

# 6, 8, 10, 12, 16 CHANNEL

## MIC/LINE MIXER OWNERS MANUAL



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## Ultra low noise 6,8,10,12,16-Channel Mic/Line Mixer

- ▲ 4,6,8,12,16 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+FREQUENCY on all mono channels
- ▲ Peak LEDs all Mono 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 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 acceptable 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 a 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.HIGH

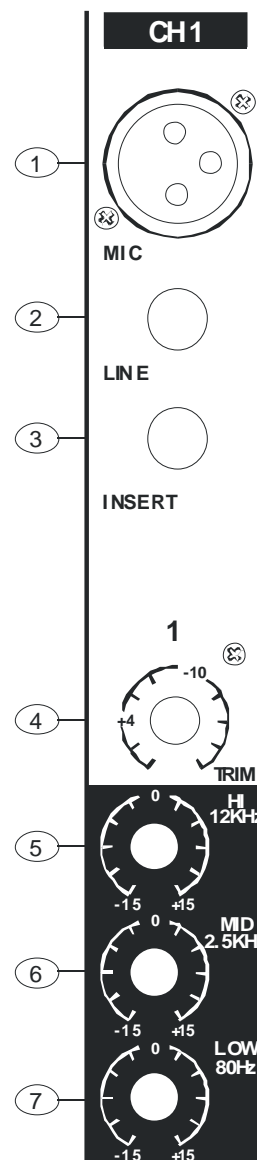
Control the high frequency tone of each channel. Always set this control to the 12 o'clock position, but you can control the high frequency tone according to the speaker, the conditions of listening position and listener's Taste. Clockwise rotation of the control increases level.

### 6.MID

This has a function which controls the middle frequency tone of each channel. Always set this control to the 12 o'clock position, but you can control the middle frequency tone according to the speaker, the conditions of listening position and listener's taste, clockwise rotation of the control increase the level, and vice versa.

### 7.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.



### 8.AUX 1

This is normally derived after the EQ section and channel fader (PRE-FADER, POST-EQ), and is therefore unaffected by the fader position and routing status. This makes these 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-FADE R, PRE-EQ.

### 9.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.

### 10.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.

### 11.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.

### 12.GRPS 1-2

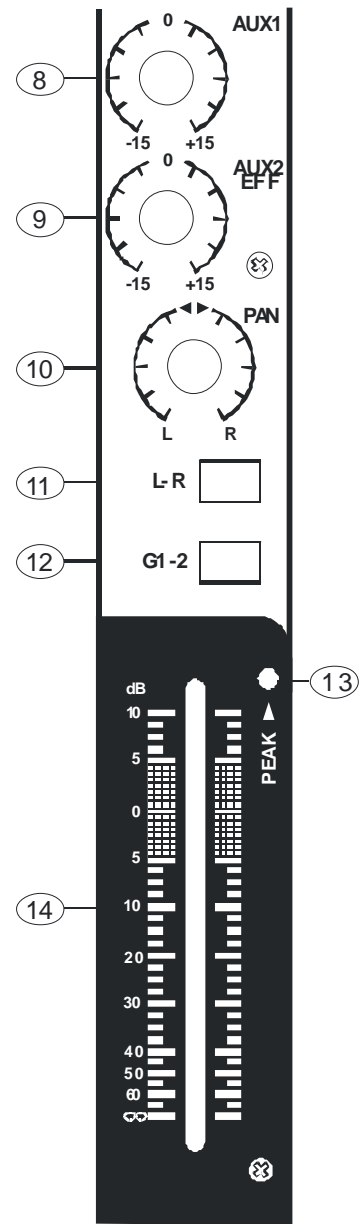
Push the switch, can use GROUP 1-2 fader.  
During the G1-2 switch pushed, you can't use stereo L-R fader.

