ARCHITECTURAL ACOUSTICS®

AAM™ 2443/3243

User Manual

LISTEN TO THIS™
ARCHITECTURAL ACOUSTICS®

Intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION: Risk of electrical shock — DO NOT OPEN!
CAUTION: To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

WARNING: To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance, read the operating guide for further warnings.

Este símbolo tiene el propósito, de alertar al usuario de la presencia de “(voltaje) peligroso” sin aislamiento dentro de la caja del producto y que puede tener una magnitud suficiente como para constituir riesgo de descarga eléctrica.

Este símbolo tiene el propósito de alertar al usario de la presencia de instruccones importantes sobre la operación y mantenimiento en la información que viene con el producto.

PRECAUCION: Riesgo de descarga eléctrica ¡NO ABRIR!
PRECAUCION: Para disminuír el riesgo de descarga eléctrica, no abra la cubierta. No hay piezas útiles dentro. Deje todo mantenimiento en manos del personal técnico cualificado.

ADVERTENCIA: Para evitar descargas eléctricas o peligro de incendio, no deje expuesto a la lluvia o humedad este aparato Antes de usar este aparato, Iea más advertencias en la guía de operación.

Ce symbole est utilisé dans ce manuel pour indiquer à l’utilisateur la présence d’une tension dangereuse pouvant être d’amplitude suffisante pour constituer un risque de choc électrique.

Ce symbole est utilisé dans ce manuel pour indiquer à l’utilisateur qu’il ou qu’elle trouvera d’importantes instructions concernant l’utilisation et l’entretien de l’appareil dans le paragraphe signalé.

ATTENTION: Risques de choc électrique — NE PAS OUVRIR!

ATTENTION: Afin de réduire le risque de choc électrique, ne pas enlever le couvercle. Il ne se trouve à l’intérieur aucune pièce pouvant être reparée par l’utilisateur. Confiez l’entretien et la réparation de l’appareil à un réparateur Peavey agréé.

AVERTISSEMENT: Afin de prévenir les risques de décharge électrique ou de feu, n’exposez pas cet appareil à la pluie ou à l’humidité. Avant d’utiliser cet appareil, lisez attentivement les avertissements supplémentaires de ce manuel.

Dieses Symbol soll den Anwender vor unisolierten gefährlichen Spannungen innerhalb des Gehäuses warnen, die von Ausreichender Stärke sind, um einen elektrischen Schlag verursachen zu können.

Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.

VORSICHT: Risiko — Elektrischer Schlag! Nicht öffnen!
VORSICHT: Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung enfernen. Es befinden sich keine Teile darin, die vom Anwender repariert werden könnten. Reparaturen nur von qualifiziertem Fachpersonal durchführen lassen.

ACHTUNG: Um einen elektrischen Schlag oder Feuergefahr zu vermeiden, sollte dieses Gerät nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.

ENGLISH

AAM™ 2443/3243

Reference Quality Recording and Sound Reinforcement Console

INTRODUCTION

Thank you for purchasing the AAM 2443/3243 mixing console. These consoles represent years of experience in mixer engineering and offer incredible versatility through their flexible 13-bus design. Their impressive 4 SUB GROUPS, 6 AUX, L/R and MONO outputs place these mixers in a league of their own. Additionally, each SUB group features a high-quality dynamic compressor that can be used on the corresponding SUB mix, or can be patched to any channel INSERT. Compact package design and rugged construction make the AAM ideal for a variety of installations. Covering both the AAM 2443 and the AAM 3243, this guide describes the features and controls found on your new mixer including:

- 24 (AAM 2443) or 32 (AAM 3243) input channels; each with GAIN, EQ, AUX and PAN controls, as well as SUB, L/R and MONO assign buttons
- Low-noise mic preamps and XLR connectors on each channel
- Balanced 1/4" LINE inputs on CHANNELS 1-22 (AAM 2443) or 1-30 (AAM 3243)
- INSERT jacks on CHANNELS 1-20 (AAM 2443) or 1-28 (AAM 3243)
- Innovative chassis design with recessed back panel connectors (ideal for desktop placement)
- Smooth, 60 mm CHANNEL, SUB, L/R and MONO faders
- Phantom power with separate activation switches and LEDs indicating operation on CHANNELS 1-16 or 17-24 (AAM 2443); 1-24 or 25-32 (AAM 3243)
- 2 SUPER CHANNELS with PAD (-20 dB) and POLARITY buttons
- 2 STEREO CHANNELS with 1/4" and RCA connectors
- 6 AUX sends (4 balanced XLR)
- 4 SUB groups with patchable dynamic compressors
- MUTE and PFL buttons, clip (PK) and signal (SIG) LEDs on all input channels
- Two RETURNs, each with switchable low-cut (150 Hz) filter, level control, bus assignment, mute and AFL
- PFL on all input channels
- AFL on all AUX SEND, RETURN, SUB and MONO channels
- Stereo HEADPHONE output
- BALANCED XLR and UNBALANCED 1/4" outputs for MONO, LEFT and RIGHT
- LEFT, RIGHT and MONO master INSERTS
- SUB group and MASTER CLIP LEDs sample at summing amp and post-FADER

EXPLANATION OF TERMS

BUSES – The signal paths through the mixer from the channels to the various outputs. AAM mixers contain 13 different buses: L, R, MONO, SUBS 1-4, AUX 1-6.

SUB groups – The buses used to group channels together. This allows one fader to control a sub mix of many channels.

AUX sends – The buses used to route signals to effects and monitors from each channel. PRE means AUX level **is not** affected by fader setting; POST means AUX level **is** affected by fader setting.

PFL – PRE-FADER LISTEN. PFLs send signals to the headphone output and **are not** affected by the fader setting.

AFL – AFTER-FADER LISTEN. AFLs send signals to the headphone output and **are** affected by fader setting.

LOW CUT – (channel low cut) These adjust the frequency in the channel where the low frequencies begin to roll off, and are variable by frequency from OFF (inaudible) to 300 Hz.

1/2, 3/4, L/R, MONO – These buttons route the channels to their respective output buses. BAL/PAN determines 1/2, 3/4 or L/R.

INSERTS – These jacks allow the signal to be taken from and returned to the channel, allowing outboard equipment to be inserted into the signal chain.

MID FREQ – This control selects the frequency adjusted by the MID control in the EQ section.

COMPRESSORS – These reduce levels at a ratio of 4 to 1 when the THRESHOLD is reached.

