS



Factory Default

This is the way the system operates from the factory. The connections shown here are internal and do not require external cabling. The other applications show some of the ways that the system can be re-assigned. A System Diagram for each application is shown on page 11. The internal factory default assignments are as follows.

Mains: Mono output from the mixer to EQ in A. EQ out A to amplifier Input 1. Amplifiers 1 & 2 are set for mono-bridge. Outputs 1 & 2 deliver 300 watts @ 8 ohms for mains.

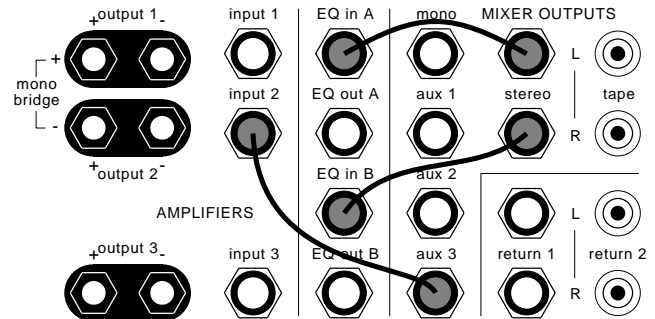
Monitors: Aux 3 output from the mixer to EQ in B. EQ out B to amplifier Input 3. Output 3 delivers 150 watts @ 4 ohms for monitors.

Stereo with Monitor

This application requires three 1/4" phone cables connected as shown.

Mains: Left output from the mixer to EQ in A. EQ out A connects to amplifier Input 1 internally. Right output from the mixer to EQ in B. EQ out B connects to amplifier Input 3 internally. Amplifiers 1 & 2 are set for stereo (not bridged). Outputs 1 & 3 deliver 150 watts per side @ 4 ohms for stereo mains.

Monitors: Aux 3 output from the mixer to amplifier Input 2. Output 2 delivers 150 watts @ 4 ohms for monitors. An outboard equalizer may be connected between Aux 3 output and amplifier Input 2 for monitor equalization.

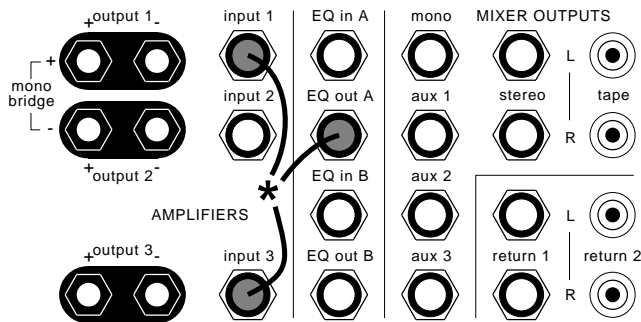


Bi-amplified Mains

This application requires three 1/4" phone cables and a cross-over*.

Mains: Mono output from the mixer connects to EQ in A internally. EQ out A to cross-over* input. Low-frequency output from the cross-over* to amplifier Input 1. Amplifiers 1 & 2 are set for mono-bridge. Outputs 1 & 2 deliver 300 watts @ 8 ohms for low-frequencies. High-frequency output from the cross-over* to amplifier Input 3. Output 3 delivers 150 watts @ 4 ohms for high-frequencies.

Monitors: Aux 3 output from the mixer connects to EQ in B internally. EQ out B may be connected to an outboard amplifier for monitors.



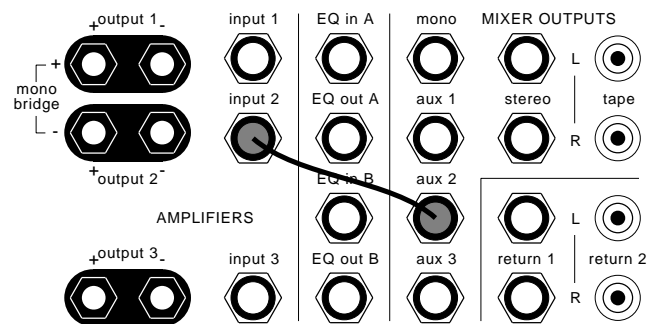
Mains/Monitors/Zone

This application requires one 1/4" phone cable connected as shown.

