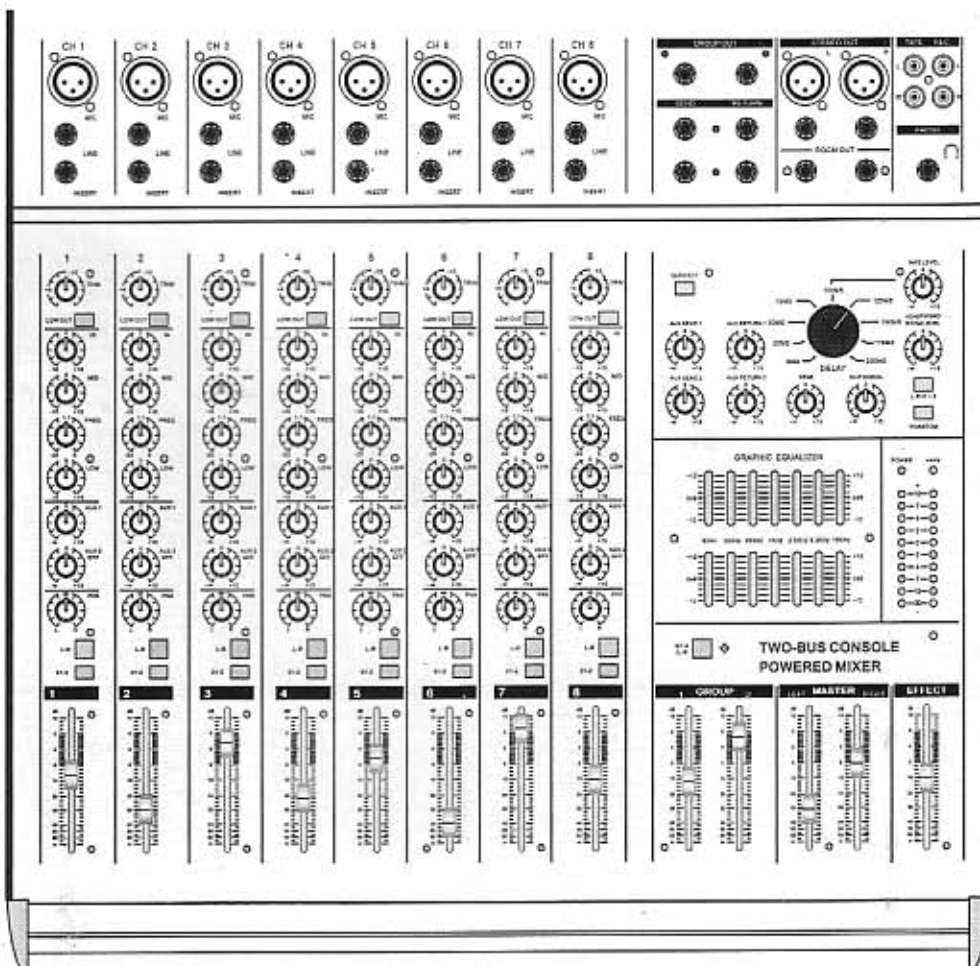


www.guardianaudio.com

Guardian Audio

Powered Mix 60 Series Consoles



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Ultra low noise 8,12,16 Channel Mic / Line Mixer

- ▲ 8,12,16 Mono input Channels with gold plated XLRs and balanced Line Inputs
- ▲ Extremely high headroom -offering more dynamic range
- ▲ Balanced Inputs for highest signal integrity
- ▲ Ultra-musical 3-band EQ+FREQ on all mono channels and 4-band EQ on all stereo channels
- ▲ Peak LEDs all Mono and Stereo Channels
- ▲ 2 Aux Send per channel for external effects and monitoring
- ▲ Digital of the effect system inside
- ▲ Separate Master Mix, Control Room and Headphone Outputs
- ▲ 2-Track Inputs assignable to Master Mix, Control Room / Headphone Output
- ▲ Highly accurate 10 segment Bargraph Meters

SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electrical shock, do not remove the cover (or back). No user serviceable parts inside; refer to servicing to qualified personnel.

WARNING: To reduce the risk of fire or electrical shock, do not expose this appliance to rain or moisture.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.