THRESHOLD – This control sets the level at which compression activates.
GAIN – This control sets the output level from the compressor. This is really a makeup gain, allowing the user to recover gain lost by compression.
LINK – When these buttons are depressed, the input to compressor 1 activates compressors 1 and 2, and the input to compressor 3 activates compressors 3 and 4.
SUBGROUP/EXTERNAL – This button routes the compressor signal to the compressor output jack (LED indicates external jack). This jack is wired reverse of an insert jack, allowing the compressor to be patched with a 1/4" TRS cable.

PHANTOM POWER – Provides +48 Volt power to microphones that need it.

CONNECTOR WIRING

Unless otherwise stated, all input and output jacks are wired as follows:

XLR (MIC) – Pin 1 = GROUND
Pin 2 = POSITIVE
Pin 3 = NEGATIVE

TS and TRS – Tip = POSITIVE (SEND)
Ring = NEGATIVE (RETURN)
Sleeve = GROUND

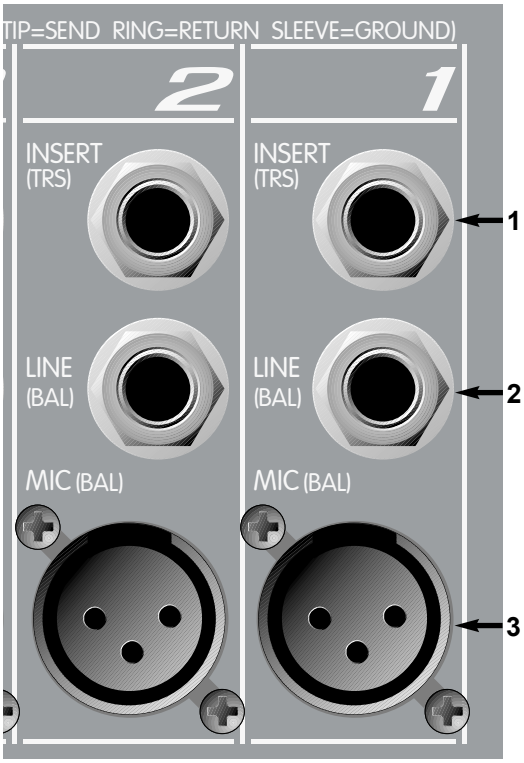
RCA
(PHONO) – Tip = POSITIVE
Cup = GROUND

UNPACKING

Inspect the console carefully during unpacking. If you find any damage, notify your dealer immediately. Be sure to save the carton and all packing materials. Should you ever need to ship the unit back to Peavey Electronics, one of its service centers, or the dealer; use only the original factory packing.

STANDARD CHANNELS
[CHANNELS 1 — 20 (AAM™ 2443) AND 1 — 28 (AAM 3243)]

REAR PANEL CONNECTIONS



(1) INSERT
This jack is a 1/4" Tip/Ring/Sleeve (TRS) connection that allows a pre-EQ, pre-fader signal to be taken from and returned to the channel. Insert jacks are often used to route an input signal to an external signal processor. The on-board compressors can be patched to any channel with an INSERT.

(2) LINE
This jack is a 1/4" balanced (TRS) high-impedance input for high level signals. The tip is the positive input, which should also be used for unbalanced inputs. This input is connected through a 20 dB pad to the MIC input (3). The two inputs cannot be used simultaneously.

(3) MIC
This jack is a balanced XLR (3-pin) low-impedance connection intended for microphones. Other low-impedance signals such as instruments sent to the console via direct boxes will also utilize these inputs.

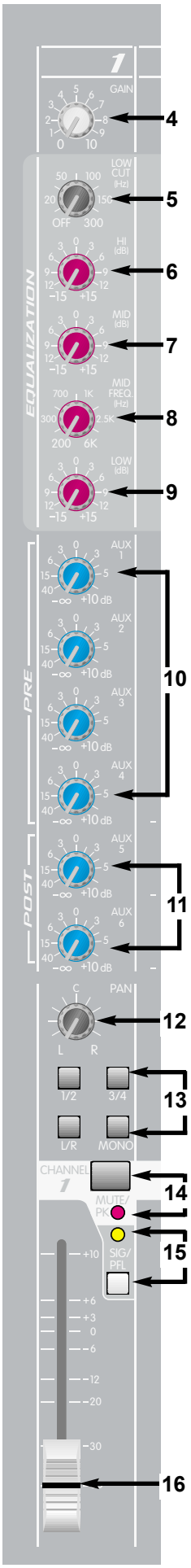
CHANNEL STRIP CONTROLS

(4) GAIN
This control varies the input gain of the channel to provide a wider dynamic range. The adjustment range is +10 dB to +58 dB for the XLR input and –10 dB to +38 dB for the line input. Proper adjustment of input gain maximizes signal-to-noise ratio. Optimum gain setting can be achieved by depressing the PFL switch (15) and adjusting the GAIN control until the signal occasionally illuminates the 0 dB LED in the AFL/PFL display (45).

(5) LOW CUT
This control adjusts the setting of the low-cut filter. Variable from no cut to cut below 300 Hz, this feature reduces/eliminates extremely low frequencies that cause “low-end rumble,” and is a very effective tone-shaping tool. It can also be used to reduce the “boominess” sometimes encountered with male voices.

(6) HI
This active tone control is a shelving-type that varies high-frequency response by +/-15 dB in the range above 12 kHz.

(7) MID
This active tone control is a bandpass (peak/notch) type that varies mid-frequency response by +/-15 dB in a range from 200 Hz to 6 kHz.



(8) MID FREQ

This control determines the center frequency of the MID control. Center frequency for the bandpass filter can be set from 200 Hz to 6 kHz.

(9) LOW

This active tone control is a shelving-type that varies low-frequency response by +/-15 dB. Corner frequency is 75 Hz.

(10) AUX 1 – 4

These controls adjust the level of the channel's **pre-fader** signal that is sent to the auxiliary mix. Gain is variable from minus infinity (– ∞) to +10 dB. Unity gain is at the center detent position. Pre-fader auxiliaries are typically used to send signal to stage monitors, but can also be used to generate an independent recording mix.

NOTE: AUX SENDS 1-4 are factory set to deliver signal pre-EQ, but can be modified (internally) to deliver signal post-EQ. Contact Peavey Electronics' Service Dept. for information. AUX SENDS 5-6 are always post-EQ.