Mains: Mono output from the mixer connects to EQ in A internally. EQ out A connects to amplifier Input 1 internally. Amplifiers 1 & 2 are set for stereo (not bridged). Output 1 delivers 150 watts @ 4 ohms for mains.

Monitors: Aux 3 output from the mixer connects to EQ in B internally. EQ out B connects to amplifier Input 3 internally. Output 3 delivers 150 watts @ 4 ohms for monitors.

Zone: Aux 2 output from mixer to amplifier Input 2. Output 2 delivers 150 watts @ 4 ohms for the zone output. An outboard equalizer may be connected between Aux 2 output and amplifier Input 2 for zone equalization.

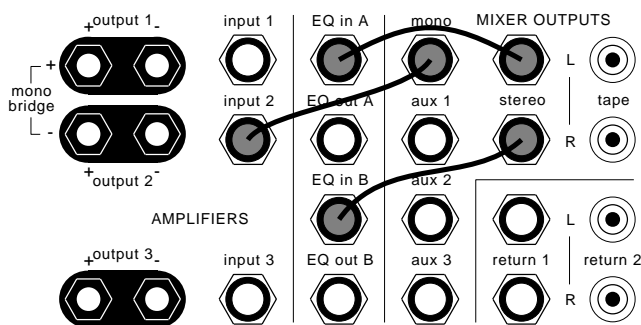


Center Cluster with Side Fills

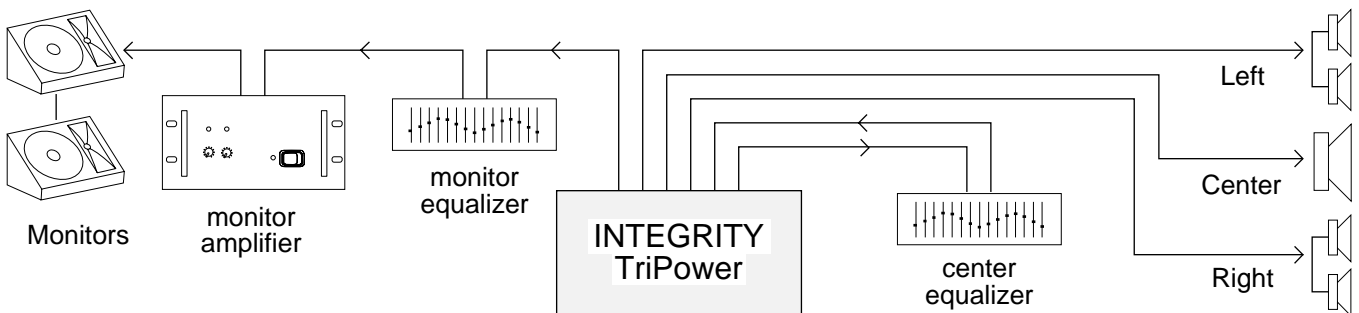
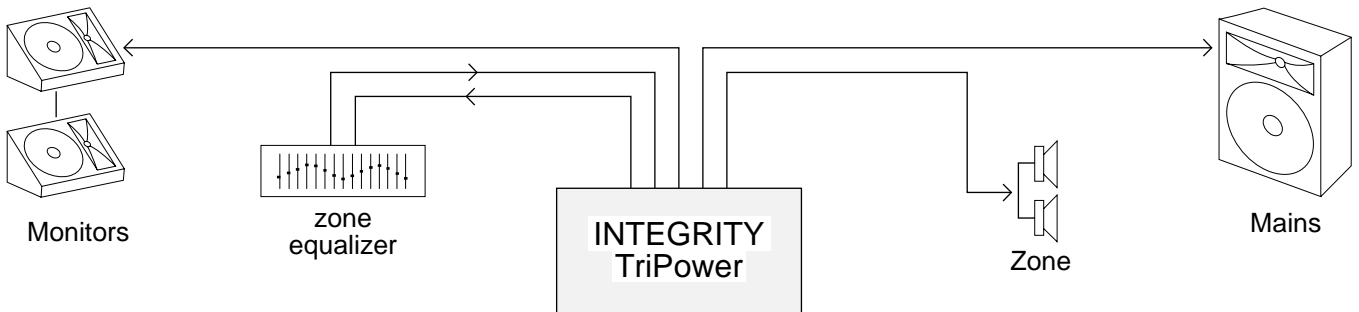
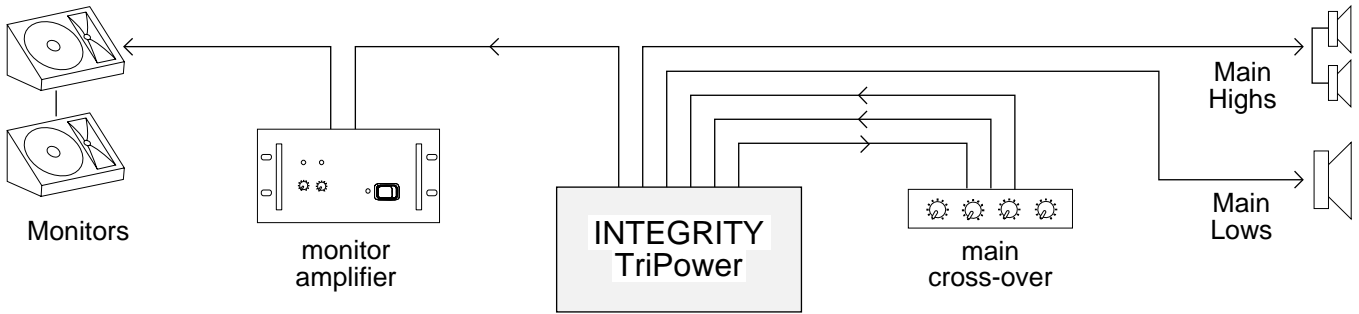
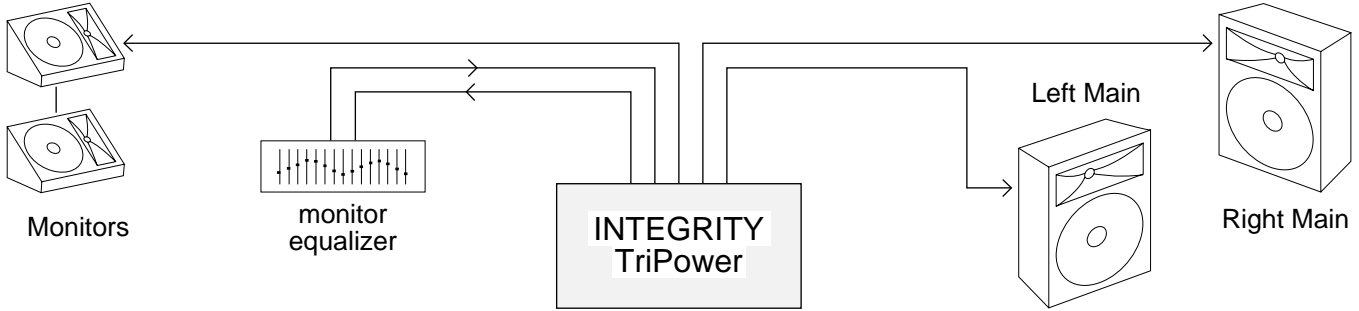
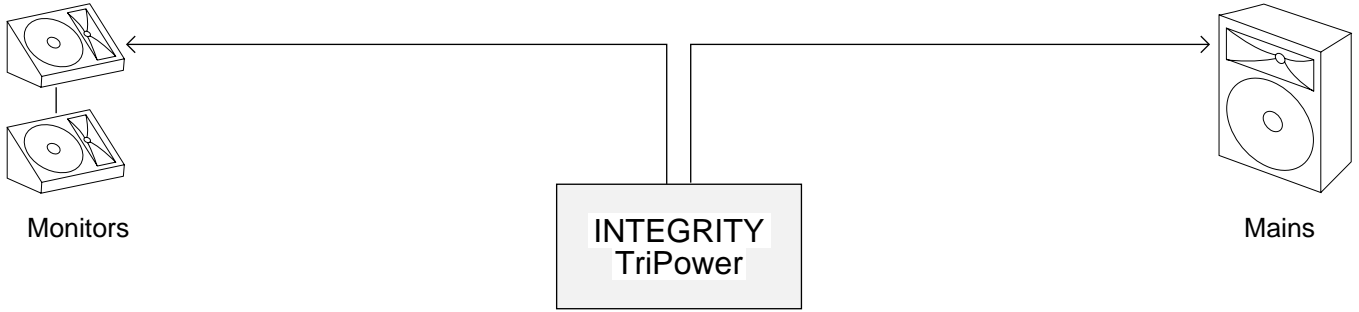
This application requires three 1/4" phone cables connected as shown.