### 13.PEAK

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

### 14.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

### 15. SEND/EFFECT

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

### 16. TAPE LEVEL

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

### 17. AUX SEND/RETURN

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

### 18. 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.

### 19. 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.

### 20. PHANTOM POWER SWITCH/LED

Depressing this switch applies 48 V DC Across all microphone input channels Connectors for remote powering of Condenser microphones.

The LED will be turned on when start working.

### 21. POWER LED

The POWER LED will be turned on when start working.

### 22. 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.

### 23. HEADPHONE/CONTROL ROOM LEVEL

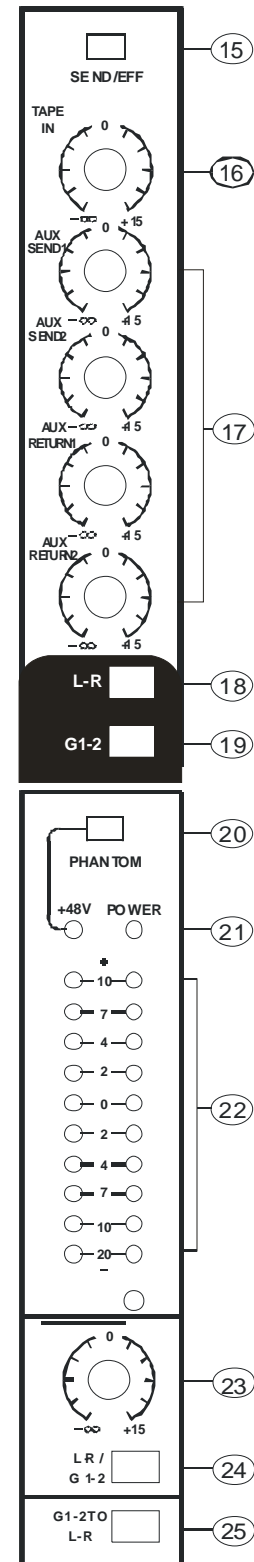
This is a single volume controlsends the level to the headphones and main monitors.

### 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. G1-2 / L-R SWITCH

This switch routes the G1-2 mix output to the STEREO bus, allowing G1-2 bus To be used two mono subgroups mixed Down to a single output when stereo is Not required.



**26.EFFECT LEVEL**

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

**27.OUTPUT MAIN FADER (LEFT/RIGHT)**

This is a master fader for adjustment for volume of left/right output.Unity gain is the top their travel.

**28.OUTPUT GROUPS 1-2 FADERS**

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

**29.DISPLAY**

Please press the Reystroke up and down, and it will be gotten the perfect reverberative effect that you need.These function which has(16) effective posture can be turned up.

**30.EFFECT SEND**

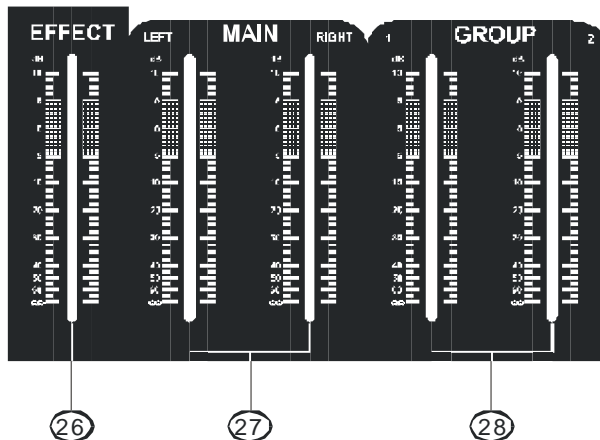
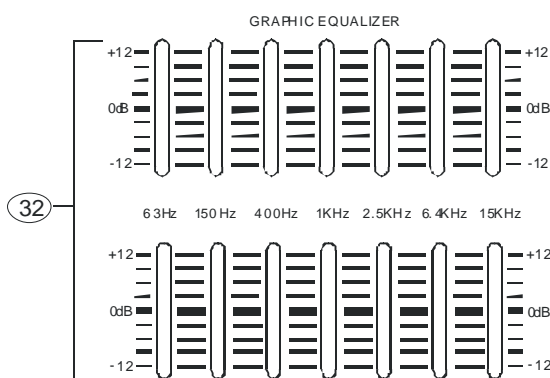
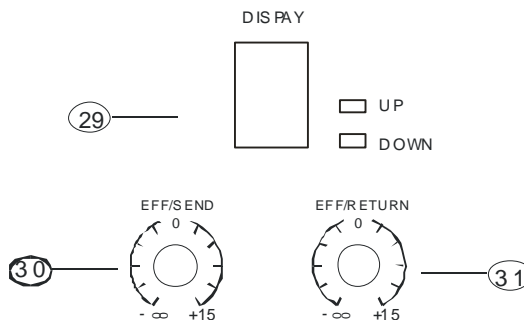
This is used for adjusting volume of echo sound, when sending echo sound to send jack in effect panel.