A.INPUT CHANNEL SECTION

1. BALANCE INPUT (MIC)

Electronically Balanced inputs accept a standard XLR male connector. +48V Phantom Power available on each input Mic socket.

2. LINE INPUT

The unbalanced Mic input is provided for the use of an unbalance Mic and is designed to accept an unbalanced high impedance input signal. (This use for connection Deck, Turntable, Keyboard etc..)

3. INSERT

The INSERT is break point in the input channel signal path. It allows the signal to be taken out from the mixer, through an external equipment such as a compressor, and then back to the mixer to continue the final mix output.

4. TRIM

This has a function which adjusts the input sensitivity of each channel in order to input the constant level of the signal.

5. LOW CUT

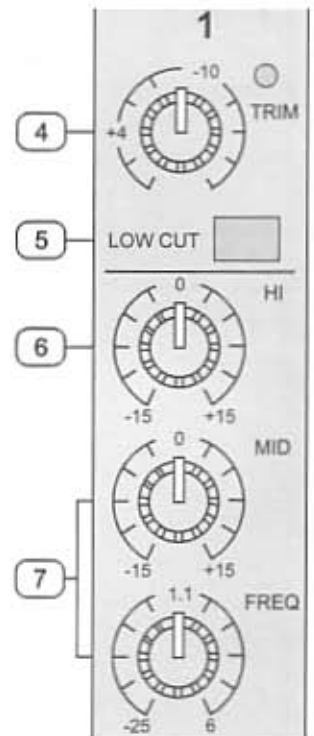
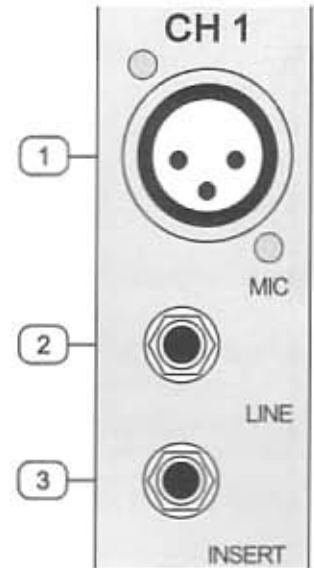
This 18 dB per octave at 75Hz low cut filter is useful to reduce stage rumble or " popping " from microphones. It can also be used to cut off low frequency hum.

6. HIGH

Control the high frequency tone of each channel.
Clockwise rotation of the control increases level.

7. FREQUENCY + MID

This equalization has a " bell " response i.e. having reached maximum amplification or attenuation at the selected frequency, The amplitude response returns to zero either side of that frequency. The **FREQ** at which this occurs is variable between 250 Hz. The **GAIN** is variable between *15dB at the selected frequency with a fixed q of 1.5Q is a factor a bandwidth.



8. LOW

Control the low frequency tone of each channel. Always set this control to the 12 o'clock position, but you can control the low frequency tone according to the speaker, the conditions of listening position and listener's taste. Clockwise rotation of the control increases the level.

9. AUX 1

This is normally derived after the EQ section and channel fader (PRE-FADER, POSE-EQ), and is therefore unaffected by the fader position and routing status. This makes the send particularly suitable for foldback or monitor feeds, which need to be controlled separately from the main P.A. Mix. All pre-fade sends may be selected internally to be PRE-FADER, PER-EQ.

10. AUX 2 / EFF

This is normally derived after the EQ and channel fader (POST FADER, POST EQ), and is therefore follow any changes in fader level. They are normally used to drive effects processing units which are fed back into the mixer and which must fade out with the input channel.

11. PAN

The pan control sends continuously variable amounts of the post fader signal to either the left or right and G1 or G2 main busses. In the center position equal amounts of signal are sent to the left and right or G1 & G2 busses.

12. STEREO

Push the switch, can use ST L-R fader.
During the stereo L-R switch pushed, you can't use ST L-R fader.