Mains: Left output from the mixer to EQ in A. EQ out A connects to amplifier Input 1 internally. Amplifiers 1 & 2 are set for stereo (not bridged). Output 1 delivers 150 watts @ 4 ohms for the left side fill. Right mixer output to EQ in B. EQ out B connects to amplifier Input 3 internally. Output 3 delivers 150 watts @ 4 ohms for the right side fill. Mono output from the mixer to amplifier Input 2. Output 2 delivers 150 watts @ 4 ohms for the center cluster. An outboard equalizer may be connected between Mono output and amplifier Input 2 for center cluster equalization.

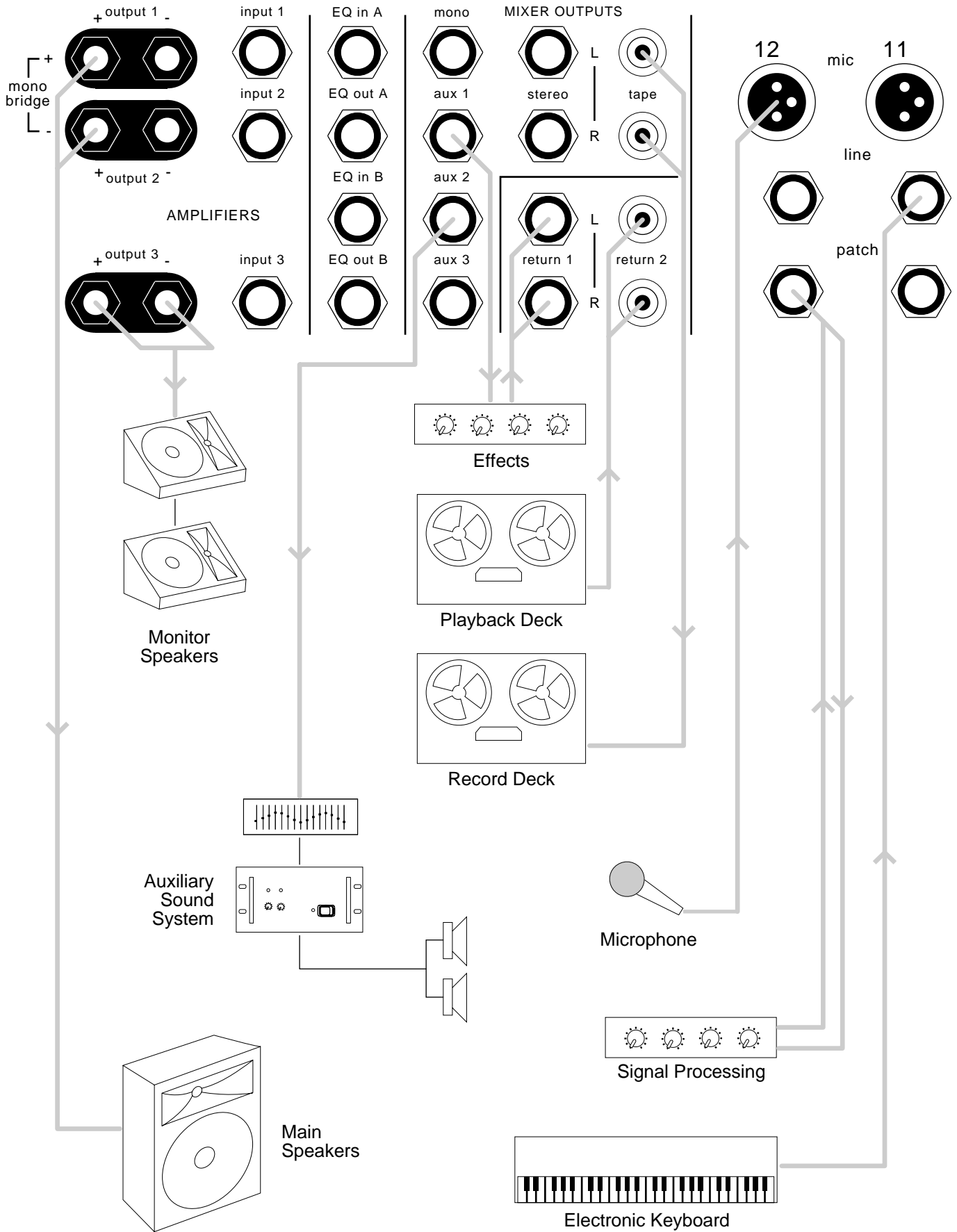
Monitors: Aux 2 and Aux 3 may be connected to outboard equalizers and amplifiers for monitors.