**31.EFFECT SEND**

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

**32.STEREO GRAPHIC EQUALIZER**

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



## C. MIXER OUTPUT SECTION

### 33. STEREO AUX RETURNS & SENDS

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

### 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. TAPE INPUT JACK

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

### 36. RECORD PIN JACK

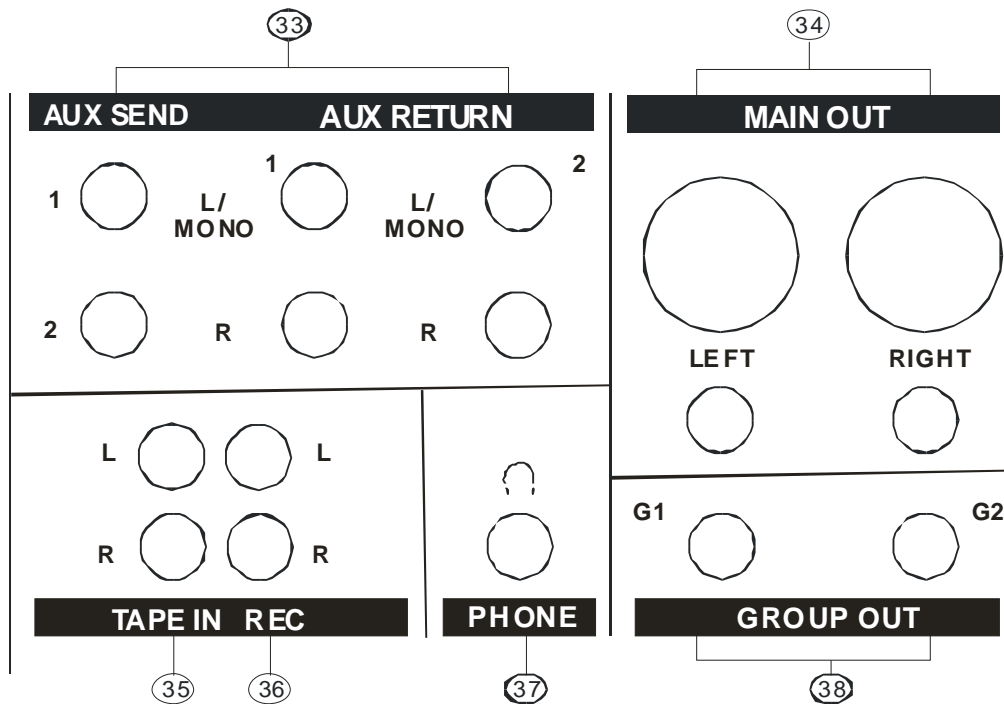
This jack is to be connected with cassette deck when recording the mixed output.

