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.

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**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” que no tiene aislamiento dentro de la caja del producto que puede tener una magnitud suficiente como para constituir riesgo de corrientazo.

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

**PRECAUCION:** Riesgo de corrientazo — ¡No abra!
**PRECAUCION:** Para disminuír el riesgo de corrientazo, no abra la cubierta. No hay piezas adentro que el usario pueda reparar. Deje todo mantenimiento a los técnicos calificados.

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

Ce symbole est utilisé pur indiquer à l’utilisateur la présence à l’intérieur de ce produit de tension non-isolée dangereuse pouvant être d’intensité suffisante pour constituer un risque de choc électrique.

Ce symbole est utilisé pour indiquer à l’utilisateur qu’il ou qu’elle trouvera d’importantes instructions sur l’utilisation et l’entretien (service) de l’appareil dans la littérature accompagnant le produit.

**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. Confier l’entretien à un personnel qualifié.

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**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 les avertissements supplémentaires situés dans le guide.

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.

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**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.

# Table of Contents

# XR® 1204 Powered Sound Reinforcement Mixing Console

## General Description:

Congratulations on your purchase of the XR® 1204, the finest example of state-of-the-art powered mixing consoles. In one compact package, we have included the feature set of 12 low noise discrete microphone preamps, 4 stereo input channels, a stereo equalizer/automatic feedback finder, digital reverb processor, 210 watt per channel stereo power amp, and world-famous Peavey ruggedness and reliability. You can feel confident that the XR 1204 powered console will meet your PA needs for many years to come.

To take advantage of the XR 1204's powerful features, please read this owner's manual carefully and keep it handy as a reference. This owner's manual includes several sections detailing individual areas of mixer operation, including: control functions, set-up, and applications in sound reinforcement.

The standard channels feature discrete low noise mic preamps with globally switched phantom power. Also featured are three-band EQs with a semi-parametric mid control. There are 4 auxiliary sends (two dedicated pre-EQ for monitor sends, 2 post-EQ/post-fader effect sends). The mute circuitry squelches the L and R bus as well as the monitor and effects sends on channels 5, 6, 7 and 8.

"Super" mic channels 7 and 8 also have pad and phase reverse switches for those applications that require it, as well as the standard channel functions. There are no line inputs on these channels.

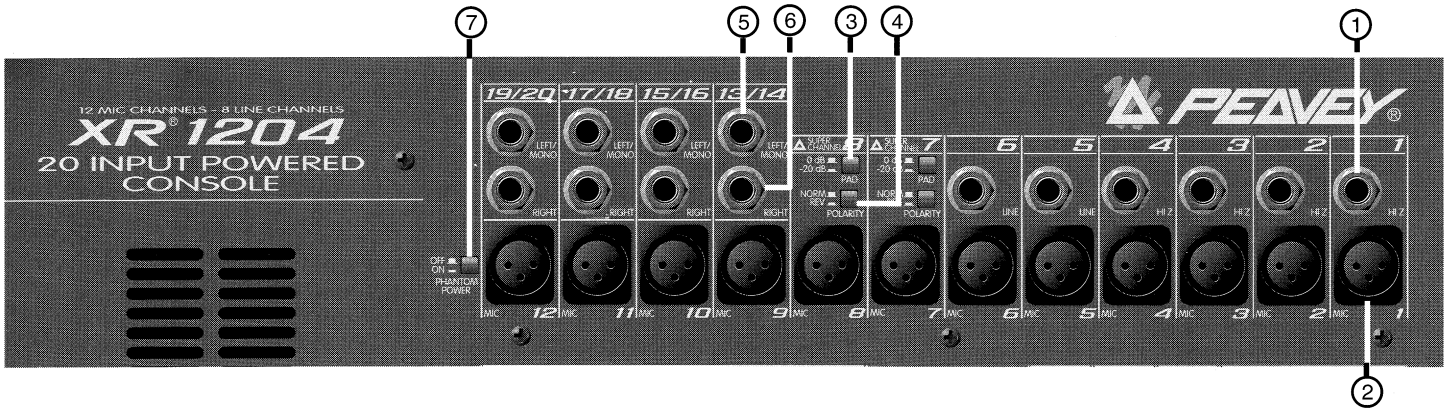
In addition to the four mic channels, there are four combination mono mic/line-level stereo channels for tape, CD, or synth inputs. Each of these four channels has all the standard channel functions, including a separate discrete low noise mic preamp. These channels feature a separate control for the mic input and line-level stereo inputs allowing them to be used simultaneously and indepently. Also, the stereo line inputs on these channels can be selected to go through the channel to the L/R bus, or bypass the channel and feed directly to the L/R bus without EQ. The monitor sends on these channels are fed simultaneously by stereo line inputs and mic inputs. These four stereo line input channels can also double as fully equalized stereo effects returns with sends to the main L/R mix and the Mon 1 and 2 mixes as well as the Aux 1 and Digital Effects buses.

The Master section features a unique graphic equalizer/power amp mode switch. You can select to use the XR 1204 as a full stereo mixer amplifier (default) or a dual mono with one graphics and amplifier used for Monitor 1 and the other graphics and amplifier receiving a L and R (mono) signal, without patching the signal to each graphic equalizer and amplifier separately.

We have incorporated digital reverb into a processor that is included in the master section as the on-board digital signal processor. By including separate time and damping controls, the user can create many effect settings. All channels have a dedicated digital effects send routed directly to the DSP effects processor. All summing buses are designed for low noise operation.

The Left and Right graphics outputs each have LED meters. They are calibrated for a 0 dB reading at a 0 dBV output level. A balanced mono output (derived from the post fader Left and Right outputs) has its own level control. Each channel, master Mon 1, Mon 2, Aux and Effects send has an overload LED indicator that illuminates when the signal level is within 2 dB of clipping. Electronic muting of the Monitor 1 and 2, Aux and Effects and the Left and Right outputs greatly reduces any turn on and turn off transients.

**NOTES:** Do not restrict or block cooling vents on mixer rear or mixer bottom. They are necessary for adequate airflow/cooling of the amplifier. Place XR® 1204 on hard smooth surface only.