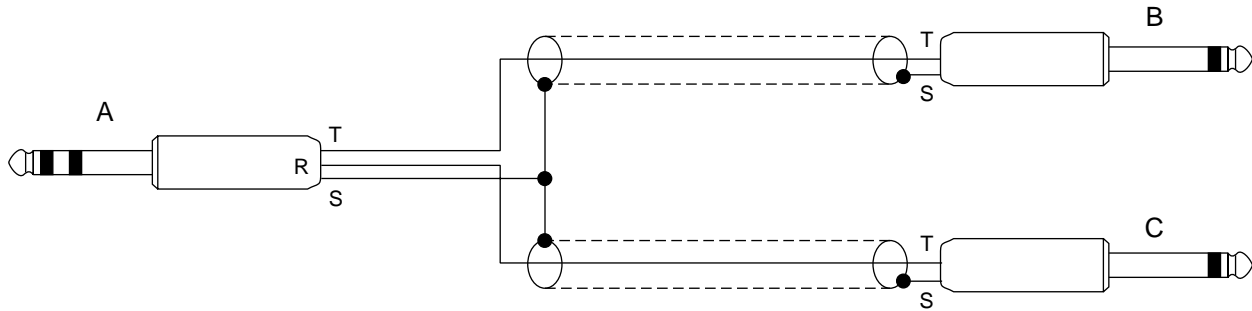
APPLICATIONS



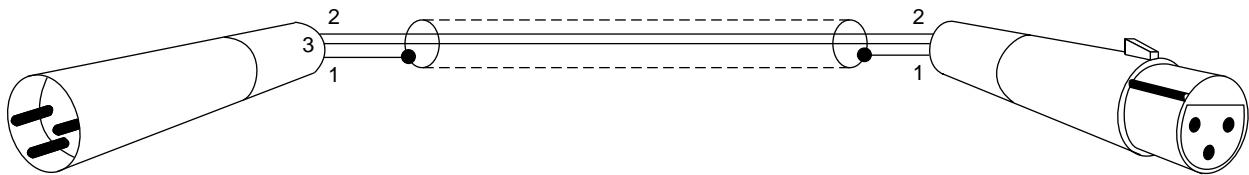
INSTALLATION DIAGRAM



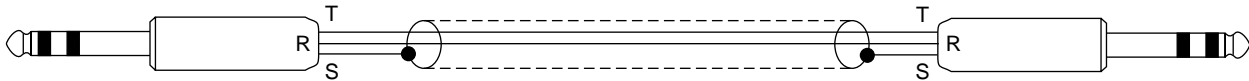
CABLES



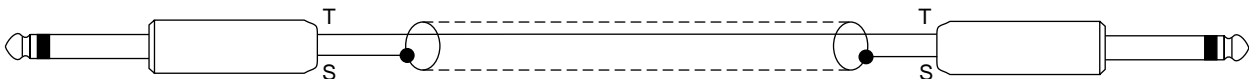
Patch Cable: This type of cable uses a Tip/Ring/Sleeve 1/4" phone connector on one end and Tip/Sleeve 1/4" phone (or RCA phono) connectors on the other two ends. It is wired with Tip A to Tip B, Ring A to Tip C, and Sleeve A to Sleeve B & C (ground). When connected to a channel Patch jack, Tip B is the send (output) and Tip C is the return (input) of the channel. When used to provide a stereo line level output from the Headphone jack, Tip B is the Left output and Tip C is the Right output.