13. GRPS 1-2

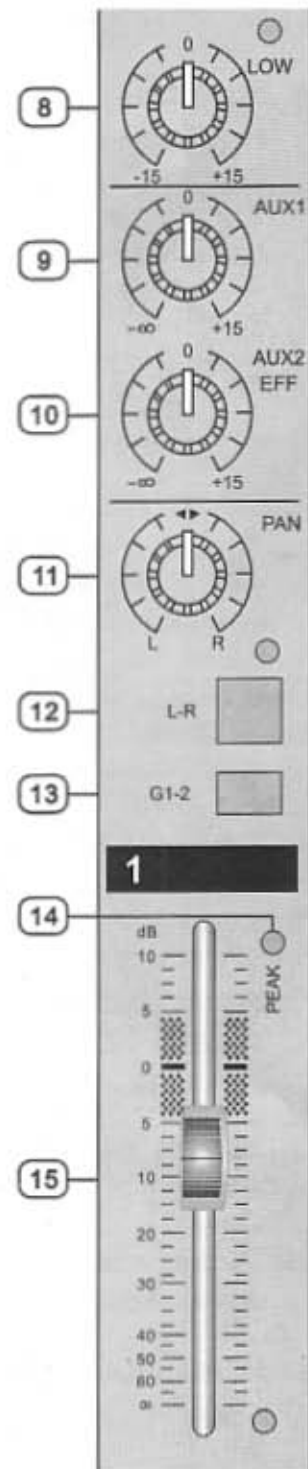
Push the switch, can use GROUP 1-2 fader.
During the G1-2 switch pushed, you can't use stereo L-R fader.

14. PEAK

A red LED indicates a signal level at the insert return point, premaster fader, it illuminates at approximately 5 dB below clipping.

15. CHANNEL FADER

This is function to adjust the volume of signal connection into each channel and adjust the volume of output, together with master fader. Normal operating position is at the "0" mark, providing 4dB of gain above that point, if required.



B.MASTER SECTION

16. SEND / EFFECT

When this button is up, Post signal work as send signal.
When this button is down, post signal work as EFFECT signal.

17. AUX SEND / RETURN

This is used for adjusting volume of AUX sound. When sending and return AUX signal to used jack.

18. EFFECT SEND

This is used for adjusting volume of echo sound, when sending echo sound to send jack in effect panel.

19. EFFECT RETURN

This is used for adjusting frequency of echo repeat; since too echo repeat may cause a howl, please adjust frequency properly.

20. DELAY

This is used for adjusting the time interval of echo repeat. The middle position (100MS) may be most effective.

21. EFFECT LEVEL

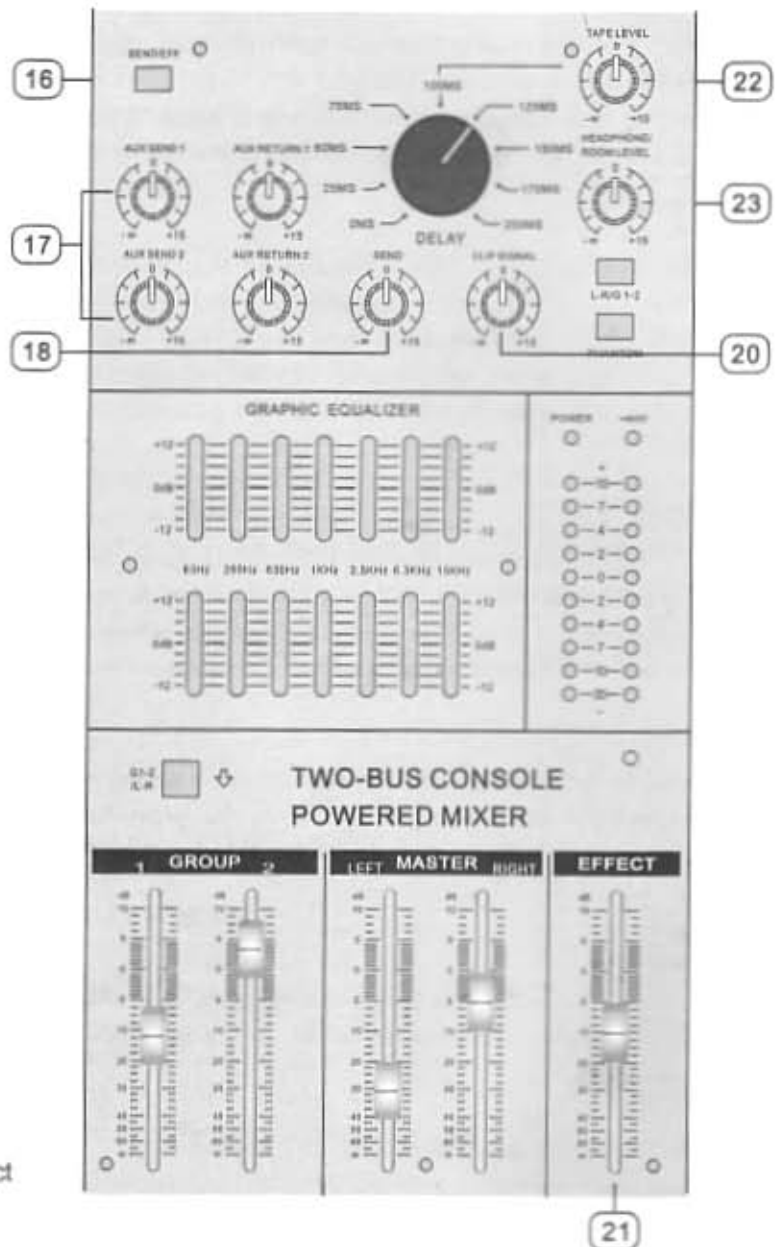
Using by this control, you can adjust signal level of echo repeat & external effect