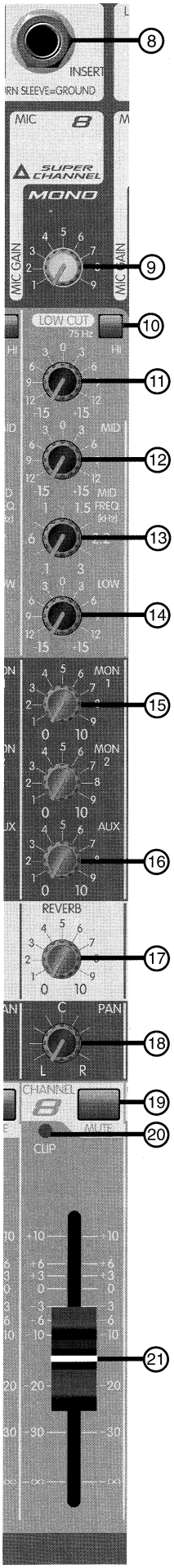



## CHANNEL INPUTS SECTION:

1. **1/4" INPUTS:** Channels 1-4 have high impedance 1/4" (TRS) mic inputs for use with sources such as high-impedance microphones and/or guitars. This input is wired in parallel with the mic input which is switched out of circuit when the 1/4" Hi-Z input is used. Channels 5 and 6 have balanced 1/4" (TRS) line-level inputs wired through a 20 dB pad to the MIC input for line level signals. The tip is the positive input as is pin 2 of the MIC input. As with Channel 1-4, Channels 5 and 6 do not allow for the simultaneous use of the line input (1/4") and MIC (XLR) input.
2. **MIC INPUT:** XLR balanced low-impedance channel input optimized for a microphone or other low-level source. Pin 2 is the positive input. Because of the wide range of gain adjustment, signal levels as high as +10 dBV (2.45 V RMS) can be accommodated. When the phantom power is enabled, this connector has +48V on pins 2 and 3 (pin 1 is ground reference).
3. **PAD:** Attenuates the input signal by 20 dB. This will increase the dynamic range to accommodate a higher input level before clipping, which may be necessary when close miking loud guitar amplifiers or drum kits.
4. **POLARITY:** Reverses the phase of the input signal. This will compensate for an out-of-phase input that would otherwise cause frequency cancellations in the mix. (Often needed for drum mics where both sides of the drum head are picked up in multiple mic situations.)
5. **LEFT/MONO INPUT:** High-impedance input for line-level signals. The left/mono input supplies signal to both the left and right inputs (if there is nothing inserted to the right input jack), then through the line-level control, then to the direct/EQ switch.
6. **RIGHT INPUT:** High-impedance input for line-level signals. The right input supplies signal to the right input, then through the line-level control, then to the direct/EQ switch.
7. **PHANTOM POWER SWITCH:** Applies 48 VDC voltage to all input XLR connectors to power microphones that require it.

⚠ **CAUTION!** When phantom power is switched on, make sure that any channel you are plugging a mic into is muted, and all Monitor and Auxes are at minimum. Otherwise, there will be a loud pop in the PA. This is normal. It is best to plug all mics into their respective channels with the phantom power switched off. This reduces noise in the PA and reduces the chances of the mic being damaged.

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.) The line input jacks (# 1) are not connected to the phantom




supply, and are safe for all inputs (balanced or unbalanced). An unbalanced-to-balanced impedance converter such as the Peavey 5116, or a Peavey 1:1 Interface Adapter can also be used to isolate a mic from phantom voltage.

## CHANNEL SECTION:

8. **INSERT**: 1/4" stereo (TRS) jack allows an external device to be inserted into the signal path before the EQ. The tip has the send signal; the ring is the return input. A switch in the jack normally connects the send to the return until a plug is inserted. The Cal 32/Y cable (available from Peavey, #5299) can be used in the insert jack to patch into and out of effects devices. It is a “Y” cable adapter.

9. **MIC GAIN:** Varies the input gain to allow for a wide dynamic range. Proper adjustment of the input gain will maximize the signal-to-noise ratio. It should be set and adjusted for a 0 dB (+0 dBV) level at the Right meter.

10. **LOW CUT:** This is a low cut filter with a corner frequency of 75 Hz used to filter out rumble, wind noise, breath thumps, stage noise, and other low-frequency components that rob power from the amplifiers and muddy the signal. The pre-EQ signal sent to the Mon 1 and 2 sends are picked up after this switch so that the monitors can also benefit from this filter.

11. **HI EQ:** A shelving type of active tone control that varies the treble frequency levels +/-15 dB at 12 kHz. It is designed to remove noise or to add brilliance to the signal, depending on the quality of the source.

12. **MID EQ:** Mid +/-15 dB. This control sets the amount of cut and boost at the mid-frequency selected.

13. **MID-FREQUENCY:** A semi-parametric sweepable (frequency select from 100 Hz to 3 kHz) type of active tone control that varies the mid-range frequency selected. These frequencies are optimum for bringing out the clarity of a vocal mic without adding harshness or grit, and can reduce feedback at mid to low frequencies. A slight cut within these frequencies can help a mic that has proximity effect to become more intelligible in close talking situations. It will also be useful to solve common feedback problems.

14. **LOW EQ:** A shelving type of active tone control that varies the bass frequency levels +/-15 dB at 70 Hz. It will add depth to thin signals, or clean up muddy ones.

15. **MON 1 and 2:** Adjusts the level of the channel signal (pre-EQ) that is added to the corresponding Monitor mix. These are designed to be used for monitor sends with Mono signals.

16. **AUX 1:** Adjusts the level of the channel signal that is added to the corresponding Aux mix. These are post-fader on all channels, and are configured in mono on all channels. They can be used to drive effects units.

17. **DIGITAL EFFECTS:** This control varies the level into the digital effects processor bus. This control will adjust the signal level from this particular channel to the digital processor. The signal is heard in the mix that the effects return is assigned to.

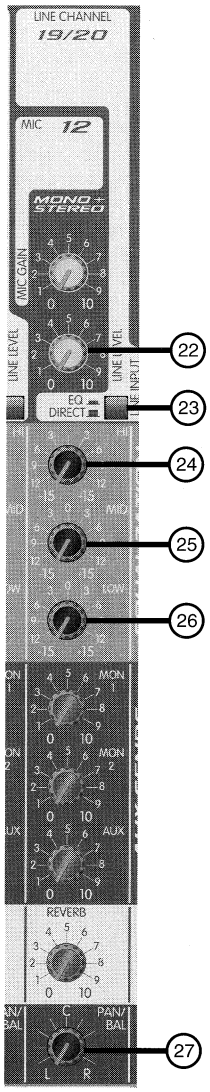
18. **PAN:** Determines whether that channel will be heard in the Left, Right, or both channels in the main mix (stereo). In Mon1/Mono Equalizer/Amplifier switch setting (#36), the pan will control the submix of Left and Right as they are mixed into a single signal into the Left graphic/amplifier.

19. **MUTE:** Mutes channels 5-8 only (L and R bus, Effects and Aux sends).

20. **CLIP LED:** A dual function LED that illuminates when the signal level is nearing the overload point. This circuit monitors the input gain, EQ, and post-fader stages for overload. It illuminates at +16 dBV and signals that gain or EQ boost should be reduced. (There is roughly 2 dB of headroom remaining when it lights.)

21. **CHANNEL FADER:** Channel output level control. Sets the level sent to the L and R bus. The optimum setting for this control is the "0" (unity gain) position.

**NOTE:** 22-27 pertain to the stereo channels 9 (13/14) through 12 (19/20) only.




22. **LINE LEVEL:** Varies the gain of the stereo input to optimize the signal-to-noise ratio. The adjustment range is off to +15 dB. Proper adjustment will maximize the signal-to-noise ratio.

