GENERAL

The Shure Model M63 AUDIO MASTER® is designed to give maximum flexibility in the control of volume, bass response, treble response, and high and low frequency rolloff. The Model M63 works ideally as a Master Control Center when used in conjunction with the Shure Model M68 series of microphone mixers. The M63 provides a means to equalize sound systems for correction of room acoustics, to reduce feedback, to provide special sound effects, to reduce stand and stage noise and for tape recording.

AUDIO MASTER features:
- Five types of outputs
  - 600 ohms balanced line level
  - High impedance, high level
  - High impedance, microphone level
  - Low impedance, microphone level, balanced
  - Headphone jack for monitoring
- Inputs for two driving sources
- VU meter to monitor audio level
- Continuously variable high-pass and low-pass 6 dB per octave filters
- Bass and treble tone controls

SPECIFICATIONS

(At 120 volts ac, 60 Hz line voltage)

Frequency Response
±2 dB, 20 to 20,000 Hz (all controls flat)

Voltage Gain (outputs terminated as noted, others open; volume and level control max.)
- Line Output: 38.5 dB (600-ohm load)
- Aux. Output: 39.0 dB (47k load)
- Hi-Imp. Mic. Output: −1.0 dB (33k load)

Tone Controls
- Bass: +14, −19 dB at 100 Hz Typical
- Treble: +16, −19 dB at 10 kHz Typical

Filters
Hi-Cut and Lo-Cut 6 dB per octave, continuously variable −3 dB point

Noise Output (Line with 600-ohm load)
Volume Control min.: 76 dB below +8 dBm, 20 Hz −20 kHz
81 dB below +8 dBm, 300 Hz −20 kHz
Volume Control max., 4.7k source:
68 dB below +8 dBm, 20 Hz −20 kHz
71 dB below +8 dBm, 300 Hz −20 kHz

Distortion
Under 1% THD at +8 dBm output

Clipping Level
+18 dBm (600-ohm load)

VU Meter (Calibrated for 600-ohm line termination)
0 VU = +8 dBm ±1 dB fixed; or
0 VU = +4 dBm; output may be attenuated by 20 dB

Inputs
Two, mixing. Impedance 50k nominal. No amplification precedes VOLUME control, so that high-level input signals cannot cause overloading.

Outputs
600-ohm line: Balanced and floating, 150 ohms minimum load, 125 ohms actual internal impedance. Will operate with up to 100 mA dc through transformer for driving telephone lines.
Auxiliary Hi-Imp.: Unbalanced, 4.7k internal impedance. For driving high-level, high impedance inputs.
Microphone Hi-Imp.: Unbalanced, 1k internal impedance. For driving medium-level high impedance microphone inputs.
Microphone Lo-Imp.: Balanced, 0.5-ohm internal impedance. For driving low-level 25- to 250-ohm microphone inputs.

Headphone: Two-level, for 600- to 2,000-ohm headphones. Crystal headphones may be used.

Operating Voltage
AC Operation: 108-132 volts, at 50/60 Hz
DC Operation: 30 volts, 20 mA maximum drain for +8 dBm output

Overall Dimensions
See Figure 2

Weight
1.4 kg (3 lb 2 oz)

Operating Temperature
−7°C to 57°C (20°F to 135°F)

Certifications
The M63 is Listed by Underwriters’ Laboratories, Inc. and is listed by Canadian Standards Association as Certified.
CONTROLS, CONNECTIONS AND OPERATION

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

INPUTS
The two high impedance inputs (phono jacks) marked HIGH LEVEL INPUTS are designed to accept high level signals from a microphone mixer (such as the Shure M68, etc.), tape recorder, AM-FM tuner, or output from a Shure Model A68P Phonograph Pre-amplifier (accessory).

To use with the Shure M68 Microphone Mixer series, connect the AUX. HIGH LEVEL OUTPUT on the mixer to the input of the M63 with a shielded cable having a phone plug on each end. Set the MASTER volume control on the mixer to approximately 6 and use the VOLUME control on the M63 to adjust the overall level.

Although not specifically designed for use with the Shure M67, it may be used in conjunction with the M67 in the following manner: connect a shielded single conductor cable with a ¼" phone plug on one end and a phone plug on the other from the head-phone output of the M67 to the M63 input. To obtain good volume control action from the M63, install a 180-ohm resistor from tip to sleeve in the phone plug and use the M63 volume control to adjust the output to the desired level.

OUTPUTS
Microphone
The receptacle marked MICROPHONE LEVEL OUTPUT is a dual impedance output selected by the switch above the receptacle. This output is designed to work into a balanced 25- to 250-ohm input, or, with the MICROPHONE IMPEDANCE selector switch in the Hi position, into an unbalanced high impedance microphone input on an amplifier or tape recorder. The receptacle is a professional three-pin audio connector designed to mate with Cannon XL series, Switchcraft A3 (O.G.) series or equivalent connector. See Figure 1 for output receptacle connections.

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Line
The line output (binding posts) is on the rear panel and is designated 600 OHM BALANCED LINE OUTPUT. These terminals are numbered "3" and "2" and are in phase with correspondingly numbered pins in the microphone output connector. The adjacent ground terminal corresponds to pin 1. While the line output may be used to drive lines of various impedances (150 ohms or greater), the VU meter is calibrated for use with a 600-ohm terminated line.