(11) AUX 5 – 6

These controls adjust the level of the channel's **post-fader** signal that is sent to the auxiliary mix. Gain is variable from minus infinity (– ∞) to +10 dB. Unity gain is at the center detent position.

(12) PAN

This control determines the signal's position with respect to L/R and SUB 1 – 4 outputs. Rotating the control counterclockwise increases the amount of signal sent to L and odd-numbered SUBs; rotation clockwise increases the amount sent to R and even-numbered SUBs. For example, with the channel ASSIGN switch (13) in the 1/2 position, rotating the control counterclockwise increases the amount of signal sent to SUB 1, while rotating clockwise increases the amount sent to SUB 2. The C position sends equal amounts to each.

(13) 1/2, 3/4, L/R, MONO (ASSIGN)

These post-fader, post-EQ switches determine where the channel signal is being sent. For example, to send a signal to SUBs 1 & 2, depress the 1/2 button. The PAN control (12) determines how much signal is sent to each SUB group.

(14) MUTE SWITCH/MUTE-CLIP LED

This switch mutes all AUX, SUB, L/R and MONO sends from the corresponding channel. This switch is equipped with a red LED that will illuminate when the channel is muted. When the MUTE switch is disengaged, the LED functions as a clip (PK) indicator that will illuminate at 2 dB below clipping. Muting the channel does not prevent the PFL signal from being sent to the PFL mix when the PFL switch (15) is engaged.

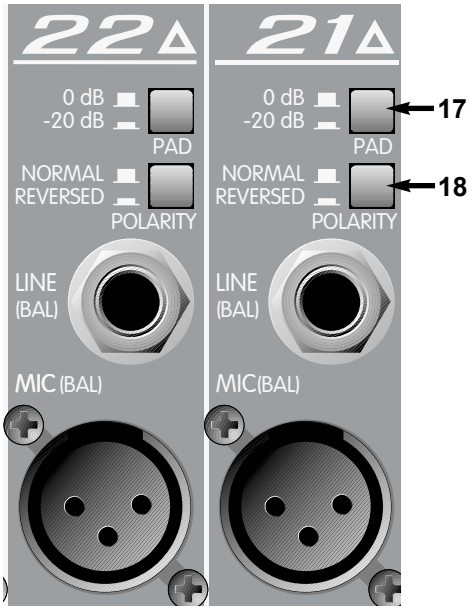
(15) PFL SWITCH/SIGNAL-PFL LED

This switch connects the channel's pre-fader signal to the PFL mix. With this feature engaged, the channel's signal can be monitored through the headphones and/or on the AFL/PFL display. A yellow

LED in the MONO MASTER section (45) will blink to indicate that the signal on the MONO LED display and at the headphone out is PFL. Selecting PFL allows the operator to monitor a channel even with the channel muted, and is especially useful for cueing CDs/tapes. When the PFL button is in the out position, the yellow channel LED will blink as an indication of signal presence (-20 dBu).

(16) CHANNEL FADER

This control varies the signal level sent from the channel to the L/R, SUB, and/or MONO master channels from (– ∞) to +10 dB. The 0 position is unity gain, meaning no increase or decrease in the level set by the GAIN control (4), and is the optimum setting for this control. If the level is too quiet or too loud at unity gain on the FADER, the channel GAIN (4) may need to be adjusted.



SUPER CHANNELS [CHANNELS 21–22 (AAM 2443) AND 29–30 (AAM 3243)]

Input connections and channel strip controls on SUPER CHANNELS are the same as STANDARD CHANNELS with the exception of INSERT jacks. In place of INSERT connections, SUPER CHANNELS are equipped with:

(17) PAD

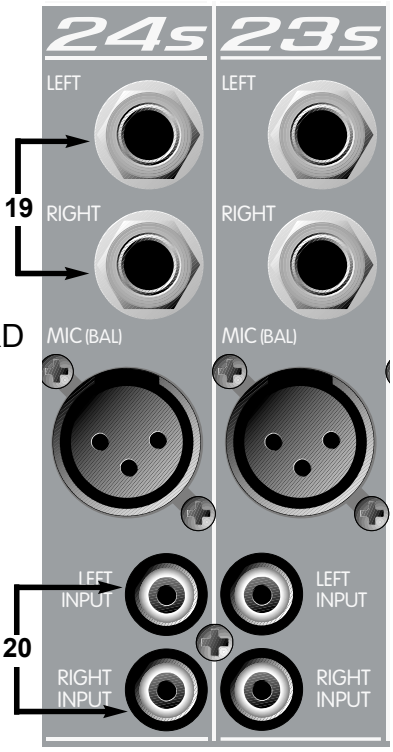
This switch attenuates (reduces) the input signal by 20 dB. This allows accommodation of higher input levels without clipping and is especially useful when close-miking high sound pressure level (SPL) sources such as drums or guitar cabinets. It is also beneficial for “hot” line sources such as keyboards and some wireless microphones.

(18) POLARITY

This switch reverses the polarity of both the XLR and LINE input connectors to compensate for an out-of-phase signal that would otherwise cause frequency (phase) cancellations in the mix.

STEREO CHANNELS [CHANNELS 23–24 (AAM 2443) AND 31–32 (AAM 3243)]

STEREO CHANNELS offer the same channel strip controls as STANDARD CHANNELS with the exception of the MID FREQ control (8). Center bandpass frequency is set at 850 Hz. In place of the MID FREQ control, STEREO CHANNELS offer independent gain controls for LINE and MIC (XLR).