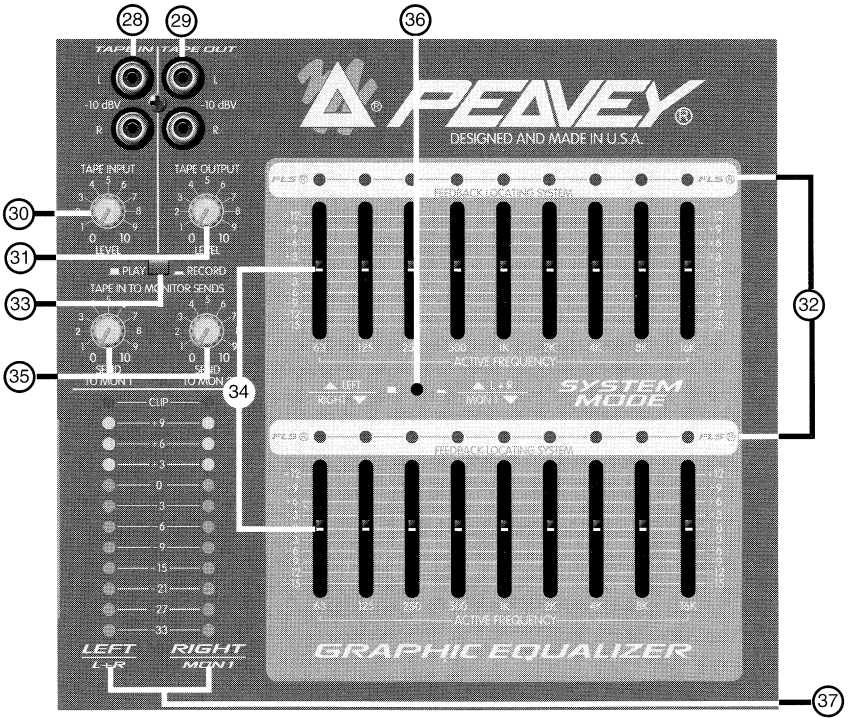
23. **EQ DIRECT:** This switch routes the stereo line-level inputs either through the channel or to the L and R bus directly, bypassing the channel EQ and the Aux 1 and Digital Effects bus. The Stereo line-level signal is always present in the Mon 1 and 2. This allows the mic and stereo line to be used simultaneously.

24. **HI EQ:** A shelving type of active tone control that varies the treble frequency levels +/-15 dB at 12 kHz. It is designed to remove noise or to add brilliance to the signal, depending on the quality of the source.

25. **MID FREQUENCY:** A bandpass (peak/notch) type of active tone control that cuts or boosts the mid-range frequencies +/-15 dB at 1 kHz.

26. **LOW EQ:** A shelving type of active tone control that varies the bass frequency levels +/-15 dB at 70 Hz. It will add depth to thin signals or clean up muddy ones.

27. **BALANCE:** Adjusts the balance of the stereo signal that is sent to the L and R bus. Functions as a pan control for mono signals from the Mic inputs on the stereo line channels.




## MASTER SECTION

**28. TAPE IN:** This stereo RCA phono jack accepts a stereo input (nominally -10 dBV) from the output of a tape deck or CD player. CAUTION: When recording, feedback can occur if the Play/Record switch (# 33) is not switched to the Record mode.

**29. TAPE OUT:** This stereo RCA phono jack provides a signal for the recording inputs of a stereo tape deck, with an amplitude set by the tape output level control (# 31).

**30. TAPE INPUT LEVEL:** Adjusts the level of the tape signal supplied to the L-R mix.

**31. TAPE OUT LEVEL:** Sets the level of the main left and right stereo signal sent to the tape output jack. It is post master fader.

**32. FLS®:** (Feedback Locating System) These LEDs illuminate to indicate the frequency band of highest energy, which will indicate not only the feedback frequency, but automatically indicate the graphics slider to use to decrease that frequency band's gain to lessen or eliminate feed back. (**NOTE:** These LEDs illuminate with any audio signal, not just during feedback.)

**33. PLAY/RECORD SWITCH:** This switch mutes the signal to the tape out jack. If you are using the same tape deck for record and playback, you should depress this switch to prevent feedback when recording. If you are using 2 tape decks, then you don't have to press in this switch because then the record tape deck's outputs are not connected to the mixer and there is no path for positive feedback.

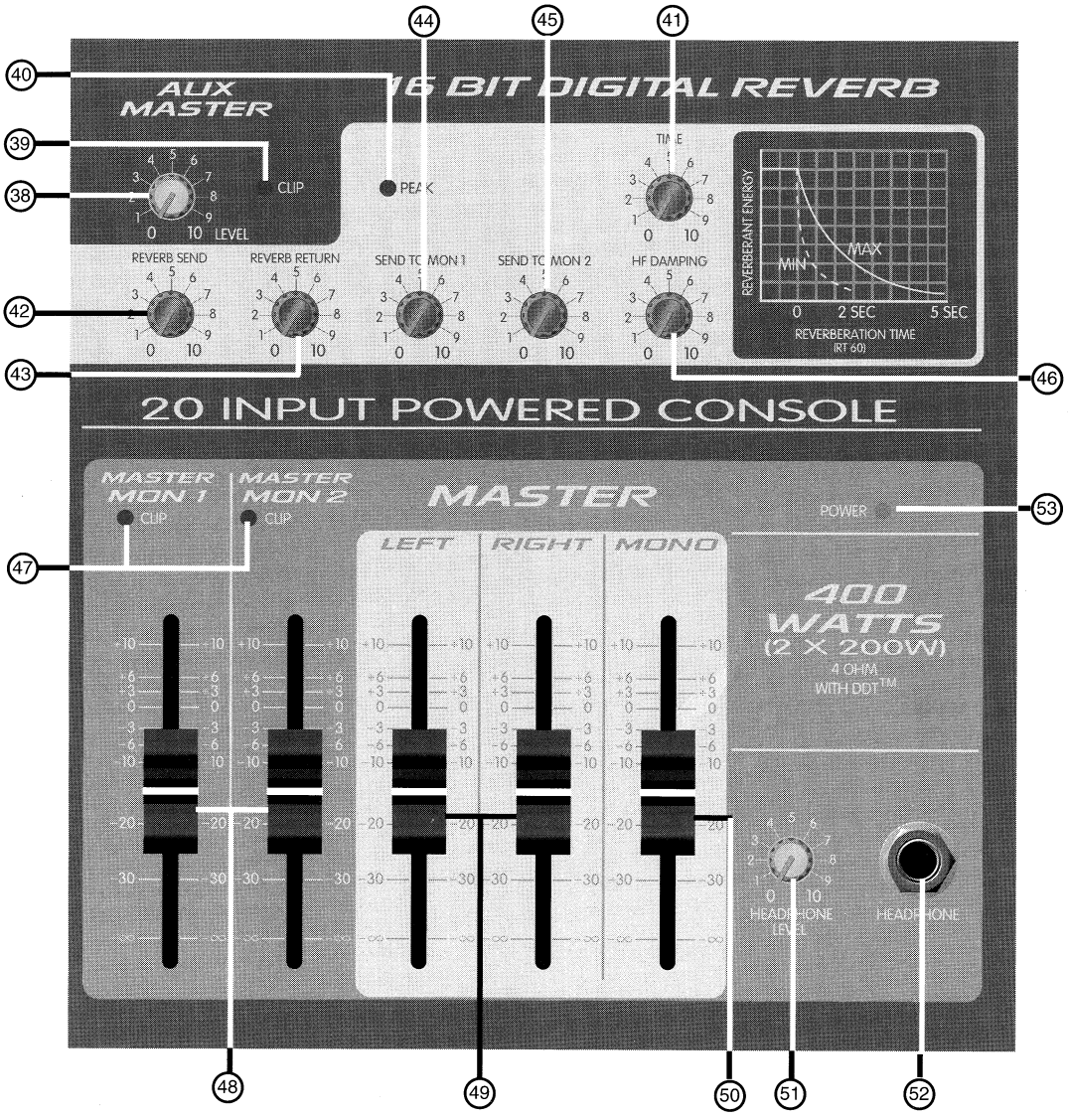
**34. GRAPHIC EQUALIZERS:** These 9-band equalizers are fixed on 1 octave centers. They are designed for 15 dB of cut, and 12 dB boost. They are connected directly to their power amplifier inputs. **NOTE:** If you want to insert an outboard equalizer in the signal path, there are graphics/power amp insert jacks on the rear panel of the mixer (#59) for connecting another source to the inputs of the power amplifiers. In this case you will simply position the XR 1204's graphic sliders in the "0" position to bypass them.