### 37. PHONES JACK

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

### 38. GROUP 1-2 OUTPUT JACK

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



## D. POWER SECTION

### 39. POWER SWITCH

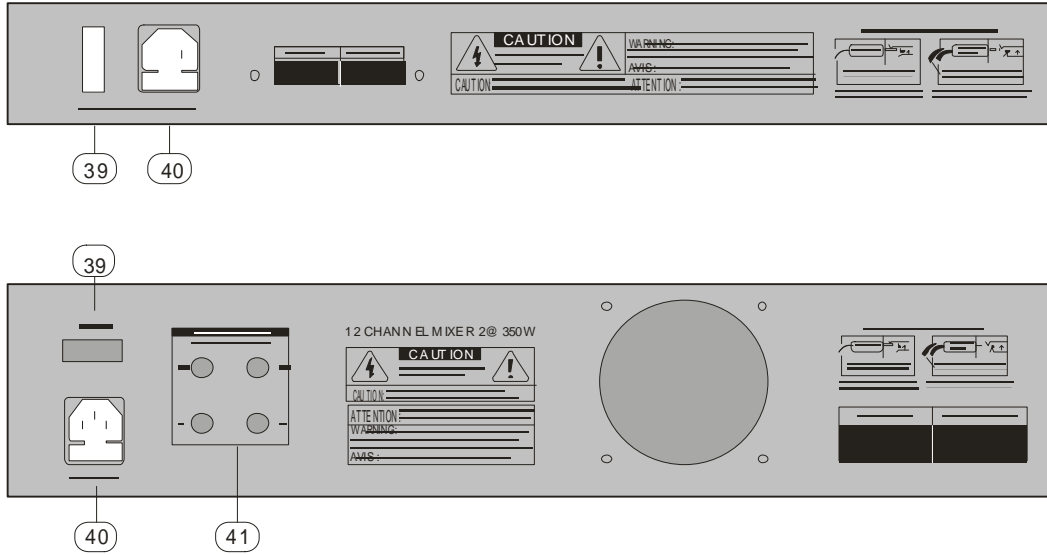
Push marked (1), when you want to operate. The LED (SEE NO,33) will be turned on when working

### 40. POWER JACK

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

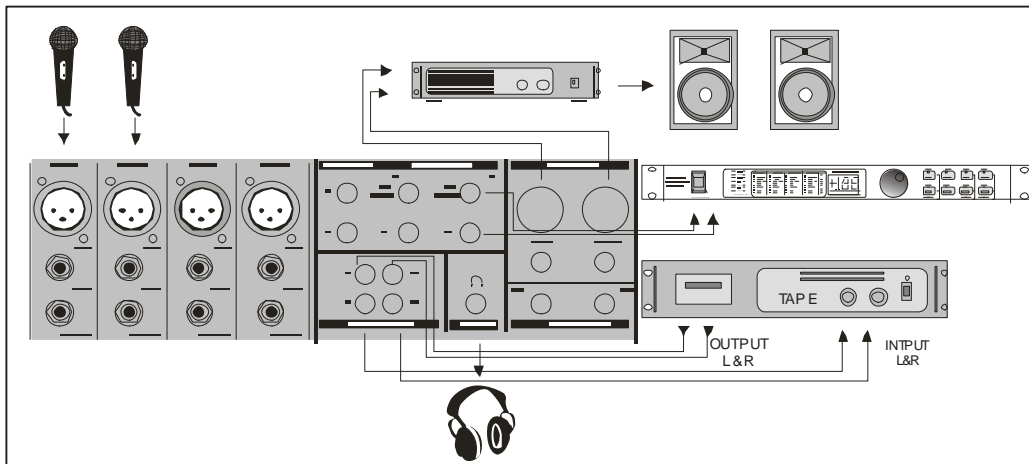
### 41. SPEAKER JACK LEFT, RIGHT

This is same function as below but the using jack is different.