22. TAPE LEVEL

You can adjust the volume of TAPE in signal by this when connecting tape in.

23. HEADPHONE / CONTROL ROOM LEVEL

This is a single volume control sends the level to the headphones and main monitors.



24. L-R / G1-2

When L-R / G1-2 switch up, could monitor stereo (L-R) output signal, when L-R / G1-2 switch down, could monitor group (G1-2) output signal.

25. PHANTOM POWER SWITCH / LED

Depressing this switch applies 48V DC across all microphone input channels connectors for remote powering of condenser microphones.

The LED will be turned on when start working.

26. STEREO GRAPHIC EQUALIZER

2X7-band equalizer is provided for tone control over each frequency, and for precise high quality sound by final tone control.

27. POWER LED

The POWER LED will be turned on when start working.

28. OUTPUTS LEVEL INDICATOR

This is level meter which shows output levels of left & right channel condition on the way of operation, therefore, you can see output condition through this master level indication.

29. G1-2 / L-R SWITCH

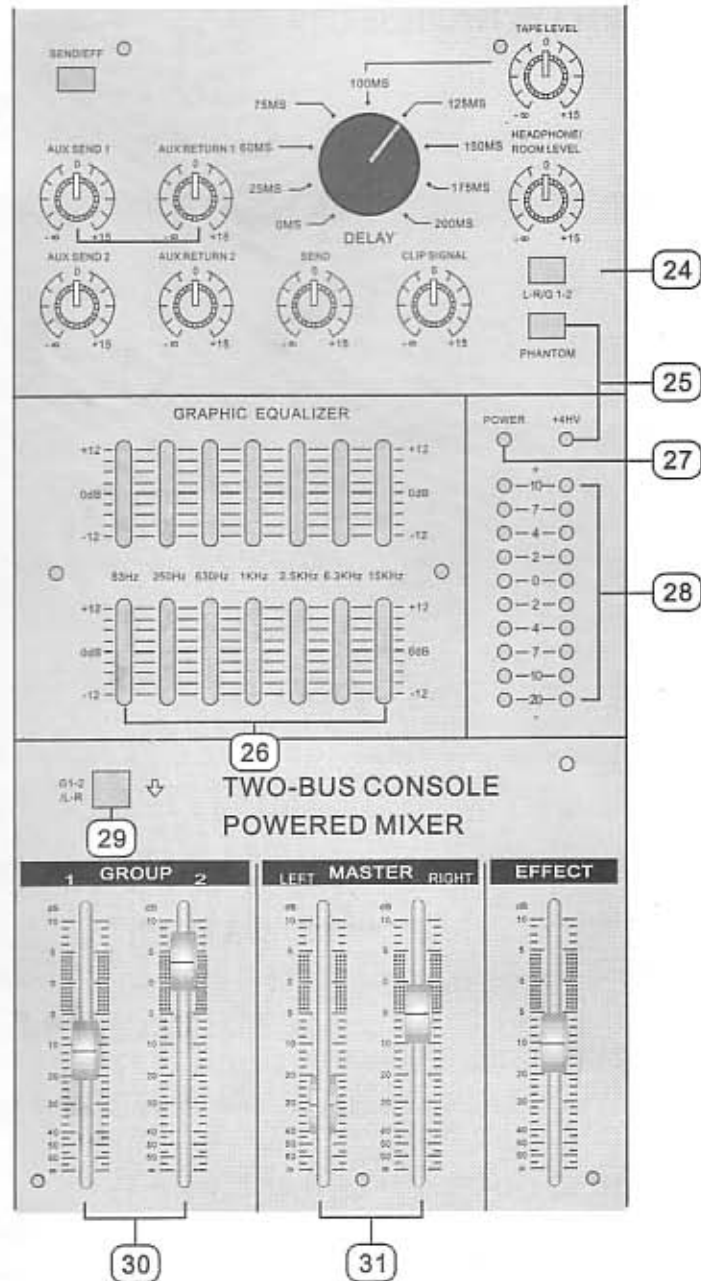
This switch routes the G1-2 mix output to the STEREO bus, allowing G1-2 bus to be sued two mono subgroups mixed down to a single output when stereo is not required.