35. **TAPE TO MONITOR SENDS:** Adds a mono sum of the tape signal to the Mon 1 or Mon 2 mixes. These are used to send the tape signal to monitors for soundtrack monitoring, or for singers to use while accompanied by pre-recorded song tracks.

36. **SYSTEM MODE:** This switch is used to configure the XR 1204 as either a stereo or dual mono amplifier. The XR 1204 is shipped from the factory in the default setting of Left Main to the upper EQ and Right to the lower EQ. When this switch is depressed (it is recessed to prevent accidental switching during a performance), it switches the upper EQ to (mono) PA Left + Right, which is still controlled by the Left and Right sliders, creating the ability to have two submixes. Some channels could be panned left for vocals only, and some channels could be panned right for instruments only. This gives you independent control of vocals and instruments globally, allowing for more versatility. The lower EQ then becomes the Monitor 1 signal only, creating an entire PA and monitor mixing system in one small, easy-to-carry package. And, this change is accomplished without a single patch cord!

37. **LED METERS:** Two 12-segment LED arrays monitor the levels of the main L-R outputs. The 0 dB reference level corresponds to 0 dBV. Also, when the LED meters are at "0 dBV" this indicates that the power amplifiers are at full power (210 Watts per channel @ 4 ohms). When the Mode switch is depressed, the LED meters switch to (L + R) Mono on the left array, and Monitor 1 on the right array.

38. **AUX MASTER LEVEL:** Aux 1 mix output level control. Sets the Aux 1 level sent to the output jack (# 57). The optimum setting for this control is "5" (unity gain) position.



39. **AUX/CLIP LED:** Will illuminate to indicate 2 dB of headroom left before clipping.

40. **EFFECTS PEAK LED:** Illuminate to indicate 6 dB of headroom left before clipping in the digital reverb processor.
**NOTE:** This PEAK LED is different than all the others on the mixer, because it is set to light at 6 dB below clipping the digital processor. It can flash occasionally, but not stay on steadily. This control should be set to illuminate the peak LED occasionally before setting the level of the Reverb Return control.

41. **TIME/RATE:** Adjusts the time of the particular reverb.

42. **REVERB MASTER SEND:** Effects mix output level control. Sets the reverb level sent to the digital reverb processor. The digital reverb processor has an automatic level control in its input signal path, which helps prevent accidental overdriving of the digital processor; however, it is not a substitute for proper set-up of the levels into and out of the processor.

43. **REVERB MASTER RETURN LEVEL:** Effects return output level control. Sets the digital reverb output level sent to the Left and Right mixing bus.

44-45. **SEND TO MONITOR 1 and 2:** These controls are used to send the digital reverb signal into the Monitor 1 or Monitor 2 mix, allowing the performers to hear the digital reverb in their monitor speaker mix.

46. **HF DAMPING:** This control adjusts the high-frequency content of the reverberated audio. It varies from allowing only 200 Hz and below at minimum, up to 14 kHz at the maximum clockwise adjustment.

47. **MONITOR 1 and 2 CLIP:** A LED that illuminates at +16dBV when the signal level is nearing the overload point. (There is roughly 2 dB of headroom remaining when it lights.)

48 **MONITOR 1 and 2 MASTER LEVEL:** Sets the overall level of the Monitor 1 and 2 signal that is sent to the output jacks (# 55). It is best set at “0” unity gain.

49. **MASTER LEFT/RIGHT:** Separate faders that set the level of the left/right mix. The output level is monitored by the left and right meters AFTER the graphic equalizers. The optimum setting for this control is the “0” (unity gain) position.

50. **MONO LEVEL:** Adjusts the level of the mono mix output (# 56). The signal is a post-fader sum of the left and right output signals. The “0” position is the unity gain setting; 10 dB of gain boost is available.

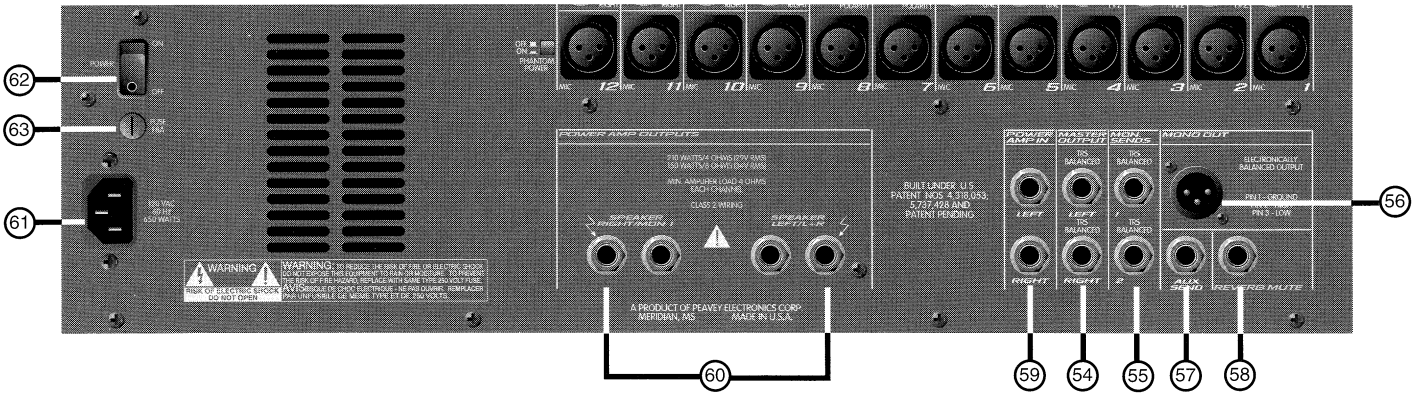
51. **HEADPHONE LEVEL:** Adjusts the volume of the headphone output.