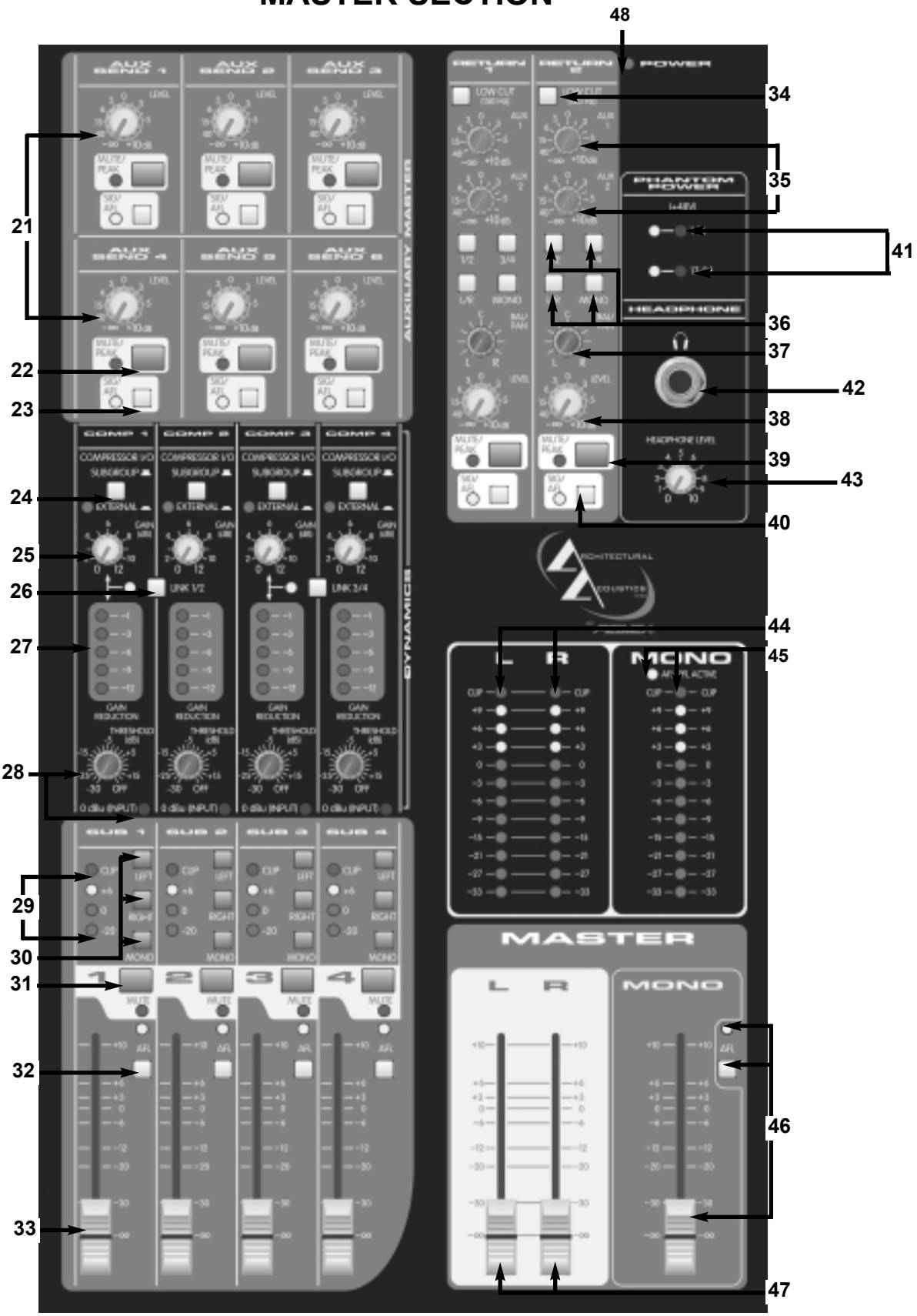
(19) STEREO 1/4" LINE INPUTS

These TS jacks are unbalanced line-level inputs for stereo (L/R) signals. They are connected in parallel with the STEREO RCA LINE INPUTS (20). If you have a MONO line source, use a Y cable or one of the channels with a MONO line input.

(20) STEREO RCA LINE INPUTS

These RCA (phono) inputs are unbalanced line-level inputs for stereo (L/R) signals. They are connected in parallel with the STEREO 1/4" LINE INPUTS (19).

MASTER SECTION



MASTER SECTION FEATURES AND CONTROLS

AUX SENDS

(21) LEVEL

This control sets the output level of the various AUX mixes and is adjustable from no output (– ∞) to +10 dB.

(22) MUTE SWITCH/MUTE-CLIP LED

This switch mutes the output signal from the respective AUX SEND. Illumination of the corresponding red LED signifies this status. When the MUTE switch is disengaged, the LED functions as a clip (PK) indicator that will illuminate at 2 dB below clipping.

(23) AFL SWITCH/AFL-SIGNAL LED

This switch directs the post-fader (AFL) signal to the HEADPHONE output (39), and activates the AFL/PFL LED display. An adjacent LED illuminates to signify this selection. If AFL is not selected, the LED will blink as an indication of signal presence (-20 dBu). Selecting AFL allows monitoring of AUX SENDS with the full AFL/PFL LEVEL DISPLAY (45), as well as allowing the operator to hear the output.

COMPRESSORS

The compressors on the AAM™ 2443/3243 function similarly to automatic volume controls. In other words, they put signals into a more controllable dynamic range. For example, suppose a singer sings too softly and gets buried in the mix on certain parts of a song, yet sings really loudly on other parts. To control this problem, the operator must “ride gain” (turn the volume up and down to achieve a constant level), but these dynamic changes may be hard to anticipate. Using a compressor eliminates this problem. The compressors are factory set at a ratio of 4 to 1, meaning that for every 4 dB of change in input signal, the output changes 1 dB. Compression takes place once the level determined by the THRESHOLD (28) is reached. A high setting, rotating the control clockwise, will result in only the louder notes being compressed; a low setting, rotating the control counterclockwise, will compress a broader range of notes.

(24) COMPRESSOR I/O

This switch determines if the compressor will be used on the SUB mix or will be patched to another channel or other external location. The corresponding yellow LED illuminates when the compressor is being patched externally. This switch can also be used to perform the bypass function. When the compressor is assigned to the SUB group, the I/O jack (53) is bypassed. Similarly, when the compressor is being patched externally, the SUB group is bypassed. Engaging the I/O switch allows the operator to hear the difference between the compressed and noncompressed signal when the compressor is being used on the SUB group.

(25) GAIN

This control sets the output level of the compressor and allows recovery of gain lost by compression. The amount of gain being lost will be represented on the GAIN REDUCTION LEDs (27), and a similar setting on the GAIN control will approximate pre-compression levels.

(26) LINK

This switch allows the compressor in SUB group 1 (or 3) to be linked with the compressor in SUB group 2 (or 4). This is useful if the two SUB groups are being used to create a stereo image. When they are linked, the RMS detector voltages are summed together for an accurate representation of the two levels. This locks the compressors together to maintain the stereo image during compression. While linked, the controls in the first of the two linked groups affect both channels. The compressor controls in the second group are disabled. The gain reduction meter for the first group is accurate for both groups and should be used to monitor compressor activity. When the link is enabled, the yellow LED will illuminate.