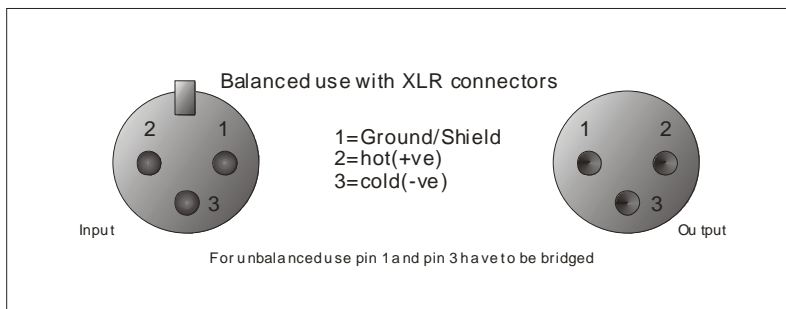
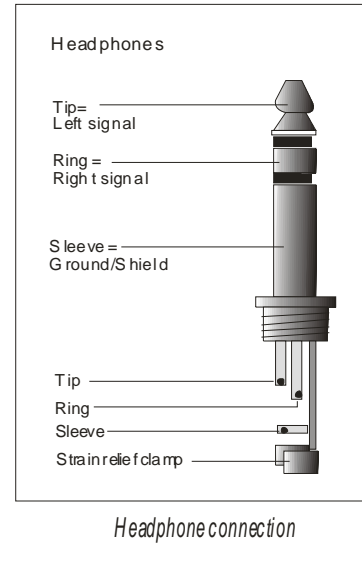
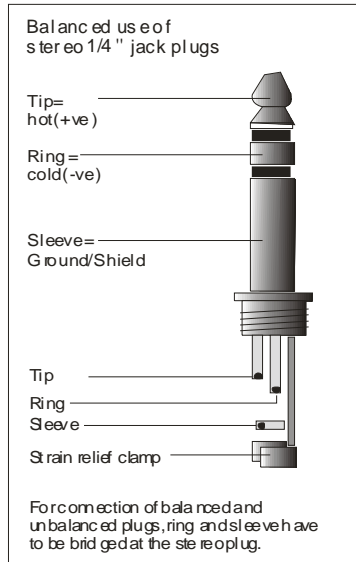
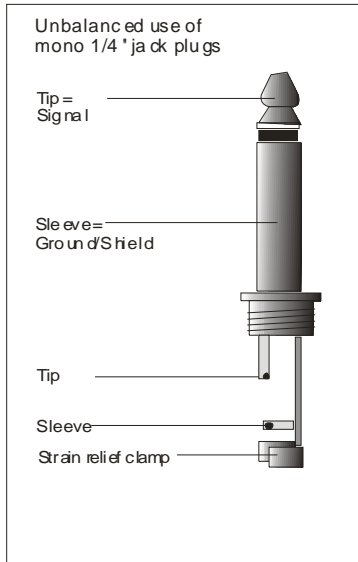
## E. INSTALLATION

Experience tells us that the cables in a studio environment get tangled very quickly (inviting mistakes),



## F.CONNECTIONS

You will need a lot of cables for different purposes- see the following figures to make sure you have got the right ones. Unbalanced equipment may be connected to balanced inputs/outputs. Either use mono 1/4" jacks or connect ring and sleeve of TRS jacks.



*Different plug types*

## G. APPENDIX

### Specifications

#### Mono Inputs

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

Line Input Bandwidth	electronically balanced 10Hz to 60 kHz $\pm$ 3dB
Distortion (THD & N)	0.01% at +4dBu, 1 kHz, Bandwidth 80 kHz
Line level range	+10dBu to -4dBu

Equalization	
Hi Shelving	12kHz $\pm$ -15dB
Mid Range	2.5kHz $\pm$ -15dB
Lo Shelving	80Hz $\pm$ -15dB

#### Master Mix section

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

#### Power supply

Mains Voltages	USA/Canada	~120V AC, 60Hz,			
	U.K./Australia	~240V AC, 50Hz,			
	China	~220V AC, 50Hz,			
Power	6CH	8CH	10CH	12CH	16CH
	2 $\times$ 200W	2 $\times$ 250W	2 $\times$ 250W	2 $\times$ 250W	2 $\times$ 250W