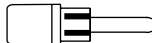
Balanced XLR Cable: This type of cable uses a male XLR connector on one end and a female XLR connector on the other end. It is wired with Pin 2 to Pin 2 (+), Pin 3 to Pin 3 (-), and Pin 1 to Pin 1 (ground). Use these cables when connecting *balanced* microphone level signals at the channel Mic inputs. For proper connection to outboard equipment, it may be necessary to use a Tip/Ring/Sleeve 1/4" phone connector on one end of the cable, wired with Pin 2 to Tip (+), Pin 3 to Ring (-), and Pin 1 to Sleeve (ground).

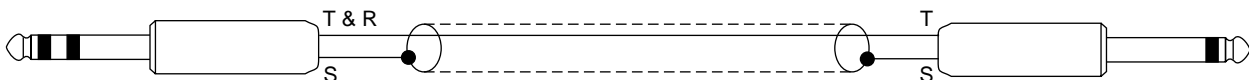


Balanced 1/4" Phone Cable: This type of cable uses Tip/Ring/Sleeve connectors on each end and is wired with Tip to Tip (+), Ring to Ring (-), and Sleeve to Sleeve (ground). Use these cables when connecting *balanced* line level signals at the channel Line inputs. For proper connection to outboard equipment, it may be necessary to use an XLR connector on one end of the cable, wired with Tip to Pin 2 (+), Ring to Pin 3 (-), and Sleeve to Pin 1 (ground).



Unbalanced 1/4" Phone Cable: This type of cable uses Tip/Sleeve connectors on each end and is wired with Tip to Tip (+) and Sleeve to Sleeve (ground). Use these cables when connecting *unbalanced* line level signals at the channel Line inputs and the Return 1 Left & Right inputs, or when making connections at the mixer outputs, the equalizers, or the amplifier inputs. This type of cable also may be used to extract signal from a channel Patch jack, however, *this will interrupt signal before it reaches the channel fader*. For proper connection to outboard equipment, it may be necessary to use an RCA phono connector on one end of the cable (wiring is the same). RCA phono connectors may be used at both ends of this type of cable, for connection of *unbalanced* line level signals at the Return 2 Left & Right inputs and the Tape Left & Right outputs.

RCA Phono Connector 



Tip/Ring/Sleeve to Tip/Sleeve 1/4" Phone Cable: This type of cable uses a Tip/Ring/Sleeve 1/4" phone connector on one end and a Tip/Sleeve 1/4" phone connector on the other end. It is wired with Tip & Ring to Tip (+) and Sleeve to Sleeve (ground). Use this cable to extract signal from a channel Patch jack, *without interrupting signal before it reaches the channel fader*. This allows Patch jacks to be used as pre-fader direct outputs from the channels. For proper connection to outboard equipment, it may be necessary to use an RCA phono connector on one end of the cable.

SPECIFICATIONS

MIC/LINE PREAMPLIFIERS:

Frequency Response (20Hz-20kHz @ +4dBu)	+0/-1dB
Total Harmonic Distortion (20Hz-20kHz @ +4dBu, 40dB gain)	<0.02%
Intermodulation Distortion (SMPTE)	<0.05%
Equivalent Input Noise (20Hz-20kHz, 150 W termination)	-127dBu
Maximum Gain (Mic input)	48dB
Maximum Gain (Line input)	31dB
Trim Control Range	40dB
Input Impedance (Mic/balanced)	2k ohms
Input Impedance (Line/balanced)	10k ohms
Maximum Input (Mic)	+11dBu
Maximum Input (Line)	+26dBu
Phantom Power	+48 volts DC

INPUT CHANNEL EQUALIZATION:

High	±15dB @ 10kHz
Mid	±12dB @ 2kHz
Low	±15dB @ 80Hz

MIXER SECTION:

Frequency Response (20Hz-20kHz @ +4dBu)	+0/-1dB
Total Harmonic Distortion (20Hz-20kHz @ +4dBu, unity gain)	<0.02%
Intermodulation Distortion (SMPTE)	<0.05%
Output Noise Floor (20Hz-20kHz @ unity gain)	-75dBu
Input Impedance (Returns/unbalanced)	10k ohms
Input Impedance (Patch/unbalanced)	3k ohms
Maximum Input (Returns/unbalanced)	+21dBu
Maximum Input (Patch/unbalanced)	+21dBu
Output Impedance (Mains, Aux, & Patch/unbalanced)	<50 ohms
Output Impedance (Tape/unbalanced)	<500 ohms
Maximum Output (Mains, Aux, & Patch/unbalanced)	+21dBu
Maximum Output (Tape/unbalanced)	+6dBu
Maximum Output (Headphones/each side)	+18dBm
Minimum Load (Mains, Aux, & Patch/unbalanced)	2k ohms
Minimum Load (Tape/unbalanced)	5k ohms
Minimum Load (Headphones/each side)	600 ohms

GRAPHIC EQUALIZERS:

Filter Gain	±12dB
Frequency Range (ISO center frequencies)	50Hz-12.5kHz
Input Impedance (unbalanced)	>2k ohms
Maximum Input (unbalanced)	+21dBu
Output Impedance (unbalanced)	100 ohms
Maximum Output (unbalanced)	+21dBu
Minimum Load (unbalanced)	2k ohms

POWER AMPLIFIERS:

Frequency Response (20Hz-20kHz @ rated power)	+0/-1dB
Total Harmonic Distortion (20Hz-20kHz @ rated power)	<0.1%
Intermodulation Distortion (SMPTE)	<0.1%
Signal-to-Noise Ratio (20Hz-20kHz)	>90dB
Input Impedance (unbalanced)	50k ohms
Input Sensitivity (unbalanced)	6 volts RMS
Power Output (each amplifier, all channels driven)	150 watts @ 4 ohms
Power Output (each amplifier, all channels driven)	100 watts @ 8 ohms
Power Output (amplifiers 1 & 2 mono-bridged)	300 watts @ 8 ohms
Minimum Load (each amplifier)	4 ohms
Minimum Load (amplifiers 1 & 2 mono-bridged)	8 ohms

POWER REQUIREMENTS:

110/220VAC 60/50Hz

POWER CONSUMPTION:

1000 watts

DIMENSIONS (12 & 16 channel models):

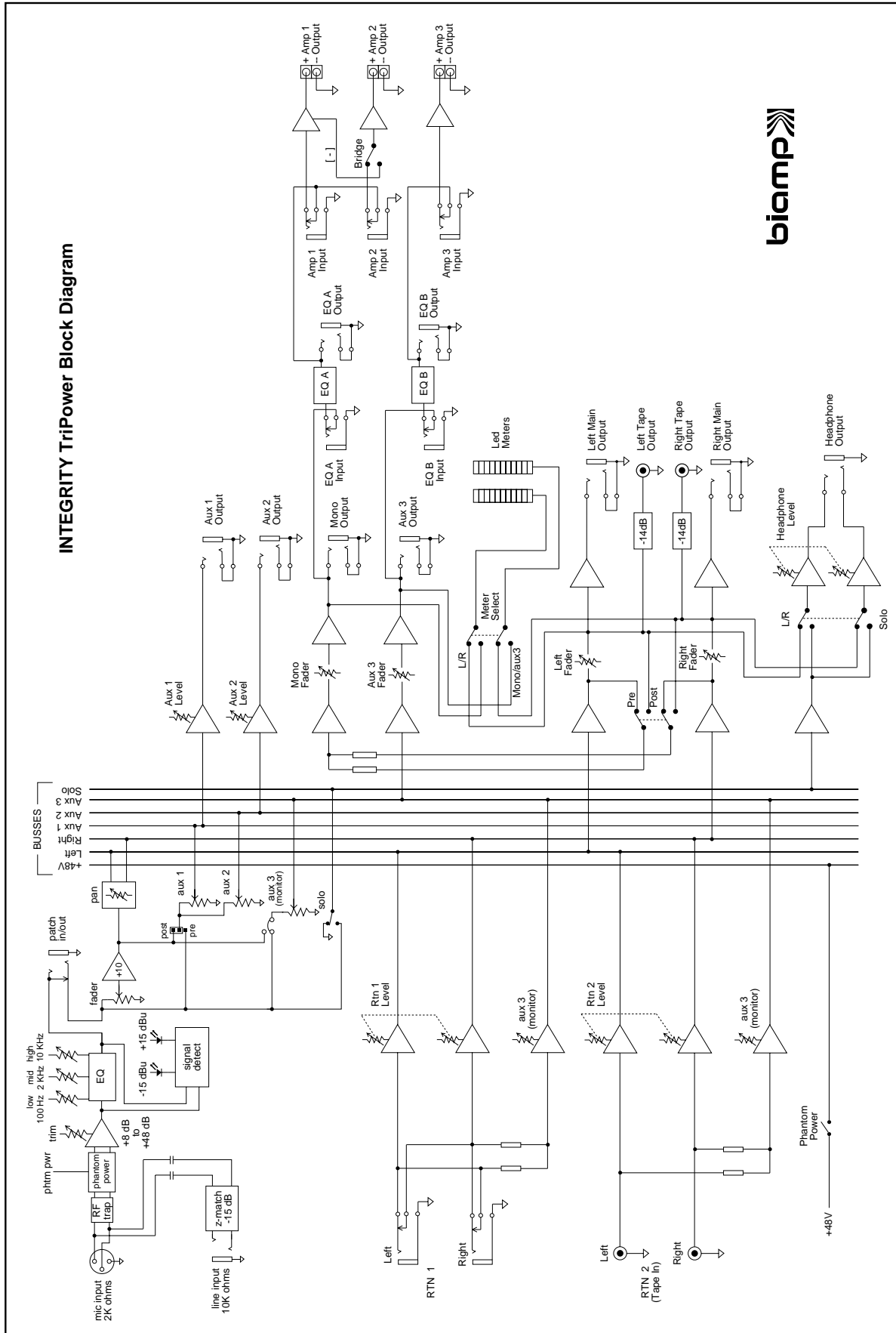
Height	8.25 inches
Width	35 inches
Depth	23 inches