52. **HEADPHONE OUT:** This stereo jack (TRS) sends the signal to both sides of any stereo head set. The level is set by the headphone level control (# 51). Tip = Left, Ring = Right, Shield = Ground

**NOTE:** The headphone system will not monitor in stereo with headsets equipped with a mono phone plug.

53. **POWER:** The power on LED indicator will light when the unit is powered.

## MASTER SECTION OUTPUTS:




**54. L and R OUTPUTS:** 1/4" balanced (Tip=Positive, Ring=Negative, Shield=Ground) outputs of the Left and Right mixes. The upper jack is the Left output, and the lower jack is the Right output. Their levels are set by the respective master L/R faders.

**55. MONITOR 1 and 2 OUTPUTS:** 1/4" balanced (Tip=High, Ring=Low, Shield=Ground) outputs of the Mon 1 and Mon 2 mixes. The upper jack is the Mon 1 output, and the lower jack is the Mon 2 output. Their levels are set by the respective master Monitor faders.

**56. BALANCED MONO OUTPUT:** An XLR balanced output of the mono mix. The level is set by the mono level control (# 50). Pin 2 is the positive output.

**57. AUX SEND:** Output jack of the corresponding Aux mix. It is unbalanced, and can be used to feed an external monitor system or effects unit. The level is set by the Aux master level (# 38) and the individual channel level control (# 16).

**58. REVERB MUTE:** This jack is for a footswitch such as the Peavey #5100 single footswitch. This jack will disable the effects board output.

**59. POWER AMP INPUTS:** These jacks are the point which breaks the connection between the Main L and R outputs from the mixer preamp and the Graphic Equalizer inputs. Plugging into this jack will allow the user to go directly into the Graphic Equalizer, then into its respective power amplifier channel.

**60. SPEAKER OUTPUTS:** These jacks are at the point at which the amplifier inside the XR 1204 exits the chassis to be connected to a speaker cabinet. Two cabinets can be connected to each channel, as long as the combined impedance of the cabinets is not less than 4 ohms min. per channel. (i.e., two 8 ohm cabinets in parallel=4 ohms, four 16 ohm speakers in parallel = 4 ohms, etc.) Power amplifier output into 4 ohms is 210 watts continous, (both amplifiers driven simultaneously).

**61. A/C POWER INLET:** This is the receptacle for an IEC line cord, which provides AC power to the mixer/amplifier. Connect the line cord to this connector to provide power to the unit. Damage to the equipment may result if improper line voltage is used (see line voltage marking on unit).

**62. POWER:** The mixer's main power switch. The power on LED indicator (#53) will light when the unit is powered.

**63. FUSE:** The fuse is located within the cap of the fuseholder. If the fuse should fail, IT MUST BE REPLACED WITH THE SAME TYPE AND VAULE IN ORDER TO AVOID DAMAGE TO THE EQUIPMENT AND TO PREVENT VOIDING THE WARRANTY. If the amp repeatedly blows fuses, it should be taken to a qualified service center for repair. WARNING: THE FUSE SHOULD ONLY BE REPLACED WHEN THE POWER CORD HAS BEEN DISCONNECTED FROM ITS POWER SOURCES.

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identityng the terminals in your plug, proceed as follows: The wire which is coloured green and yellow must be connected to the terminal which is marked by the letter E or the earth symbol, or coloured green or green and yellow. The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

# XR® 1204 Powered Mixer Applications

## SOUND REINFORCEMENT:

1. Microphones and other low-impedance sources are connected to the XLR mic inputs. High-level line inputs, such as electronic musical instruments, are connected to the 1/4" line inputs of Channel 5 and 6. Other instruments, such as an acoustic guitar, are connected to the 1/4" Hi-Z inputs of Channels 1-4. If problems arise because a microphone either picks up an out-of-phase signal (as when using multiple drum microphones) or a very loud signal that causes clipping even at a minimum gain setting (as when close miking an amplifier or a drum head), it can be connected to a channel with pad and polarity switches (channels 7 and 8). Stereo line-level sources (synth, tape, CD, etc.) can be connected to a stereo channel, or to two of the mono line inputs (one panned left, the other panned right).

2. Auxiliary power amplifier inputs can be connected to the main Left and Right outputs, or to the Mono output. The Mono output is a blend of the Left and Right output signals (post master fader) and has its own level control (#50). It can be used to drive an additional amplifier, Radio feed, Nursery feed, etc., that needs an independently set volume.

   If you only need two Main speakers (out fronts) and two monitor speakers, the XR® 1204 is configured for this. On the front panel, between the Graphic Equalizer sections, is a switch labeled "Mode" (#36). This switch will cause the Monitor 1 signal to be routed to the Right speaker and the L and R mixed together (into mono) to be routed into the Left speaker.

3. If you prefer to use outboard power amplifiers for Monitors, then connect the monitor power amplifier input to the Mon 1 or 2 output jacks (#55). If you use outboard EQs, then they are hooked in between the Monitor 1 and 2 outputs and the power amplifier inputs. Two monitor outputs are provided, Monitor 1 and Monitor 2.

4. If an external effects device is used, connect its input to the Aux 1 output (#57).

5. The effects device outputs are connected to the Channel 1-12 1/4" line inputs. Channels 1-8 are mono return capable, Channels 9-12 are stereo return capable.

6. Connect a tape recorder to the Tape input and Tape output jack. Care should be taken not to record without the Record switch (#33) activated. The Record switch in the Tape in/out section prevents feedback. A deck that has its outputs connected to the Tape input jacks and its inputs connected to the Tape out jacks with the tape input level control turned up and the Record switch off will cause feedback when placed into the Record mode.

   If three-band equalization is needed, a line channel can be used for tape input (see above).

7. On channels 1-8, the inserts can be used to patch compressors or EQ into the path. The Insert points are pre-EQ, pre-fader. Tip is send, ring return and sleeve is ground.

8. If not in use, Aux 1 can also be used as a sub mix.

9. Connect the Left and Right outputs to the two-track mixdown deck inputs. If a graphic EQ, compressor/limiter, or enhancer is used, connect it between the Left and Right outputs and the tape deck inputs.

