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MICROPHONES AND ELECTRONIC COMPONENTS

**DATA SHEET
 MODEL 450
 PAGING AND DISPATCHING
 MICROPHONE**

MODEL 450 PAGING AND DISPATCHING MICROPHONE

GENERAL

The Model 450 is a CONTROLLED MAGNETIC® microphone especially designed for high speech intelligibility and exceptional reliability for radio communications, paging, and dispatching systems. The microphone has a high output level, tailored response, and an omnidirectional pickup characteristic.

Microphone Features:

- Dual impedance (Low or High) with impedance switch for convenient changeover
- Finger-tip control bar (locking or non-locking action) to actuate microphone circuit and an external relay or control circuit
- Long-life switch to satisfy rigorous requirements of communications and paging systems
- Sturdy, high impact ARMO-DUR® base and microphone case
- Adjustable microphone height
- Dependability—under all operating conditions

PRESS-TO-TALK SWITCH OPERATION

The finger-tip control bar can be used as a locking or nonlocking switch. To use as a nonlocking switch, simply depress the control bar and release after transmission. To use as a locking switch, depress the control bar and pull it forward. To unlock the switch, move the bar back and release.

IMPEDANCE SELECTION

High or low impedance is selected by the switch located on the under side of the microphone base near the cable entry. The microphone is shipped with the switch in the "HI" position.

The low-impedance connection is recommended where long cable lengths are required or under conditions of severe hum disturbance. The permissible cable length is practically unlimited, since neither response nor level is appreciably affected. Shure Model A95 Series Line Matching Transformers are available for use in those cases where a low-impedance microphone line is desirable but the associated amplifier has a high-impedance input. These transformers provide a proper impedance match between a 19 to 300 ohm microphone line and a high-impedance input and are available with various input and output connectors.

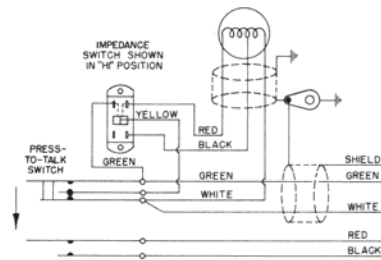
CONNECTIONS

Figure 1 shows the internal wiring of the Model 450 microphone.



For unbalanced high- or low-impedance operation, the WHITE cable lead is the "hot" conductor for the microphone circuit; the GREEN cable lead and the shield are connected to the amplifier or chassis ground. Set the impedance switch to the proper position. The RED and BLACK leads control an external relay or switching circuit.

For balanced-line low-impedance operation, with the Impedance Switch in the "LO" position, the WHITE and GREEN cable leads are the "hot" conductors for the microphone circuit; the shield is connected to the amplifier or chassis ground. The RED and BLACK leads control an external relay or switching circuit.



CARTRIDGE CONNECTIONS:
 RED & WHITE - HIGH IMPEDANCE
 BLACK & WHITE - LOW IMPEDANCE

INTERNAL CONNECTIONS

FIGURE 1

SPECIFICATIONS

Type

CONTROLLED MAGNETIC®

Frequency Response

100 to 10,000 Hz (see Figure 2)

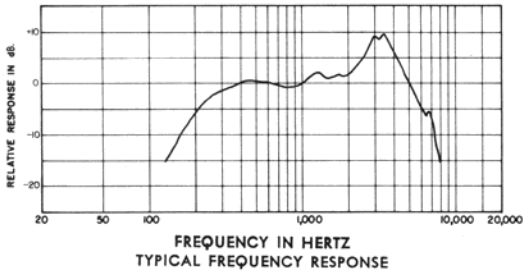


FIGURE 2

Polar Pattern

Omnidirectional

Impedance (at 1,000 Hz)

Dual. Microphone rating impedance is 150 ohms (225 ohms actual) and "High"

Load Impedance Range

	Minimum	Recommended
High Impedance	15 kilohms	100 kilohms
Low Impedance	150 ohms	1,000 ohms

Output Level (at 1,000 Hz)

	Impedance	
	High	Low
Open Circuit Voltage*	-53.0 dB (2.24 mV)	-71.0 dB (.28 mV)
Power Level**		-50.5 dB

*0 dB = 1 volt per microbar

**0 dB = 1 milliwatt per 10 microbars

Switch

Press-to-Talk Switch—locking or nonlocking operation to actuate microphone circuit and an external relay or control circuit. Microphone circuit normally shorted in high impedance and normally open in low impedance position

Impedance Selection Switch—double-pole double-throw slide switch in microphone base to provide either high- or low-impedance operation

Cable

2.1m (7 ft) four-conductor, two conductors shielded, nondetachable

Case

Two-tone gray ARMO-DUR®

Dimensions

See Figure 3

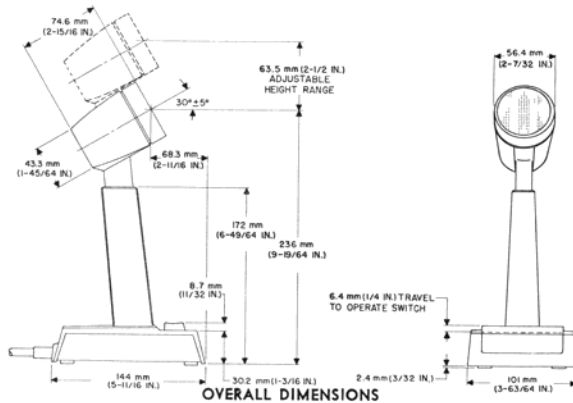


FIGURE 3

Net Weight

736 grams (1 5/8 lb)

Shipping Weight

1020 grams (2 1/4 lb)

REPLACEMENT PARTS

Cartridge	R44D
Cable	70A494
Screen Assembly	90A1060
On-Off Switch	RK141S

OPTIONAL ACCESSORY

Split Bar Switch Kit	RK199S
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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, have it insured, and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
222 Hartrey Avenue
Evanston, Illinois 60204

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.