

# USER MANUAL

## QSM-624ET

### MIXER AMPLIFIER



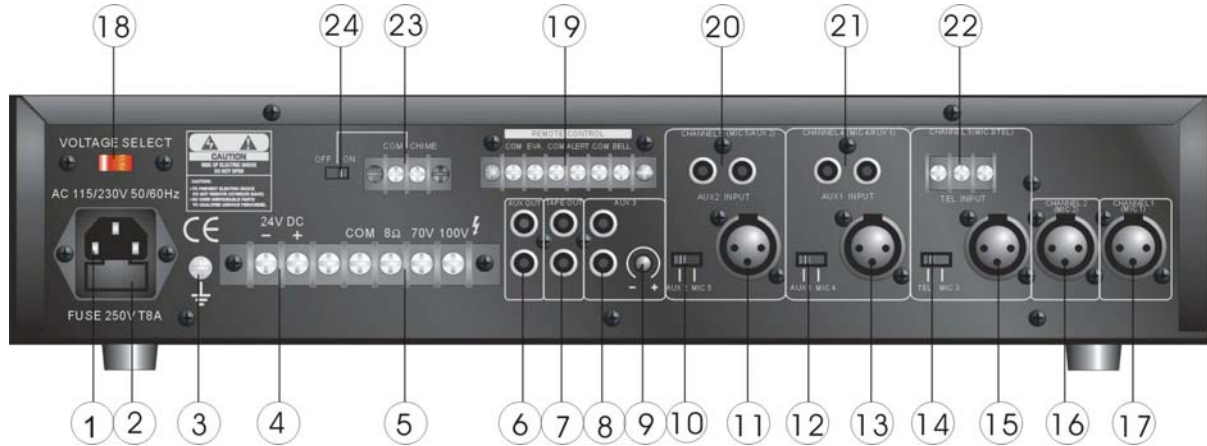
## QSM-624ET AMP 240W 3 TONE CONTROL + CHIME Mixer Amplifier

### FRONT PANEL



1. Channel 1 Volume Control
2. Channel 2 Volume Control
3. Channel 3 Volume Control
4. Channel 4 Volume Control
5. Channel 5 Volume Control
6. Master Tone Control (Bass)
7. Master Tone Control (Treble)
8. Master Volume Control
9. Power On / Off switch
10. Power On / Off indicator LED
11. Output Level indicator LED
12. Chime Emergency Push Switches

## REAR PANEL



- |                                 |   |
|---------------------------------|---|
| 1. Mains Input Socket           | 13. MIC 4 Input (XLR Jack)                    |
| 2. Power Fuse                   | 14. MIC 3/TEL Selector Switch                 |
| 3. Earth Connection Screw       | 15. MIC 3 Input (XLR Jack)                    |
| 4. DC Power Supply Terminals    | 16. MIC 2 Input (XLR Jack)                    |
| 5. Speaker Output Terminals     | 17. MIC 1 Input (XLR Jack)                    |
| 6. Aux Output (RCA Jack)        | 18. Mains Voltage (115V/230V) Selector Switch |
| 7. Tape Output (RCA Jack)       | 19. Chime Emergency Control Terminals         |
| 8. Aux 3 Input (RCA Jack)       | 20. Aux 2 Input (RCA Jack)                    |
| 9. Aux 3 Level Control          | 21. Aux 1 Input (RCA Jack)                    |
| 10. MIC 5/Aux 2 Selector Switch | 22. Tel Page Input (Screw Terminals)          |
| 11. MIC 5 Input (XLR Jack)      | 23. Chime (Ding Dong) Control Terminals       |
| 12. MIC 4/Aux 1 Selector Switch | 24. Chime (Ding Dong) Control on/off Switch   |

### Mains Connection

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

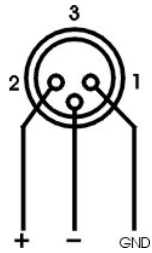
### Battery Connection (24Vdc)

When using external batteries, earth the amplifier via the screw terminal because of the high voltages present. Electrical stability of the system is increased by earthing the case.

**NOTE: the connection cable must be fitted with an in-line fuse. Quick blow type F15A when Connecting batteries please ensure correct polarity.**

### **Microphone Connection**

Mic1-5 inputs are balanced standard 3-PIN XLR on the rear panel (with selectable phantom power on MIC 1-2-3).



### **XLR (Balanced Operation)**

Pin 1: Screen

Pin 2: Signal (live)

Pin 3: Signal (return)

# WARNING



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.  
DO NOT REMOVE COVER (OR BACK).  
NO USER-SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

\*Do not install this equipment in a confined space such as a bookcase or similar unit.

\*The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

\*Worded: "WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING WATER AND MOISTURE:Unit should not be used near water (eg. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings."



This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

## Installation

### Unpacking

Although your QSM-624ET is neither complicated nor difficult to operate, we recommend you take a few minutes to read this brief manual and familiarize yourself with the important information regarding product features, setup and operation.

### Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture and vibration.

### Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
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 plus has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the 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 the power supply 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.

## General Installation

- DO NOT run microphone cables near mains, data, telephone or 100V 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 100V line (speech only).
- DO NOT exceed 70% of the amplifiers output power when using 100V 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.
- 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.