WEIGHT (12 & 16 channel models):

62 lbs.

BLOCK DIAGRAM

INTEGRITY TriPower Block Diagram



WARRANTY

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

BIAMP Systems expressly warrants this product to be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase as a new product from an authorized BIAMP dealer under the following conditions.

1. The Purchaser is responsible for completing and mailing to BIAMP, within 10 days of purchase, the attached warranty application.

2. In the event the warranted BIAMP product requires service during the warranty period, BIAMP will repair or replace, at its option, defective materials, provided you have identified yourself as the original purchaser of the product to any authorized BIAMP Service Center. Transportation and insurance charges to and from an authorized Service Center or the BIAMP factory for warranted products or components thereof to obtain repairs shall be the responsibility of the Purchaser.

3. This warranty will be VOIDED if the serial number has been removed or defaced; or if the product has been subjected to accidental damage, abuse, rental usage, alterations, or attempted repair by any person not authorized by BIAMP to make repairs; or if the product has been installed contrary to BIAMP's instructions.

4. The normal wear and tear of appearance items such as paint, knobs, handles, and covers is not covered under this warranty.

5. BIAMP SHALL NOT IN ANY EVENT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, LOSS OF USE, PROPERTY DAMAGE, INJURY TO GOODWILL, OR OTHER ECONOMIC LOSS OF ANY SORT. EXCEPT AS EXPRESSLY PROVIDED HEREIN, BIAMP DISCLAIMS ALL OTHER LIABILITY TO PURCHASER OR ANY OTHER PERSONS ARISING OUT OF USE OR PERFORMANCE OF THE PRODUCT, INCLUDING LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY IN TORT.

6. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. BIAMP EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES SET FORTH HEREIN SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES WITH RESPECT TO ANY DEFECTIVE PRODUCT. THE AGENTS, EMPLOYEES, DISTRIBUTORS, AND DEALERS OF BIAMP ARE NOT AUTHORIZED TO MODIFY THIS WARRANTY OR TO MAKE ADDITIONAL WARRANTIES BINDING ON BIAMP. ACCORDINGLY, ADDITIONAL STATEMENTS SUCH AS DEALER ADVERTISEMENTS OR REPRESENTATIONS DO NOT CONSTITUTE WARRANTIES BY BIAMP.

7. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.

Thank you for purchasing BIAMP...
AMERICAN SOUND CRAFTSMANSHIP

Biamp Systems
14270 N.W. Science Park
Portland, Oregon 97229
(503) 641-7287