



**GENERAL**

The Shure Model PE68M is a five-channel, completely transistorized, portable microphone/instrument mixer for use with public-address systems and musical instrument amplifiers.

The Mixer Features:

- Five microphone/instrument inputs. (Two or more mixers can be connected together to obtain additional microphone inputs. For example, two mixers connected together will give a total of nine microphone/instrument inputs.)
- Individual volume controls to balance each of the five inputs.
- A master volume control to simultaneously control level of all inputs.
- A high- (unbalanced) or low-impedance (balanced or unbalanced) microphone level output. Impedance selected with slide switch to match the microphone input of associated amplifier.
- Two high-impedance auxiliary outputs to drive a power amplifier or guitar amplifier.
- A dc power supply jack. With the Model A67B Battery Power Supply (Accessory) connected to this jack, the mixer is completely battery operated.
- Listed by Underwriters' Laboratories, Inc. and listed by Canadian Standards Association as certified.

**GROUNDING**

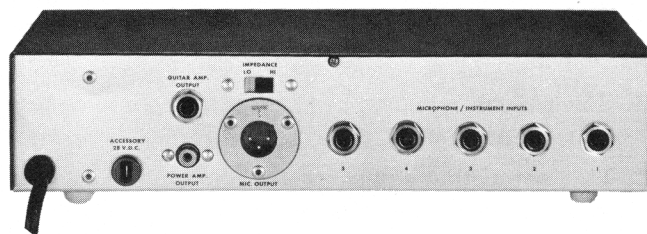
If there should be objectionable hum, ground the metal chassis of the mixer to a good ground such as a metal frame of a wall outlet or a water or steam pipe. This is normally accomplished automatically through the ground wire of the power cord.

**INPUT CONNECTIONS**

**Microphones/Instruments:** A maximum of five high-impedance dynamic or ribbon microphones or electrified musical instruments may be connected to standard phone jacks marked 1, 2, 3, 4, and 5. The unit is not recommended for use with crystal or ceramic microphones.

**OUTPUT CONNECTIONS**

**Microphone:** The receptacle marked MIC. OUTPUT is a dual-impedance output selected by the switch above



REAR VIEW OF MODEL PE68M

the receptacle. This output is the "mixed" output of all the input sources and is designed to work into a 50 to 250-ohm line or input, or into a high-impedance amplifier. The MIC. OUTPUT receptacle on the mixer is a professional three-pin male audio connector designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent female connector. See Figure A for output plug connections. The Model A68C Output Cable Kit (Accessory) provides a simple and effective method of connecting the mixer to virtually any PA microphone input.

**Power Amplifier Output:** The jack marked POWER AMP. OUTPUT is a high-impedance high level output designed to feed a power amplifier.

**Guitar Amplifier Output:** The jack marked GUITAR AMP. OUTPUT is a high-impedance medium level output designed to feed a guitar amplifier. Any high quality shielded guitar cable may be used to connect the mixer to the Guitar Amplifier.

**Accessory 28-volt DC:** To convert to battery operation, this jack is used as a power input when using the Model A67B Battery Power Supply (Accessory). When not using mixer, turn On-Off switch off to conserve battery life (pilot light does not operate when using A67B). Voltage is 29 Vdc open circuit (20 Vdc at 6 mA max.).

**OPERATION**

**Power:** Connect the microphone/instrument mixer power line cord to a 108-132 volt 50/60 Hz ac power outlet.

**Volume Controls:** The Master Gain Control and the individual gain controls for each of the five channels are identified on the front panel.

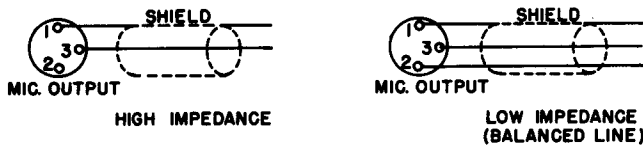
The individual gain controls should generally be set near maximum (fully clockwise) and the master gain control adjusted to required output. Individual channel gain controls not being used should be kept at a minimum gain (fully counterclockwise).

**Identifying Controls:** Pressure sensitive adhesive labels are supplied with the Mixer as a means of identifying the control and recording the control position when optimum settings have been determined. The labels are easily removed when their use is no longer required.

## CONNECTING TWO UNITS TOGETHER

Two PE68M Mixers may be combined to give total of nine microphone or instrument channels.