## Front Panel Control

1. **Power Switch** – for normal use this control should be on. It is suggested that the power switch be turned off for weekends or holiday breaks.
2. **Channel Volume Controls Nos 1-5** – these level controls provide volume adjustment out over the speakers of the various input services that may be connected to the Amplifier. These may be microphone, cassette, CD etc.
3. **Treble Control** – adjusts higher frequency response of the amplifier.
4. **Bass Control** – adjusts the lower frequency response of the amplifier. These controls are usually set midway.
5. **Chime** – “Pre-announcement” chime to call attention that an announcement is about to be made. This function may be set to operate automatically when connected to a suitable microphone via connections on the rear panel.
6. **Bell Switch** – pressing this button will generate an electronic bell sound for as long as the button is depressed. The feature may be activated by time clock or other means via the rear panel terminals. The primary function of the bell is to signify starts or ends of particular periods of time eg. lunch breaks, school classroom periods etc.
7. **Alert Switch** – the alert switch generates an emergency alert electrical tone. This tone is to Australian Standard. Its purpose is to call attention to a possible emergency and for those in the building or area to cease activities and remain quietly for further instructions.
8. **Evacuation Switch (EVAC)** – this switch will general an electronic emergency evacuation tone to Australian Standard. This tone is used to call attention for the immediate and orderly evacuation of the building to a pre-determined evacuation plan.
9. **Green – Red L E D** – this row of lights starting from left to right, green to red shows at what level the amplifier is operating. The normal operation levels for any source should be in the green areas, with the occasional peak into red. Continuous operation in the red will overdrive the amplifier and may cause damage and distortion of sound.

## QSM-624ET Technical Specifications

<b>Type</b>		Chime Mixer Amplifier
<b>Model</b>		QSM-624ET
<b>Supply</b>	<b>Mains Voltage</b>	AC 115V/ 230V, 50 / 60Hz $\pm$ 10% Switchable
	<b>Battery Voltage</b>	DC 24V (MAX 10% deviation)
<b>Output power</b>	<b>Max:</b>	360W
	<b>Rated:</b>	240W
<b>Output</b>		<p>Speaker outputs:</p> <p>Music/speech: , 8<math>\Omega</math>, 70V, 100V</p> <p>Chime :1/8 power output</p> <p>Tape output: 1V 15K<math>\Omega</math></p> <p>Aux output: 1V, 150<math>\Omega</math></p>
<b>Inputs</b>		<p>Mic 1~5: sensitivity. Adjustable (1mV), 600<math>\Omega</math> balanced.</p> <p>Aux 4~6: 150mV, stereo 22K,</p> <p>TEL: 150mV, Adjustable 600<math>\Omega</math>, balanced</p>
<b>Frequency response</b>		<p>Mic 1~Mic 5: 60Hz ~ 15KHz <math>\pm</math> 3dB</p> <p>Aux 4~ 6: 50Hz ~ 20KHz <math>\pm</math> 3dB</p> <p>TEL: 50Hz ~ 15KHz <math>\pm</math> 3Db(cmrr)</p>
<b>Total harmonic distortion</b>		Less than 1% at 1KHz, rated power
<b>Signal to noise ratio</b>		<p>All Volume Controls C.C.W.: 80dB below rated power</p> <p>Mic 1~ 5: 60dB below rated power</p> <p>TEL: 80dB rated power</p> <p>Aux: 80dB below rated power</p>
<b>Tone Controls</b>		<p>Bass: <math>\pm</math> 10dB at 100Hz</p> <p>Treble: <math>\pm</math> 10dB at 10KHz</p>
<b>Controls</b>		<p>Front Panel</p> <p>Power switch</p> <p>Chime Emergency push switch</p> <p>Channel 1~5 volume control</p> <p>Tone controls (Bass, Treble)</p> <p>Master volume control</p> <p>Rear Panel:</p> <p>Aux 3 volume control</p> <p>Mic 3/Tel Slide switch</p> <p>Mic 4/Aux 1 Slide switch</p> <p>Mic 5/Aux 2 Slide switch</p>

	Chime Emergency controls Chime DING DONG control Chime DING DONG Slide switch AC 115V / 230V voltage Selector switch
	Power indicator (LED), output level indicators (6 LEDS)
<b>AC power consumption</b>	640W
<b>DC power consumption</b>	15A
<b>Phantom power</b>	Set up Mic 1 "on", Mic 2 "on", Mic 3 "on", Mic 4 "off", Mic 5 "off" Phantom power output 16V as set up "on"
<b>Priority</b>	Chime can mute all channel Priority level ( Mic 1: 0.3mv) Channel 1 can mute Channel3 ~5, Aux3
<b>Dimensions ( H x W x D )mm</b>	88(H)x425(W)x305(D)
<b>Weight</b>	11.8 kgs
<b>Color</b>	Black
<b>Mounting options</b>	Table top or 19" rack mountable

## Trouble Shooting Guide

**No Sound** Check Amplifier is plugged into power source and power switch illuminates when on. If the power point is tested OK with another appliance and the amplifier does not illuminate when turned on refer to qualified service personnel.

If the amplifier has power, press the "bell" button to see if there is visual indication of sound on the V.U. Meter. If there is no indication of sound refer to qualified service personnel.

Test other input sources for indication of sound on the V.U. Meter. Check the relevant volume controls are turned on. If there is no indication of sound from any source, refer to qualified service personnel.

If there is no indication of sound from any one source the problem is more than likely in that source.

If the amplifier shows visual indication of sound ie. the amplifier is not working but still no sound out over the installation, the problem may be external to the amplifier and should be referred to qualified service personnel.

**Squealing** When microphone talk button is depressed. This is caused by the microphone being too close to the loudspeaker.

**Distortion** Or insufficient level of sound from any one source.  
Adjust relevant volume control for that particular source.

**NOTE** **There are no user controls, adjustments, or serviceable items inside the amplifier case. Fuses on the rear panel should be replaced by qualified service personnel after investigation of the cause of the fuse failure.**