# XR® 1204 Powered Sound Reinforcement Mixer

## Specifications:

### Input Specifications:

| Function | Input z (ohms) Min | Input Gains control setting | Input Levels Min* | Nominal** | Max | Bal/ Unbal | Connector |
|---|---|---|---|---|---|---|---|
| Microphone (150 ohms) | 2 k | Max Gain (56 dB) | -76 dBV | -56 dBV | -38 dBV | Bal | XLR Pin 1 Gnd Pin 2 (+), Pin 3 (-) |
| | | Min Gain (10 dB) | -30 dBV | -10 dBV | +10 dBV | | |
| Line (10K ohms) | 10 k | Max Gain (36 dB) | -57 dBV | -37 dBV | -20 dBV | Bal | 1/4" TRS; Tip (+), Ring (-), Sleeve Ground |
| | | Min Gain (-10 dB) | -11 dBV | +10 dBV | +22 dBV | | |
| Insert Return | 22 k | N/A (0 dB) | -16 dBV | +0 dBV | +18 dBV | Unbal | 1/4" TRS: Tip Send, Ring Return, Sleeve Ground |
| Stereo Line Input | 20 k | Max Gain (15 dB) | -25 dBV | -15 dBV | 0 dBV | Unbal | 1/4" Phone |
| | | Min Gain (OFF) | N/A | N/A | N/A | | |
| Tape | 10 k | N/A (14 dB) | -29 dBV | -10 dBV | N/A | Unbal | RCA Jacks |

0 dBV=1V (RMS)

* Min input level (Sensitivity) is the smallest signal that will produce nominal ouput (0 dBV) with sliders (channel and master) 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 in the Input gain control setting column.

# XR® 1204 Powered Sound Reinforcement Mixer

## Output Pre-power Amp Specifications:

| Function | Minimum Load Z (Ohms) | Output Levels Nominal | Output Levels Max | Bal/ Unbal | Connector |
|---|---|---|---|---|---|
| Main L/R | 600 | +0 dBV | +22 dBV | Bal | 1/4" Phone Tip (+), Ring (-) Sleeve Gnd |
| Mono | 600 | +3 dBV | +22 dBV | Bal | XLR: Pin 1 Gnd Pin 2 (+), Pin 3 (-), |
| Monitor Masters | 600 | +0 dBV | +22 dBV | Bal | 1/4" Phone Tip (+), Ring (-), Sleeve Gnd |
| Aux Send | 600 | +0 dBV | +18 dBV | Unbal | 1/4" Phone |
| Channel Insert Send | 600 | +0 dBV | +18 dBV | Unbal | 1/4" TRS: Tip Send, Ring Return, Sleeve Ground |
| | | | | | |
| Headphone | 8 | +0 dBV | +18 dBV | Unbal | 1/4" TRS: Tip Left, Ring Right, Sleeve Ground |
| Tape | 10 K | -0 dBV | +18 dBV | Unbal | RCA |

0 dBV=1V (RMS)

# XR® 1204 Powered Sound Reinforcement Mixer

## Gain:

| | |
|---|---|
| **Mic Input Gain Adj. Range:** | 10 dB to 56 dB |
| Mic Input to L and R Output | 76 dB (Max Gain) |
| Mic Input to longest path | 105 dB (Max Gain) to Power Amp Output |
| **Line Input Gain Adj Range:** | -10 dB to 36 dB |
| Line Input to L and R Output | 56 dB (Max Gain) |
| Line Input to longest path | 86 dB (Max Gain) to Power Amp Output |
| **Stereo Line Input Gain Adj. Range:** | Off to +15 dB |
| Stereo Line Input to L and R Output | +26 dB (Max Gain) Direct to L and R Bus |
| Stereo Line Input to L and R Output | +36 dB (Max Gain) Thru Channel |
| Stereo Line Input to longest path | +63 dB (Max Gain) to Power Amp Output |
| | +53 dB (Max Gain) Direct to Power Amp Output |

## Frequency Response:

| | |
|---|---|
| Mic Input to L-R Output | 20 Hz to 30 kHz +0 dB / -1 dB |
| Stereo Input to L-R Output | 20 Hz to 30 kHz +0 dB / -1 dB |
| To Power Amplifier Output | 20 Hz to 30 kHz +0 dB / -1 dB |

## Total Harmonic Distortion (THD):

< 0.009% 20 Hz to 20 kHz  Mic to L-R output at Nominal Level (20 Hz to 80 kHz BW)

## Graphic Equalizer:

| | |
|---|---|
| Filter Bandwidth | 1 Octave |
| Filter Frequencies | 63, 125, 250, 500, 1 K, 2 K, 4 K, 8 K, 16 K |
| Maximum Boost and Cut | +12 dB Boost, -15 dB Cut |
| Input Level | 0 dBV (this level produces full power in Amp) |
| Input Impedance | 100 K ohms |
| Output Impedance | N/A (Output connected directly to Power Amp input) |

# XR® 1204/400 SC AMPLIFIER SPECIFICATIONS

**Power Section:**
(400 SC Module with DDT™)

**Frequency Response:**
+0, -1 dB, 20 Hz to 20 kHz @ rated power

**Rated Power:**
- 210 watts RMS into 4 ohms, both channels driven
- 150 watts RMS into 8 ohms, both channels driven

**Total Harmonic Distortion:**
Less than .01% @ 1 kHz @ rated power

**DDT™ Dynamic Range:**
Greater than 26 dB

**DDT™ Maximum Distortion:**
Below 0.5% THD for 6 dB overload
Below 1% THD for 20 dB overload

**Hum and Noise:**
-97 dB below 210 watts

**Damping Factor:**
Greater than 100 @ 1 kHz, 4 ohms

**Input Sensitivity:**
1.5 V RMS for 210 watts @ 4 ohms

**Input Impedance:**
2 k ohms

**Power Requirements:**
600 watts, 120 V AC, 60 Hz, Nominal
600 watts, 230 V AC, 50/60 Hz, Nominal Export

# XR® 1204 Powered Sound Reinforcement Mixer

**Compression:** DDT (Dynamic range 23 dB)

Hum and Noise >100 dB below 420 W (20 Hz to 20 kHz)

**Hum and Noise:**

| Output | Residual Noise Ref: 0 dBV | | Test Conditions |
|---|---|---|---|
| | | | |
| Master L/R,<br>Monitor 1 and 2 | -95 dBV<br>-83 dBV | | All Faders Down<br>Master Fader Nominal,<br>Channel Faders Nominal,<br>Mic Inputs Terminated @ 150 ohms |

(Hum and Noise Measurements: 20 Hz to 22 kHz BW)

Cooling Variable speed DC fan

Protection Short and Open Circuit Protection

**Equivalent Input Noise (EIN):**

-128 dBu (Input terminated with 150 ohms)

**Crosstalk:**

>80 dB Adjacent Input Channels (20 Hz to 20 kHz)

>70 dB Left to Right Outputs (20 Hz to 20 kHz)

**Common Mode Rejection Ratio (Mic Input):**

50 dB min (20 Hz to 20 kHz)

60 dB typical @ 1 kHz

**Meters:**

L/R Master = 12-segment, peak reading

(0 dB= 0 dBV)

**Signal / Overload Indicators:**

Red LED lights 2 dB below clipping.