30. OUTPUT GROUPS 1-2 FADERS

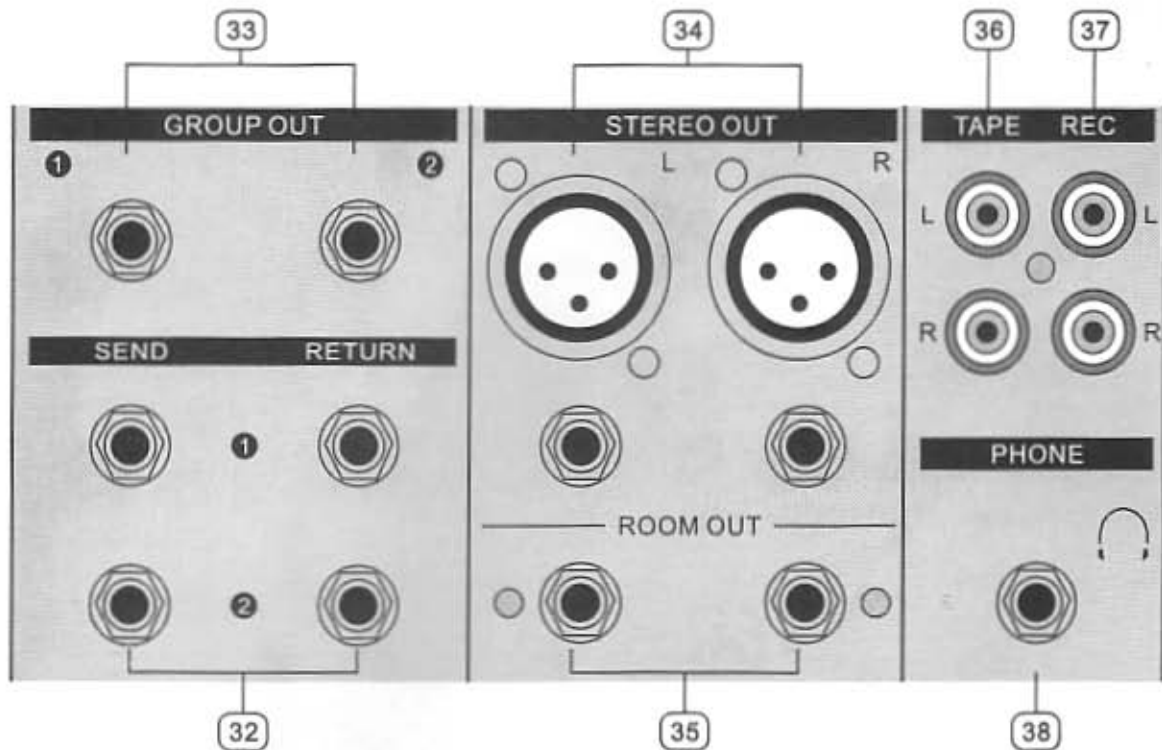
Using by this control, you can adjust G1-2 output level.