NOTE: While linked, the gain reduction meter in the second group may show gain reduction, although it is not a true representation of the compressor activity.

(27) GAIN REDUCTION LEDs

These LEDs graphically show the amount of gain being reduced through compression (-1 to - 12 dB).

(28) THRESHOLD

This control sets the level at which compression activates and is variable from –30 dBu to no compression in the OFF position. The adjacent LED (0 dBu) will illuminate when enough signal is present for compression to function properly.

SUB GROUPS

(29) LEVEL LEDs

This display indicates the amount of signal present in the SUB group mix. Signal is sampled at the summing amp and post-master faders to monitor clipping throughout the SUB group. The CLIP indicator will illuminate when signal approaches (-2 dB) clipping. For example, the SUB fader (33) may be at an acceptable setting, yet the channel signals assigned to the SUB may be approaching clipping. If this is occurring, the channel FADER (16) and GAIN (4) settings may need to be assessed and setting corrections made.

NOTE: The CLIP LED can illuminate before the rest of the array indicating the summing amp is clipping.

(30) LEFT, RIGHT, MONO (OUTPUT ASSIGN)

These switches determine where the SUB mix signal is being sent. For example, if each individual drum mic is assigned to SUB 1, depressing the LEFT button will send the drum SUB mix to the LEFT OUT on the rear panel.

(31) MUTE/MUTE LED

This switch mutes all output from the corresponding SUB group. Illumination of the adjacent red LED occurs when the MUTE button is depressed.

(32) AFL/AFL LED

This switch directs the post-fader signal from the respective SUB group to the HEADPHONE OUTPUT (42) and is displayed in the AFL/PFL LEVEL DISPLAY (45).

(33) SUB FADER

This control determines how much signal is present at the selected output. As with channel faders, optimum setting is at unity gain (0). If the output level is too quiet or too loud at unity gain, the GAIN and FADER settings on the channels assigned to the SUB mix should be checked. If two SUB mixes, SUB 1 and SUB 2 for example, are intended to be in stereo, adjust both FADERS equally and simultaneously to preserve balance.

RETURNS

(34) LOW CUT

This switch activates the low-cut (150 Hz -18 dB/per octave) filter. With this feature engaged, input frequencies below 150 Hz will be rejected. Especially when using reverb, the low-cut filter is useful in reducing “low-end rumble” and making resultant sounds less “muddy.”

(35) AUX 1 & AUX 2

These controls determine the level of the signal returned to the respective AUX bus, allowing musicians/singers to hear external effects.

NOTE: Do not use AUX SENDS 1 or 2 as the path to external equipment that is to be sent back to the corresponding AUX mix (1 or 2) due to the creation of an electronic feedback loop.

(36) 1/2, 3/4, L/R, MONO (ASSIGN)
Like the channel assign switches, these buttons determine the bus assignment of the input signal. They determine where the return signal is being sent.

(37) BAL/PAN
This control determines the placement of the signal in its assigned bus. Rotating the control counterclockwise (L) sends more signal to the LEFT output and odd-numbered SUBS; rotating clockwise (R) sends more signal to the RIGHT output and even-numbered SUBS. The C position sends equal amounts to each.

(38) LEVEL
This control determines the level of the signal being sent to its assigned bus(es). It functions similarly to the CHANNEL FADERS (16).

(39) MUTE SWITCH/MUTE-CLIP LED
Like the other mutes on the console, this switch interrupts the input signal being sent to the bus(es). Red LED illumination indicates activation. When MUTE is not engaged, the LED functions as a clip (PK) indicator that illuminates at 2 dB below clipping.

(40) AFL SWITCH/AFL-SIGNAL LED
This switch directs the post-fader (AFL) signal to the HEADPHONE OUTPUT (42), and to the AFL/PFL LEVEL DISPLAY (45). An adjacent LED illuminates to signify this selection. If AFL is not selected, the LED will blink as an indication of signal presence (-20 dBu).

(41) PHANTOM POWER

These switches apply power (+48 V DC) to the MIC inputs (6) on CHANNELS 1–16 and 17–24 respectively (1–24 on the AAM 2443 and 25–32 on the AAM 3243). This feature provides power to microphones that need an external power source. These switches are recessed into the console and require a small “tool” to activate. If PHANTOM POWER is used, do not connect unbalanced dynamic microphones or other devices that cannot handle this voltage to the XLR inputs. (Some wireless receivers may be damaged. Consult their manuals.) A regular low-impedance mic such as the PVM™ 22 will not be harmed. The LINE inputs (2) are not connected to the +48 V supply and are safe for balanced or unbalanced inputs. An adjacent LED will illuminate when PHANTOM POWER is activated on its respective channels.

(42) HEADPHONE OUTPUT
This stereo output jack (TRS) provides the signal to drive headphones. Signal to this output is L/R unless AFL or PFL is activated.

(43) HEADPHONE LEVEL
This control adjusts the volume of the signal being sent to the HEADPHONE OUTPUT (42).

(44) LEFT/RIGHT LEVEL DISPLAYS
These indicators graphically display the signal level being sent to the LEFT or RIGHT outputs (L, R). Signal is sampled at the summing amp and post-master faders to monitor clipping throughout the Left/Right and MONO MASTER section. The CLIP indicator will illuminate when signal approaches (-2 dB) clipping.
NOTE: CLIP LED can illuminate before the rest of the array indicating the summing amp is clipping.

(45) MONO — AFL/PFL LEVEL DISPLAY
This indicator graphically displays the signal level being sent to the MONO output. When any AFL/PFL switch on the mixer is activated, this display indicates the signal level being sent to the AFL/PFL bus. The AFL/PFL indicator flashes if either mode (AFL or PFL) is selected.

(46) MONO MASTER FADER

This control determines the level of the output signal sent to the MONO output. An adjacent switch allows a post-fader signal to be sent to the HEADPHONE OUTPUT (42) and the AFL/PFL LEVEL DISPLAY (45). A yellow LED above the switch indicates AFL (post-fader) engagement.