**Dimensions:**

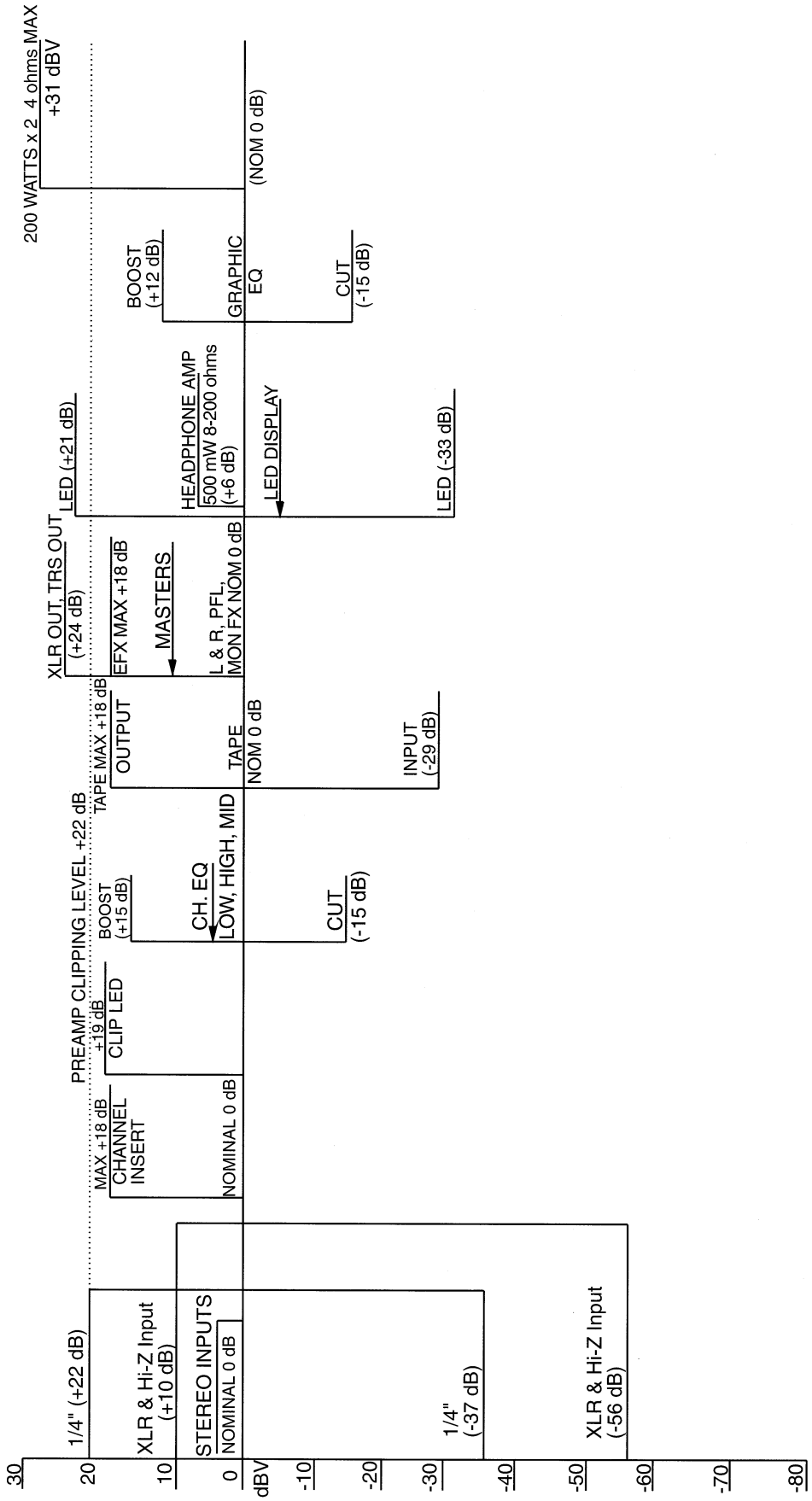
Width: 25.25"

Height: 8.5"

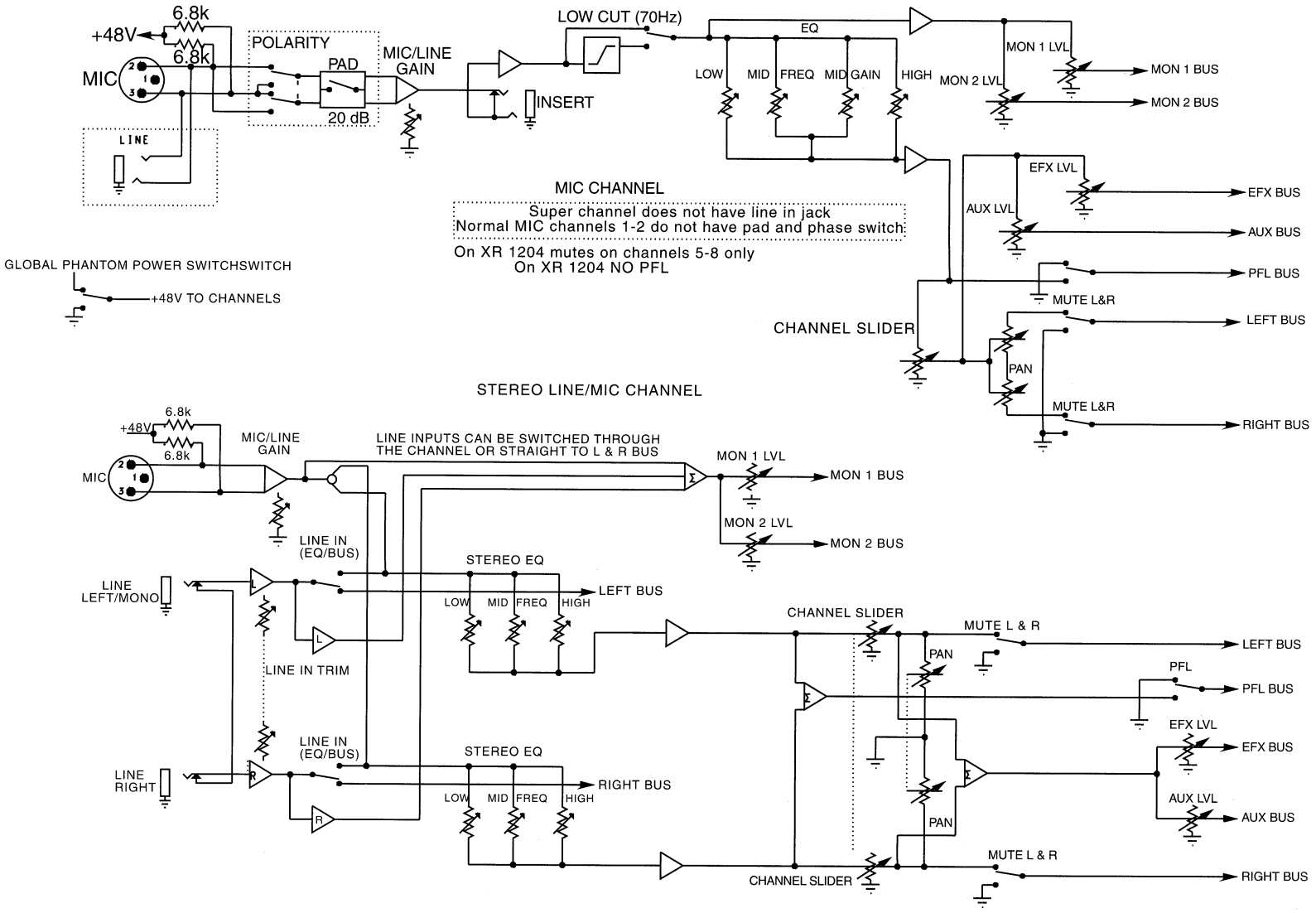
Depth: 17.375"

Weight: 40.4 lbs.

