

# USER MANUAL

**QSM-606EP**

**QSM-612EP**

**QSM-624EP**

## MIXER AMPLIFIER



## PANEL DESCRIPTION



1. Channel 1 Volume Control	7. Treble Control
2. Channel 2 Volume Control	8. Master Volume Control – Volume control for entire system
3. Channel 3 Volume Control	9. Power Switch
4. Channel 4 Volume Control	10. Power Indicator - LED
5. Channel 5 Volume Control	11. Output Level Indicator LED
6. Bass Control	

## REAR PANEL DESCRIPTION



1. IEC Socket – Used for A/C Line Interconnect with AC fuse	17. MIC 2 Input (XLR Jack)
2. Earth Ground Connection Screw	18. MIC 2/Aux 2 Selector Switch*
3. Power Amplifier Input (RCA Jack)	19. Aux 2 Input (RCA Jack)
4. Pre Output (RCA Jack)	20. Aux 1 Input (RCA Jack)
5. Tape Output (RCA Jack)	21. MIC 1/Aux 1 Selector Switch*
6. Aux 6 Level Control	22. MIC 1 Input (XLR Jack)
7. Aux 6 Input (RCA Jack)	23. Supply Voltage (115V/230V) Selector Switch
8. Aux 5 Input (RCA Jack)	24. Speaker Output Terminals

9. MIC 5/Aux 5 Selector Switch*	25. DC Power Supply Terminals
10. MIC 5 Input (XLR Jack)	26. MIC 5 Input (Screw Terminals)
11. MIC 4 Input (XLR Jack)	27. MIC 4 Input (Screw Terminals)
12. MIC 4/Aux 4 Selector Switch*	28. MIC 3 Input (Screw Terminals)
13. Aux 4 Input (RCA Jack)	29. MIC 2 Input (Screw Terminals)
14. Aux 3 Input (RCA Jack)	30. MIC 1 Input (Screw Terminals)
15. MIC 3/Aux 3 Selector Switch*	31. Tel Page Input (Screw Terminals)
16. MIC 3 Input (XLR Jack)	32. Tel Page Level Control
	33. MIC 1 Mute Switch – Mute On enables mute of ch. 1 over chs. 3-6

\* Switch selects between RCA Line inputs and Microphone level, either screw or XLR input.

## **POWER SOURCE**

### **VAC**

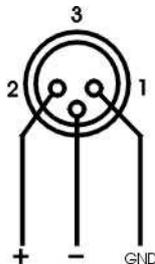
The supply transformer has been designed for use either 115V or 230V, 50-60Hz, selected by a slide switch on the rear panel. The amplifier is factory set at 230Vac mains voltage.

### **Battery Connection (24Vdc)**

When using external batteries, ground the amplifier via the screw terminal. (Electrical stability of the system will be improved by providing a good earth ground.) NOTE: the connection cable must be fitted with an in-line fuse, quick blow type 5A(60W) 8A(120W) 15A(240W). When connecting batteries, please ensure correct polarity.

## **MICROPHONE CONNECTION**

Mic1~5 inputs are balanced standard XLR Jack and screw terminal, rear panel.



## **MUTING**

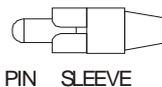
The TEL input has voice activated (VOX priority) muting over, CH1~CH5 and AUX 6.

Priority Microphone, Mic1 input has VOX priority over CH 3~6 and Line input signals but does NOT mute Channel 2 input.

### **LINE (Aux) CONNECTION**

The equipment provides an auxiliary input which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. A push switch is located on the rear panel for selection of, Mic1→Aux1, Mic2→Aux2, etc. The Aux input is a dual RCA phono jack and has a stereo to mono converter for each channel

RCA Phono plug connection



Sleeve-Shield

Pin- Signal

### **TAPE OUTPUT CONNECTION**

These standard RCA /phono jacks provide a mixed output suitable for connection to a tape or cassette recorder.

### **PRE OUT / AUX OUT**

The horseshoe jumper “U” connects the mixer/preamplifier stage to the power amplifier stage. The connecting link must be plugged in for normal operation as a mixer/amplifier. “PRE OUT” is after the tone controls and the master volume control.

### **POWER AMP IN**

Connecting the Mixer Amplifier to a Power Amplifier or other accessory equipment:

This amplifier can be connected to accessory equipment by using phono to phono leads from the mixer amplifier “PRE OUT (1)” to the accessory gear and back to the “POWER AMP IN” RCA jack. Additional amplification can be achieved by connecting the “PRE OUT (2)” output to another power amplifier. Under normal conditions, up to three power amplifiers can be connected in this way.

### **LOUDSPEAKER CONNECTION**

Use only 70V or 100V line loudspeakers.

### **LOW IMPEDANCE** 8Ω or (4Ω):

This output allows connection of standard low impedance loudspeakers. The minimum impedance must be 4Ω. When two or more loudspeakers are in use, ensure that they are wired in such a way that the impedance load is between 4Ω and 16Ω.