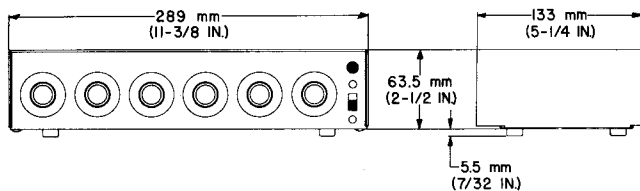
- A. Connect the GUITAR AMP. OUTPUT on Unit 1 to the fifth MICROPHONE/INSTRUMENT INPUT on Unit 2.
- B. Connect the microphones or instruments to mixers and set each input control to 0 position.
- C. Take the output signal for desired application from appropriate output jack on Unit 2.
- D. Set Master Control on Unit 1 to position 4.
- E. Set fifth MICROPHONE/INSTRUMENT INPUT Control on Unit 2 to position 10.
- F. The Master Control on Unit 2 is now Master for all inputs.
- G. Advance Master Control (Unit 2) and all individual Microphone/Instrument controls for desired level.



MICROPHONE OUTPUT PLUG CONNECTIONS  
FIGURE A

## OPTIONAL ACCESSORIES

Handle/Tilt Bracket .....	A67H
Battery Power Supply .....	A67B
Output Cable Kit .....	A68C
Locking Panel .....	A68L
Rack Panel Kit .....	A68R
Stacking Kit .....	A68S
Attaché Case .....	AC60
Line Matching Transformers .....	A95 Series



OVERALL DIMENSIONS  
FIGURE B

## GUARANTEE

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor.

## SPECIFICATIONS

### Gain (At 1,000 Hz)

Input	Outputs			
	Low Imp. Mic.	High Imp. Mic.	Guitar Amp.	Power Amp. Aux.
5.0 mV produces	.5 mV	7.5 mV	22.5 mV	158 mV

### Frequency Response

Flat  $\pm 3$  dB from 40 Hz to 20,000 Hz

### Hum-Noise

60 dB below rated output

### Input Impedance

Inputs suitable for high-impedance dynamic and ribbon microphones and electrified instruments

### Recommended Load Impedance

MIC. OUTPUT (LO) ..... 25 to 600 ohms

MIC. OUTPUT (HI) ..... 20,000 ohms or greater

POWER AMP. OUTPUT ... 50,000 ohms or greater

GUITAR AMP. OUTPUT ... 50,000 ohms or greater

### Distortion

Less than 1% THD when MIC. OUTPUT (LO) is at 20 mV level, MIC. OUTPUT (HI) is at 200 mV level, POWER AMP. OUTPUT is at 2.0V level, and GUITAR AMP. OUTPUT is at 300 mV level.

### Phase

All INPUTS and AMP. OUTPUTS are in phase. MIC. OUTPUTS are out of phase with AMP. OUTPUTS.