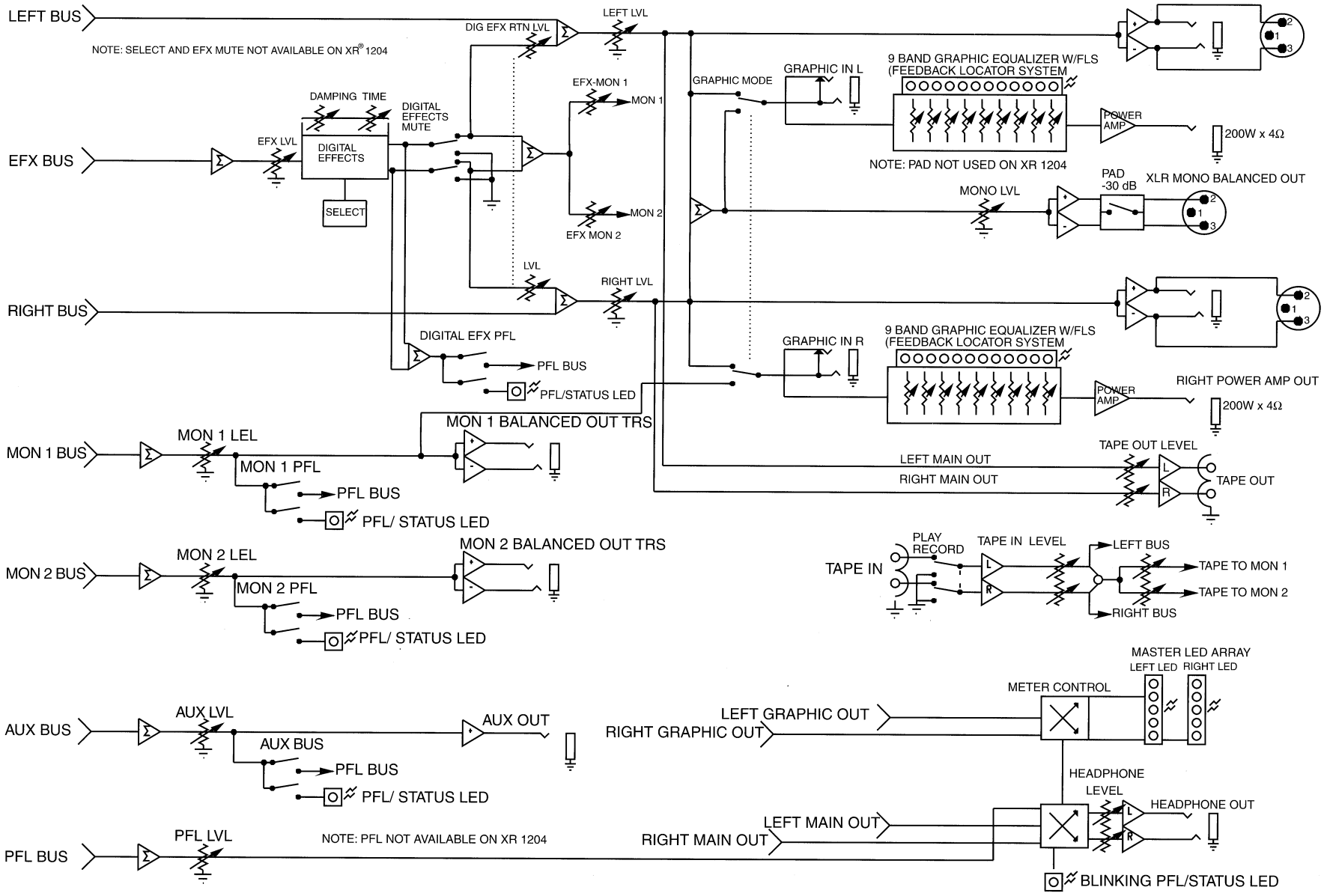
# XR® 1204 LEVEL CHART



# XR® 1204 LINE/MIC CHANNELS



# XR® 1204 MASTER SECTION BLOCK DIAGRAM



# IMPORTANT SAFETY INSTRUCTIONS

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

1. Read all safety and operating instructions before using this product.

2. All safety and operating instructions should be retained for future reference.

3. Obey all cautions in the operating instructions and on the back of the unit.

4. All operating instructions should be followed.

5. This product should not be used near water (i.e., a bathtub, sink, swimming pool, wet basement, etc).

6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.

7. This product should not be placed near a source of heat such as a stove, radiator, or another heat producing amplifier.

8. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.

9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding."

10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.

11 The power supply cord should be unplugged when the unit is to be unused for long periods of time.

12. If this product is to be mounted in an equipment rack, rear support should be provided.

13. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag or an ammonia-based household cleaner if necessary. Disconnect unit from power supply before cleaning.

14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.

15. This unit should be checked by a qualified service technician if:
    a. The power supply cord or plug has been damaged.
    b. Anything has fallen or been spilled into the unit.
    c. The unit does not operate correctly.
    d. The unit has been dropped or the enclosure damaged.

16. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.

17. This product should be used only with a cart or stand that is recommended by Peavey Electronics.

18. 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 Safety 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!**

# 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 |
|---|---|
| ***Guitars/Basses, Amplifiers, Pre-Amplifiers, Mixers, Electronic Crossovers and Equalizers*** | ***2 years *(+ 3 years)*** |
| ***Drums*** | ***2 years *(+ 1 year)*** |
| ***Enclosures*** | ***3 years *(+ 2 years)*** |
| ***Digital Effect Devices and Keyboard and MIDI Controllers*** | ***1 year *(+ 1 year)*** |
| ***Microphones*** | ***2 years*** |
| ***Speaker Components (incl. speakers, baskets, drivers, diaphragm replacement kits and passive crossovers) and all Accessories*** | ***1 year*** |
| ***Tubes and Meters*** | ***90 days*** |

***[*denotes additional warranty period applicable if optional Warranty Registration Card is completed and returned to Peavey by original retail purchaser within 90 days of purchase.]***

**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.

**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.*

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