### **QSM-606EP, QSM-612EP and QSM-624EP Technical Specifications**

Type		Mixer Amplifier		
Model		QSM-606EP	QSM-612EP	QSM-624EP
Supply	Mains Voltage	AC 115V/ 230V, 50 / 60Hz ± 10% Switchable		
	Battery Voltage	DC 24V (MAX 10% deviation)		
Output Power:		60W	120W	240W
Outputs		Speaker outputs: 4Ω, 8Ω, 70V, 100V Tape output: 1V 4.7KΩ Pre output: 1V, 600Ω Aux Mains Power: 4A/115V		
Inputs		Mic 1~5: 1mV, 600Ω balanced. Aux 1~6: 150mV, dual RCA stereo to mono converter 22K, TEL: 150mV, 600Ω balanced Power amplifier in: 1V		
Frequency response		Mic 1~Mic 5: 60Hz ~ 12KHz ± 3dB Aux 1~ 6: 50Hz ~ 15KHz ± 3dB TEL: 50Hz ~ 15KHz ± 3dB		
Total harmonic distortion		Less than 1% @ 1KHz, rated power		
Signal to noise ratio		All Volume Controls: 80dB below rated power Mic 1~ 5: 60dB below rated power Tel: 80dB below rated power Aux: 80dB below rated power		
Tone Controls		Bass: ± 10dB at 100Hz Treble : ± 10dB at 10KHz		
Controls		Channel 1~5 volume control Aux 6 volume control Master volume control Tone controls (Bass, Treble) TEL volume control		

	Mute slide switch Mic 1/Aux 1 push switch Mic 2/Aux 2 push switch Mic 3/Aux 3 push switch Mic 4/Aux 4 push switch Mic 5/Aux 5 push switch AC 115V / 230V voltage Selector switch		
Indicators	Power indicator (LED), output level indicators (6 LEDS)		
AC power consumption	150W	300W	600W
DC power consumption	5A	8A	15A
Phantom power	Factory set "off" @ 16V, defeat via internal jumpers		
Priority	TEL mutes all channels Channel 1 can mute Channel 3 ~5, Aux 3~6		
Dimensions ( H x W x D )mm	17"W x 3.5"H x 13.5"D		
Weight	8.5	9.5	11.5
Color	Black		
Mounting options	Table top or 19" rack mountable / Rack Mount Ears Included		

**WARNING: THIS APPLIANCE MUST BE EARTHED**



<p><b>IMPORTANT</b>  The wires in the mains lead are colored  In accordance with the following code:</p> <p>Green and Yellow: Earth (E)</p> <p>Blue: Neutral (N)</p> <p>Brown: Live (L)</p>	<p>As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug proceed as follows:</p> <p>The wire, which is colored green and yellow, must be connected to the terminal that is marked with the letter N or colored black. The wire which is marked with the letter L or colored red.</p> <p>If a 13 Amp (B.S.1363) plug or any other type of plug is used, a 5 Amp fuse must be fitted either in the plug or at the distribution board.</p>
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**GENERAL INSTALLATION**

- DO NOT run microphone cables near mains, data, telephone or 70V line cables.
- DO NOT run 100V line cable near data, telephone or other low voltage cables.
- DO NOT exceed 90% of the amplifiers output power when using 70V line (speech only).
- DO NOT exceed 70% of the amplifiers output power when using 70V line (high level background music).
- DO NOT use re-entrant horn loudspeakers for background music unless the loudspeaker has been specifically designed for this purpose.
- AVOID jointing the microphone cable, when this is unavoidable make sure a good screened connector is used, e.g. Phono.
- ALWAYS use a unbalanced or floating low impedance microphone terminating into a unbalanced input on long microphone cable runs.
- ALWAYS use a mains grade double insulated cable for the loudspeaker cable runs.
- ENSURE that all loudspeakers are in-phase.
- ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier.

**GENERAL INSTALLATION**

DO NOT run microphone cables near A/C lines, data, telephone or 70V line cables.

DO NOT run outputs line cable near data, telephone or other low voltage cables.

ENSURE that all loudspeakers are in-phase.

ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier.

<p><b>IMPORTANT</b></p> <p>The wires in the mains lead are colored In accordance with the following code:</p> <p>Green and Yellow: Earth (E)</p> <p>Blue: Neutral (N)</p> <p>Brown: Live (L)</p>	<p>As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug proceed as follows:</p> <p>The wire that is colored green and yellow must be connected to the terminal which is marked with the letter N or colored black. The wire which is marked with the letter L or colored red.</p> <p>If a 13 Amp (B.S.1363) plug or any other type of plug is used, a 5 Amp fuse must be fitted either in the plug or at the distribution board.</p>
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**WARNING: THIS UNIT MUST BE EARTH GROUNDED**