### Output Clipping Level

OUTPUT	MIN. CLIPPING LEVEL
MIC. (LO)	60 mV
MIC. (HI)	.85V
POWER AMP.	4.0V
GUITAR AMP.	0.7V

### Case

Painted metal

### Dimensions

See Figure B

### Net Weight

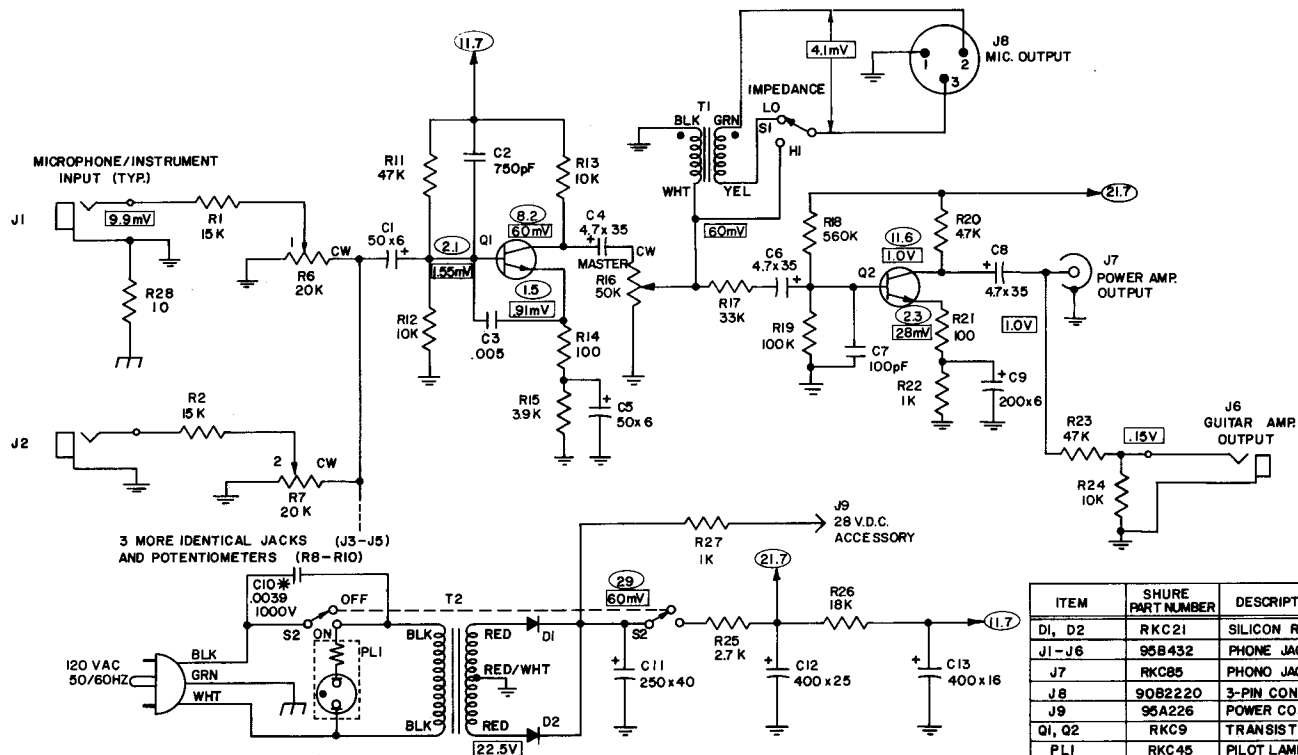
1.36 kg (3 lb)

### Packaged Weight

1.62 kg (3 lb, 9 oz)

## SHIPPING INSTRUCTIONS

Carefully repack the unit and return it prepaid to the factory. 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.



**NOTES:**

1. ALL CAPACITORS IN  $\mu\text{F}$  AND 50V OR MORE UNLESS OTHERWISE SHOWN. ELECTROLYTICS SHOWN IN  $\mu\text{F} \times \text{VOLTS}$ .
  2. ALL RESISTORS 1/2W, 10%.
  3. FOLLOWING SYMBOLS DENOTE:  $\perp$  CHASSIS GROUND;  $\perp$  COMMON GROUND BUS;  $\square$  AC VOLTAGE;  $\circ$  DC VOLTAGE.
  4. ALL VOLTAGES MEASURED WITH AC = 120V, IMPEDANCE SWITCH TO LO, POWER AND GUITAR AMP. OUTPUTS LOADED WITH 47K. MIC INPUT 1 KHZ FROM 33K SOURCE SUCH THAT POWER AMP. OUTPUT = 1.0V. INPUT 1 AND MASTER CONTROLS SET TO MAX. INPUT 2-5 CONTROLS SET TO MIN. AC VOLTAGES MEASURED WITH 1 MEG AC VTVM. DC VOLTAGES MEASURED WITH 10 MEG VTVM.
  5. VOLTAGES SHOWN ARE TYPICAL AND MAY VARY  $\pm 15\%$ .
- \* C10 WAS PREVIOUSLY 0.047  $\mu\text{F}$ , 600V, AND WIRED ACROSS PRIMARY OF T2.

ITEM	SHURE PART NUMBER	DESCRIPTION
D1, D2	RKC21	SILICON RECTIFIER
J1-J6	95B432	PHONE JACK
J7	RKC85	PHONO JACK
J8	90B2220	3-PIN CONNECTOR
J9	95A226	POWER CONNECTOR
Q1, Q2	RKC9	TRANSISTOR
PL1	RKC45	PILOT LAMP
R6-R10	46A010	POTENTIOMETER
R16	46A011	POTENTIOMETER
S1	RKC10	SWITCH
S2	55B103	SWITCH
T1	RKC81	TRANSFORMER SHIELD ASSEMBLY
T2	51A252	POWER TRANSFORMER
	RKC6	KNOB (BLACK)
	RKC67	KNOB (GRAY)

## MODEL PE68M MICROPHONE/INSTRUMENT MIXER