31. OUTPUT MAIN FADER (LEFT / RIGHT)

This is a master fader for adjustment for volume of left/right output.



C.MIXER OUTPUT SECTION



32. STEREO AUX RETURNS & SENDS

This can be used to connect all kinds of effects from outside.

33.GROUP 1-2 OUTPUT JACK

There are to be output with the volume control against inputting signal into GRPS 1-2 board.

34. STEREO OUTPUT JACK (LEFT / RIGHT)

In this product, the final confirmed sound can be send to main amplifier through XLR & 1/4 jack.

35. ROOM OUT JACK

The phones signal follows the control room output.

36. TAPE INPUT JACK

This jack is to be connected with cassette deck when playing back.

37. RECORD PIN JACK

This jack is to be connected with cassette deck when recording the mixed output.

38. PHONE JACK

This is used for monitoring the master signal and individually monitoring each channel with PFL, L/R & G1-2.

D. POWER SECTION

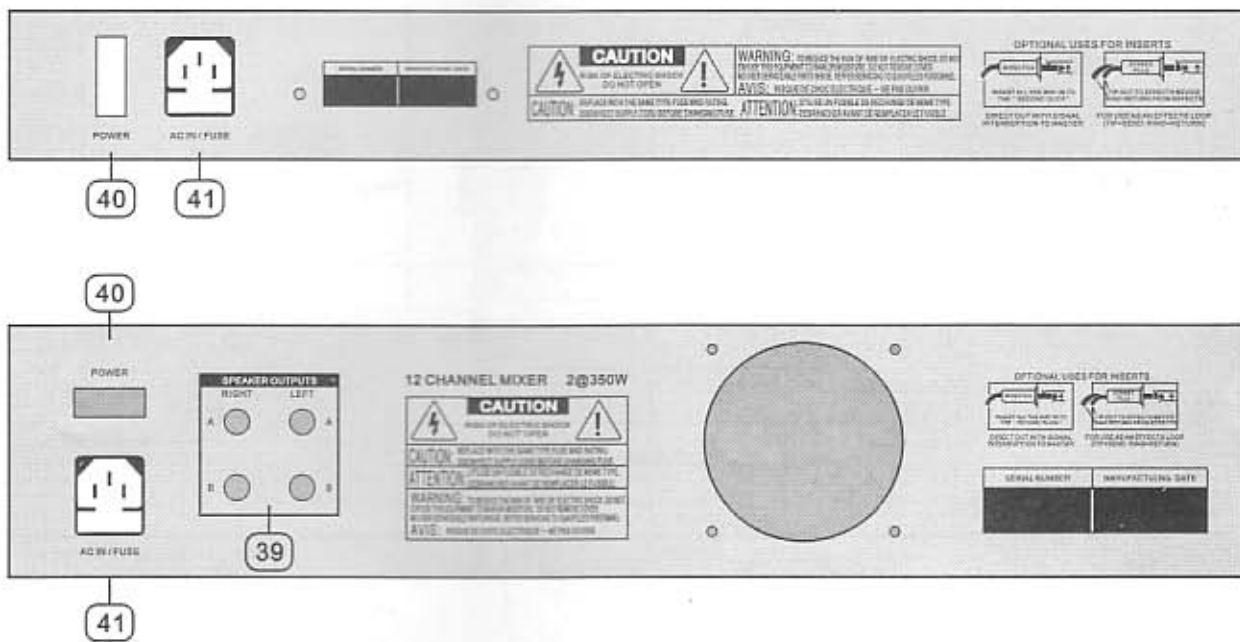
39. SPEAKER JACK

40. POWER SWITCH

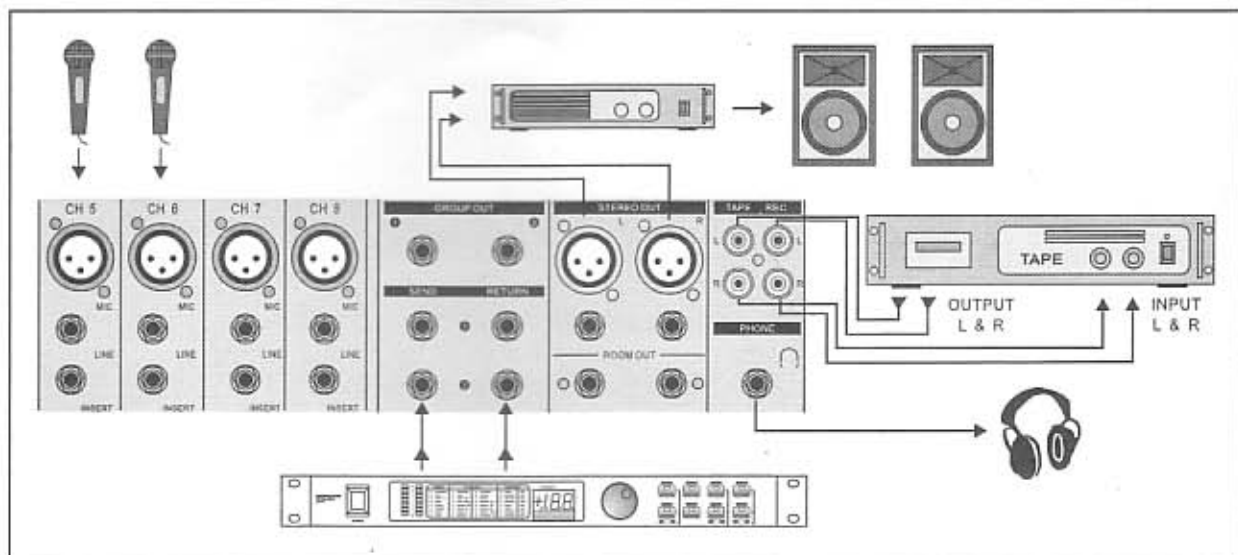
Push the power switch when you want to operate. The LED (SEE No.27) will be turned on when working.

41. POWER JACK

This is out of connecting the power supply (2 × AC 120V or 230V) jack.