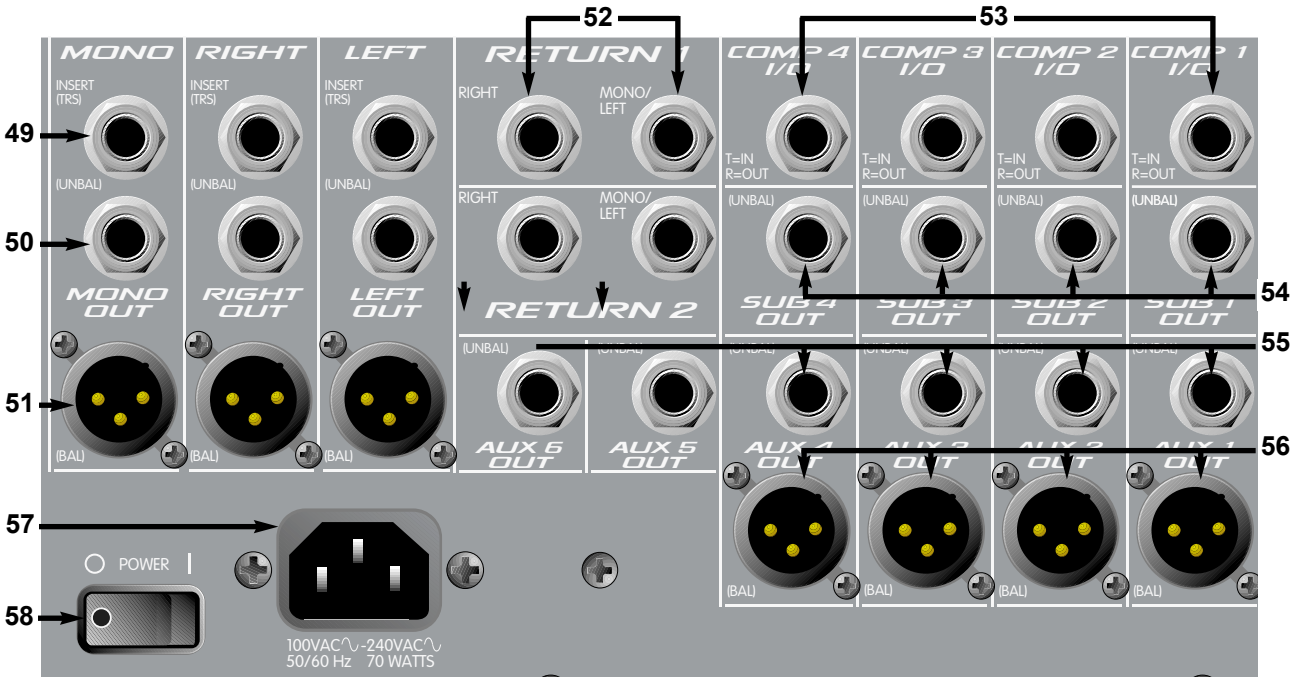
(47) L & R MASTER FADERS

These controls determine the level of the signal sent to the LEFT and RIGHT outputs respectively. As with all faders, the optimum setting is at unity gain (0).

(48) POWER LED

This green LED will illuminate when power is applied to the console, indicating the unit is on.

REAR PANEL CONNECTIONS



(49) L, R, MONO INSERT

These 1/4" stereo (TRS) jacks, provided on the LEFT, RIGHT and MONO channels, allow an external device to be inserted into the signal path, pre-MASTER FADER. The tip carries the signal being sent and the ring is the signal return. A switch in the jack connects the send to the return if no plug is inserted. The signal must be returned to this jack when this feature is used. Failure to return the signal will result in no output.

(50) L, R, MONO UNBAL (UNBALANCED OUTPUT)

These 1/4" jacks allow output of an unbalanced signal and are provided for the LEFT, RIGHT and MONO channels.

(51) L, R, MONO BAL (BALANCED OUTPUT)

These XLR connectors allow output of a balanced signal and are also provided for the LEFT, RIGHT and MONO channels. The unbalanced and balanced outputs can be used simultaneously, but both output levels are controlled by the corresponding MASTER FADER.

(52) RETURN INPUTS

These 1/4" balanced (TRS) high-impedance inputs can be used as stereo or individual returns. Designed for effects return, they can also be used as additional stereo inputs. The MONO/LEFT input provides signal to both inputs if no connector is attached to the RIGHT jack. The tip is the positive input for both balanced and unbalanced use.

(53) COMPRESSOR I/O (INPUT/OUTPUT)

These 1/4" stereo (TRS) jacks allow the internal compressors for each SUB group to be patched to an input channel or to an external device. The tip carries the input (return) signal to the compressor and the ring carries the output (send).

(54) SUB OUT

These 1/4" (TRS) unbalanced outputs provide signal from the SUB groups.

(55) AUX 1 - 6 OUT (UNBALANCED)

These 1/4" (TS) jacks provide signal from the AUX buses.

(56) AUX 1 - 4 OUT (BALANCED)

These XLR connectors are provided on AUX 1 – 4 and provide output from those buses. These can be used simultaneously with the unbalanced jacks (55), but both levels will be determined by the AUX SEND LEVEL (21).

POWER

(57) REMOVABLE POWER CORD

This receptacle is for the IEC line cord (included) that provides AC power to the unit. Connect the line cord to this connector and to a properly grounded AC supply. Damage to the equipment may occur if an improper line voltage is used (see voltage marking on unit). Never remove or cut the ground pin of the line cord plug. The console is supplied with a properly rated line cord. If lost or damaged, replace this cord with one of the proper rating.