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VU METER
When the METER SENSITIVITY switch (on rear panel) is in the 0 VU position, an output of 8 dBm on the 600-ohm line output (loaded with 600 ohms), reads 0 VU on the meter. When the METER SENSITIVITY switch is in the 0 VU VARIABLE position and the 0 VU LEVEL ADJUST control is maximum (fully clockwise), an output of 4 dBm on the 600-ohm line output (loaded with 600 ohms) reads 0 VU on the meter; at minimum position of the 0 VU LEVEL ADJUST, fully counterclockwise, an output of approximately −20 dBm on the 600-ohm line output (terminated in 600 ohms) reads 0 VU on the meter.

The variable position on the METER SENSITIVITY switch allows the VU meter to read 0 VU for outputs ranging from −20 dBm to +4 dBm (600-ohm line terminated), by adjusting the 0 VU LEVEL ADJUST (screwdriver adjustment on rear panel). To calibrate the VU meter properly in applications where a level other than the fixed level is needed, set the VOLUME control on the M63 until the meter deflects to the 0 VU position on the loudest peaks, then adjust the 0 VU LEVEL ADJUST control for the desired output signal level. The LEVEL ADJUST control attenuates all outputs simultaneously (except HEADPHONES), while the internal circuitry operates at the proper level to insure good signal-to-noise ratio.
ACCESSORY 30 V.D.C.
The rear panel jacks (located near power cord) provide 26 Vdc open circuit (23 Vdc at 10 mA max.) for accessories. These jacks also are used as a power input when using the A67B Battery Power Supply.

CONTROLS
Volume Control
The front panel control designated VOLUME controls the overall output of both high level inputs and functions as a master volume control. When the input device has a volume control of its own, the best signal-to-noise ratio is obtained by turning up that control as high as possible without encountering distortion, keeping the M63 VOLUME control low.

Tone Control
Front panel controls designated BASS and TREBLE are standard function tone controls having a response characteristic as shown in Figure 3.

Filter Controls
The front panel controls designated LO CUT (Hz) and HI CUT (Hz) are continuously variable low-pass and high-pass filters (6 dB per octave) with a typical response function as shown in Figure 4.

Combining Tone and Filter Functions
The BASS and TREBLE control response characteristic and the LO CUT and HI CUT response characteristic may be combined to obtain a variety of overall curves, sometimes needed for special effects involving room acoustics, equipment equalization, etc. Figure 5 shows an example of combining these functions.

WARNING
Voltages in this equipment are hazardous to life. Refer servicing to qualified service personnel.

OPTIONAL ACCESSORIES
A68M MICROPHONE PREAMPLIFIER
The A68M Microphone Preamplifier provides a microphone input, either balanced low or high impedance, or a balanced bridging line input to the M63. The A68M output cable is connected to one of the M63 inputs. The A68M mounts on the left side of the M63 and receives its power from the M63 30-volt DC jacks.

A68S STACKING KIT
This accessory consists of brackets for vertical stacking of an M68 Series mixer and an M63 (or any combination of Shure mixers or controllers). An interconnecting cable for combining units is included.
**A68R RACK PANEL KIT**

The kit consists of a 19 in. x 3½ in. (483 mm x 89 mm) precut rack panel and necessary hardware for rack-mounting the M63 with its cover in place. Gray hammertone finish.

**A68R-BL RACK PANEL KIT**

The kit consists of a 19 in. x 3½ in. (483 mm x 89 mm) precut rack panel and necessary hardware for rack-mounting the M63 with its cover in place. Black finish.

**A68L LOCKING PANEL**

This panel fits within the front hood of the M63 cover and locks in place to prevent tampering with the front panel controls.

**A67B BATTERY POWER SUPPLY**

The A67B eliminates the need to connect the M63 mixer to a wall outlet. The battery complement is three Eveready Type 222, 216, or equivalent 9-volt batteries. At room temperature, battery life is approximately 10 hours.

**AC60 ATTACHÉ CARRYING CASE**

This case is compartmented and foam-lined for an M63 and as many as four microphones, cables, adapters, and other accessories.

**GUARANTEE**

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

**SHIPPING INSTRUCTIONS**

Carefully repack the unit and return it prepaid to:

Shure Brothers Incorporated  
Attention: Service Department  
1501 West Shure Drive  
Arlington Heights, Illinois 60004

If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.
LAMP REPLACEMENT

1. DISCONNECT AC CORD.
2. Remove 4 Phillips head screws retaining cover — one on front, one on back, two on bottom.
3. Remove cover.
4. Remove screw and nut detaching VU meter brackets.
5. Gently push VU meter from front and lift up clear of chassis.
6. Bracket may fall out. Note their position in cutout. Brackets are interchangeable.
7. Remove screws retaining lamp sockets from underside of chassis. Sockets may be pushed clear of chassis and 247 lamps replaced. It is advisable to replace both lamps when one burns out.
8. Replace lamp socket and loosely fasten screws.
9. Place two VU meter brackets in cutout, pushing them firmly against sides of cutout.
10. Slide VU meter into cutout. Should lamps be in line, move them. VU meter should fit evenly into cutout if positioned properly. Do not force.
11. Hold VU meter firmly against back side of chassis front panel. Insert screws through holes in brackets and secure with nut. Nut gets on right side of meter. Do not overtighten. (See diagram for replacement.)
12. Check positioning of lamps, and tighten their two mounting screws.
13. Replace cover and secure with screws.

REPLACEMENT PARTS LIST

<table>
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<tr>
<th>PART DESIGNATION</th>
<th>REPLACEMENT KIT NO.*</th>
<th>QTY</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<td>3A048</td>
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*Parts listed as RKC Kit should be ordered by that kit number. Any orders received for piece parts where RKC Kit number is shown will be shipped in RKC quantities.
**Replace as matched pair: T102M-1/102M.