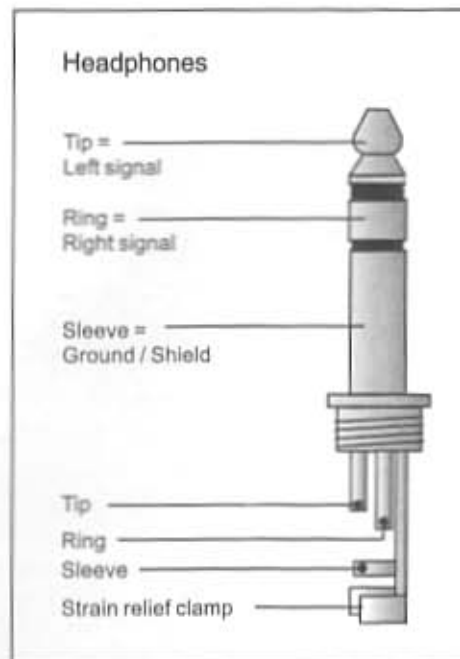


E. INSTALLATION

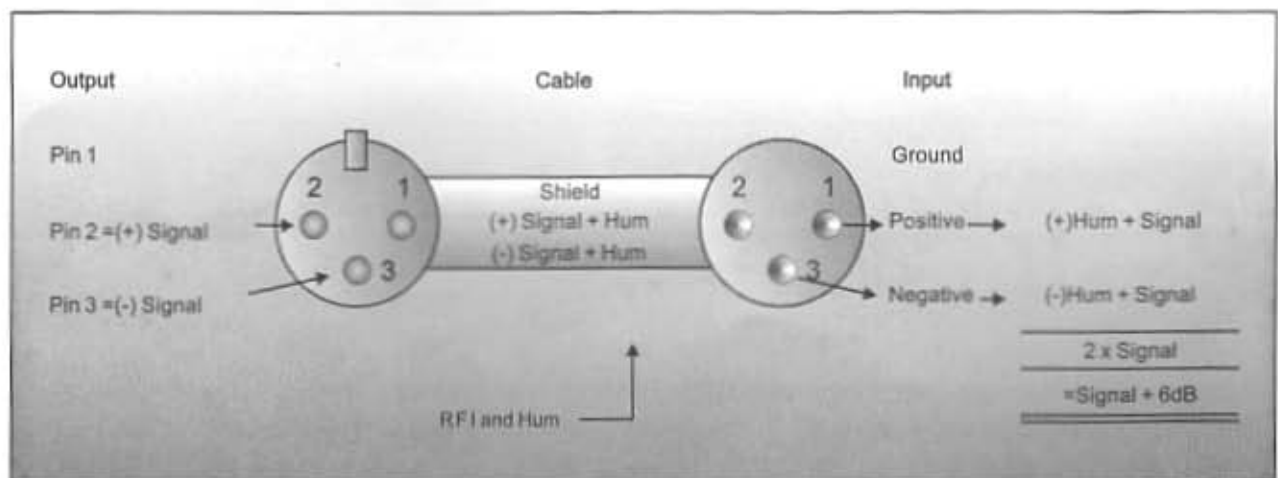


F. CONNECTIONS

Unbalanced equipment may be connected to balanced inputs/outputs. Either use mono 1/4 jacks or connect ring and sleeve of TRS jacks.



Headphone connection



Unbalanced use of mono 1/4 " jack plugs

Tip =
Signal

Sleeve =
Ground / Shield

Tip

Sleeve

Strain relief clamp



Balanced use of stereo 1/4 " jack plugs

Tip =
hoho (+ve)

Ring =
cold (-ve)

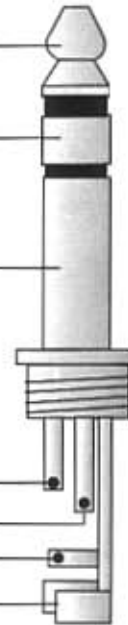
Sleeve =
Ground / Shield

Tip

Ring

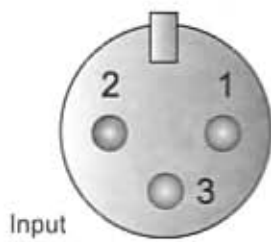
Sleeve

Strain relief clamp

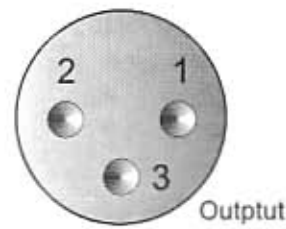


For connection of balanced and unbalanced plugs, ring and sleeve have to be bridged at the stereo plug.

Balanced use with XLR connectors



1 = Ground / Shield
2 = hot (+ve)
3 = cold (-ve)



For unbalanced use pin 1 and pin 3 have to be bridged

Different plug types

G.APPENDIX

Specifications

Mono Inputs