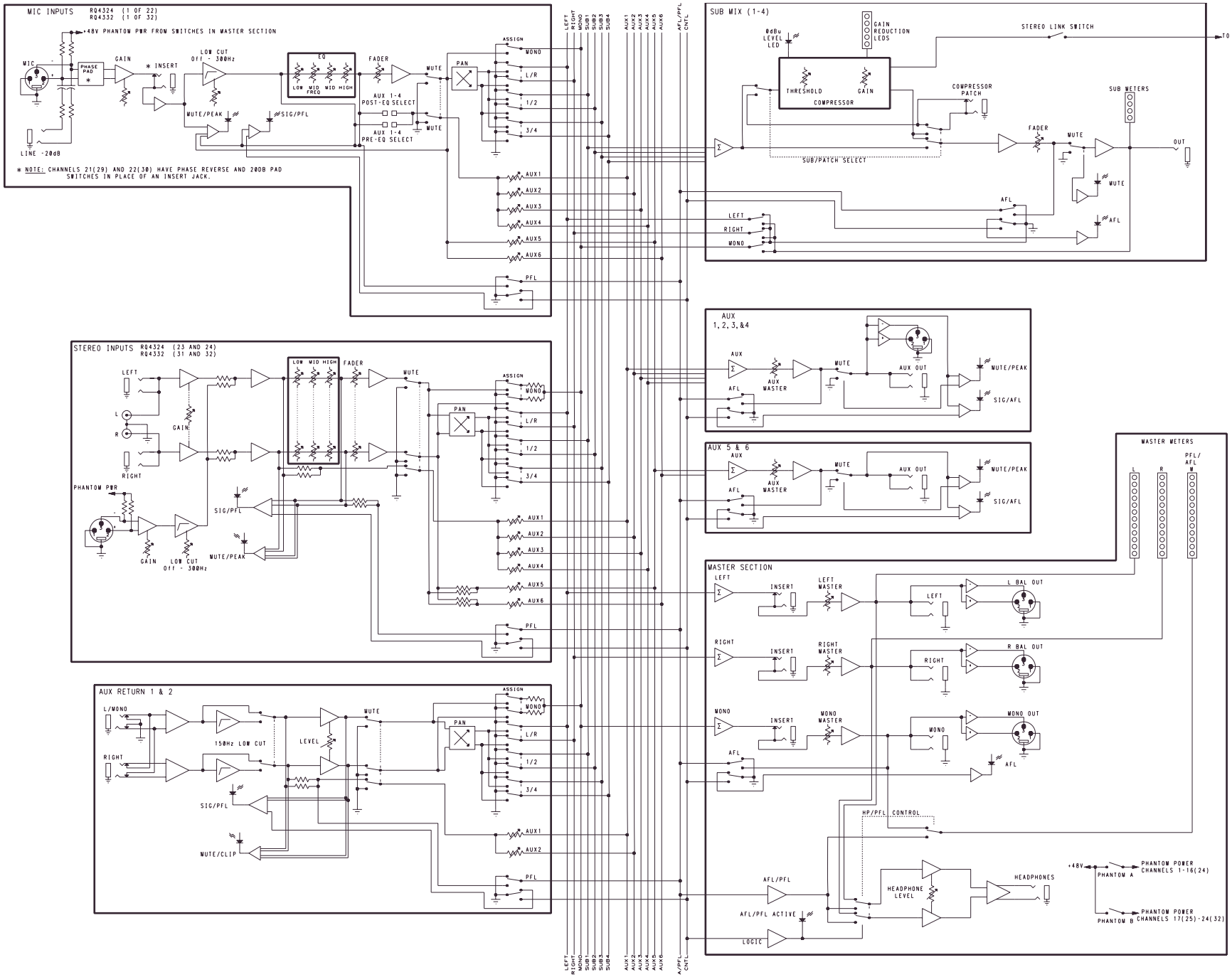
NOTE: FOR UK ONLY

If the colors of the wires in the mains lead of this unit do not correspond with the colored markings identifying terminals in your plug, proceed as follows: (1) The wire that is colored green and yellow must be connected to the terminal marked by the letter E, or by the earth symbol, or colored green or green and yellow. (2) The wire that is colored blue must be connected to the terminal that is marked with the letter N, or colored black. (3) The wire that is colored brown must be connected to the terminal that is marked with the letter L or colored red.

(58) POWER SWITCH

Place this switch in the "**|**" position to apply power to the console. Return it to the "**O**" position to turn the unit off. It is recommended that the unit be turned off while patching and/or applying power to external equipment to be used in conjunction with the mixer.
The POWER LED (48) will illuminate when power has been applied and the unit is on.

BLOCK DIAGRAM



AAM™ 2443 and 3243 Sound Reinforcement Mixer

Specifications:

Input Specifications:

Function	Input Z (Ohms) Min.	Input Gain Setting	Input Levels			Bal./ Unbal.	Connector
			Min.**	Nominal	Max.		
Microphone (150 Ohms)	2 k	Max. Gain (58 dB)	-74 dBu	-54 dBu	-38 dBu	Bal.	XLR Pin: Pin 1 (Ground) Pin 2 (+) Pin 3 (-)
		Min. Gain (10 dB)	-24 dBu	-6 dBu	+12 dBu		
Line Input (10 k Ohms)	10 k	Max. Gain (38 dB)	-54 dBu	-34 dBu	-18 dBu	Bal.	1/4" TRS: Tip (+) Ring (-) Sleeve (Ground)
		Min Gain (-10 dB)	-6 dBu	+14 dBu	+32 dBu		
Insert Return	22 k	N/A (0 dB)	-16 dBu	+4 dBu	+22 dBu	Unbal.	1/4" TRS: Tip Send Ring Return Sleeve (Ground)
Stereo Line Input (RCA's)	20 k	Max. Gain (20 dB) Min. Gain 0 dB (detent)	-29 dBu -16 dBu	-9 dBu +4 dBu	+4 dBu +18 dBu	Unbal.	1/4" Phono Sleeve (Ground)
Aux Return	22 k	N/A (0 dB)	-24 dBu	+4 dBu	+22 dBu	Unbal.	1/4" Phono

0 dBu = 0.775 V (RMS)

** Minimum input level (Sensitivity) is the smallest signal that will produce nominal output (+4 dBu) with sub and master controls set for maximum gain.

* Nominal settings are defined as all controls set at 0 dB (or 50% rotation for rotary pots) except the gain adjustment pot, which is as specified.

Output Specifications:

Function	Minimum Load Z (Ohms)	Output Levels Nominal	Max.	Bal./ Unbal.	Connector
Main L/R	600	+4 dBu	+22 dBu	Unbal. Bal.	1/4" Phono (Unbal); XLR: Pin 1 Ground Pin 2 (+) Pin 3 (-) (Bal.)
Mono	600	+4 dBu	+22 dBu	Unbal. Bal.	1/4" Phono (Unbal.); XLR: Pin 1 Ground Pin 2 (+) Pin 3 (-)
Sub Master	600	+4 dBu	+22 dBu	Unbal.	1/4" Phono
Aux Send	600	+4 dBu	+22 dBu	Unbal.	1/4" Phono (Unbal.); XLR Pin 1 Ground Pin 2 (+) Pin 3 (-)
Channel Insert Send	600	+4 dBu	+22 dBu	Unbal.	1/4" TRS: Tip Send, Ring Return, Sleeve Ground
Headphone	8	+4 dBu (no load)	+22 dBu	Unbal.	1/4" TRS: Tip Left Ring Right Sleeve Ground

* 0 dBu = 0.775 V (RMS)

Gain:

Mic Input Gain Adj Range	10 dB to 58 dB
Mic Input to Sub Output	78 dB (Max Gain)
Mic Input Longest Path	88 dB (Max Gain)
Line Input Gain Adj Range	-10 dB to 38 dB
Line Input to Sub Output	58 dB (Max Gain)
Line Input Longest Path	68 dB (Max Gain)
Stereo Line Input Gain Adj Range	-60 dB to 10 dB
Stereo Line Input to Sub Output	30 dB (Max Gain)
Stereo Line Input Longest Path	40 dB (Max Gain)
Aux Return to Sub Output	28 dB (Max Gain)
Aux Return Longest Path	38 dB (Max Gain)

Frequency Response:

Mic Input to L-R Output	20 Hz to 50 kHz +0 dB / -1 dB
Stereo Input to L-R Output	20 Hz to 30 kHz +0 dB / -1 dB

Total Harmonic Distortion (THD):

< 0.007% 20 Hz to 20 kHz; Mic to L-R output at nominal level (20 Hz - 80 kHz BW)

Hum and Noise:

Output	Residual Noise Ref: 0 dBu	S/N Ratio	Test Conditions
Master L/R Mono	-105 dBu	109 dB	All Faders Down
	-90 dBu	94 dB	Master Fader Nominal, Channel Faders Down, All Channels Assigned
Submaster	-98 dBu	102 dB	All Faders Down
	-88 dBu	92 dB	Submaster Fader Nominal, Channel Faders Down, All Channels Assigned

(Hum and Noise Measurements: 22 Hz to 22 KHz BW)

Equivalent Input Noise (EIN):

-128 dBu (Input terminated with 150 Ohms)

Crosstalk:

>90 dB Adjacent input channels (20 Hz - 20 kHz)
>70 dB Left to right outputs (20 Hz - 20 kHz)

Common Mode Rejection Ratio (Mic Input):

50 dB min (20 Hz - 20 kHz)
70 dB typ @ 1 kHz

Meters:

L/R master and all submasters = 12 segment, peak reading
(0 dB= +4 dBu)

Signal / Overload Indicators:

Red LED lights 2 dB below clipping

Lamp Power:

12 VDC @ 350 mA per connector, or 12 V DC @ 700 mA total maximum load

Power Requirements:

DOM: 100 VAC –240 VAC 50/60 Hz 70 Watts Nominal, 24 chan
80 Watts Nominal, 32 chan

Dimensions:

AAM™ 2443
Height: 8.9" (226 mm)
Width: 36.6" (930 mm)
Depth: 19.5" (495 mm)
Weight: 36 lbs. (16.4 kg)

AAM™ 3243
Height: 8.9" (226 mm)
Width: 44.6" (1132 mm)
Depth: 19.5" (495 mm)
Weight: 48 lbs. (21.8 kg)

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric products, basic cautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water. For example, near or in a bathtub, swimming pool, sink, wet basement, etc.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding plug. The wide blade or third prong is provided for your safety. When the provided plug does not fit into your inlet, consult an electrician for replacement of the obsolete outlet. Never break off the grounding. Write for our free booklet "Shock Hazard and Grounding". Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
11. Only use attachments/accessories provided by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. If this product is to be mounted in an equipment rack, rear support should be provided.
16. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational and Health Administration (OSHA) has specified the following permissible noise level exposures:

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

SAVE THESE INSTRUCTIONS!

Architectural Acoustics®

PEAVEY ELECTRONICS CORPORATION LIMITED WARRANTY

Effective Date: July 1, 1998

What This Warranty Covers
Your Peavey Warranty covers defects in material and workmanship in Peavey products purchased and serviced in the U.S.A. and Canada.

What This Warranty Does Not Cover
The Warranty does not cover: (1) damage caused by accident, misuse, abuse, improper installation or operation, rental, product modification or neglect; (2) damage occurring during shipment; (3) damage caused by repair or service performed by persons not authorized by Peavey; (4) products on which the serial number has been altered, defaced or removed; (5) products not purchased from an Authorized Peavey Dealer.

Who This Warranty Protects
This Warranty protects only the original retail purchaser of the product.

How Long This Warranty Lasts
The Warranty begins on the date of purchase by the original retail purchaser. The duration of the Warranty is as follows:

Product Category	***Duration***
MediaMatrix® DPU (Excluding Frames), Cinema Processors, Power Amplifiers, Pre-Amplifiers, Mixers, Electronic Crossovers and Equalizers	***5 years***
Loudspeakers	***5 years***
Microphones	***2 years***
Frames	***1 year***
Speaker Components (incl. speakers, baskets, drivers, diaphragm replacement kits and passive crossovers) and all Accessories	***1 year***

What Peavey Will Do
We will repair or replace (at Peavey's discretion) products covered by warranty at no charge for labor or materials. If the product or component must be shipped to Peavey for warranty service, the consumer must pay initial shipping charges. If the repairs are covered by warranty, Peavey will pay the return shipping charges.

How To Get Warranty Service
(1) Take the defective item and your sales receipt or other proof of date of purchase to your Authorized Peavey Dealer or Authorized Peavey Service Center.
OR
(2) Ship the defective item, prepaid, to Peavey Electronics Corporation, International Service Center, 412 Highway 11 & 80 East, Meridian, MS 39301 or Peavey Canada Ltd., 95 Shields Court, Markham, Ontario, Canada L3R 9T5. Include a detailed description of the problem, together with a copy of your sales receipt or other proof of date of purchase as evidence of warranty coverage. Also provide a complete return address.
OR
(3) All MediaMatrix® Frames needing repair, should be shipped prepaid to Peavey Electronics Corporation, International Service Center, 412 Highway 11 & 80 East, Meridian, MS 39301.

Limitation of Implied Warranties
ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.
Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Exclusions of Damages
PEAVEY'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT PEAVEY'S OPTION. IF WE ELECT TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. PEAVEY SHALL NOT BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If you have any questions about this warranty or service received or if you need assistance in locating an Authorized Service Center, please contact the Peavey International Service Center at (601) 483-5365 / Peavey Canada Ltd. at (905) 475-2578.

Features and specifications subject to change without notice.

LISTEN TO THIS™

ARCHITECTURAL ACOUSTICS®

Features and specifications subject to change without notice.

Peavey Electronics Corporation • 711 A Street • Meridian • MS • 39301
(601) 483-5376 • FAX (601) 486-1678 • http://aa.peavey.com

80304868

Printed in the U.S.A. 7/01