Mic Input	electronically balanced, discrete input configuration
Bandwidth	10 Hz to 60 KHz \pm 3 dB
Distortion (THD & N)	0.01% at + 4 dBu, 1 KHz, Bandwidth 80 KHz
Mic E.I.N (22 Hz 22 KHz)	-129.5 dBu, 150 Ohm source -117.3 dBqp, 150 Ohm source -132.0 dBu, input shorted -122.0 dBqp, input shorted +10dB to +60dB

TRIM range

Line Input	electronically balanced
Bandwidth	10Hz to 60 KHz \pm 3 dB
Distortion (THD & N)	0.01% at + 4 dBu, 1 KHz, Bandwidth 80 KHz
Line level range	+10dBu to 40 dBu
Equalization	
Hi Shelving	12KHz +/-15 dB
Mid Range	2.5KHz +/-15dB
Lo Shelving	80Hz +/-15dB

Master Mix section

Max Output	+22 dBu balanced
Aux Send Max Out	+22 dBu unbalanced
Control room Out	+22 dBu unbalanced
Signal-To-Noise Ratio	112 dB, all channels at Unity Gain

Power supply

Mains voltages	USA/Canada ~ 120 V AC, 60 Hz
	U.K./Australia ~240 V AC, 50 Hz
	China ~220 V AC, 50 Hz

Power	MX-600	MX-800	MX-120	MX-160	MX-240
	2×250W(4 Ω)	2×350W(4 Ω)	2×350W(4 Ω)	2×350W(4 Ω)	2×350W(4 Ω)
