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**Shure Model 522 Microphone**

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DATA SHEET

MODEL 522

## UNIDIRECTIONAL DYNAMIC BASE STATION MICROPHONE

### GENERAL

The Model 522 is a dynamic base station microphone having unidirectional characteristics designed especially for radio communications, paging and dispatching systems.

This cardioid (unidirectional) pickup pattern suppresses unwanted background noise—the type of noise generated by other dispatchers working nearby, by ventilating equipment, or by office machines in the same area. In addition, it also eliminates or reduces feedback in public address paging applications.

### Microphone Features:

- Dual impedance (19 to 300 ohms or High)
- Impedance change switch for convenient change-over
- 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.

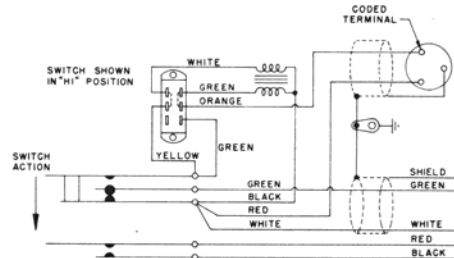
The low-impedance connection is recommended where long cable lengths are required or under conditions of severe hum disturbance. The permissible cable length is practically unlimited, since neither response nor level is appreciably affected. Shure Model A95 Series Line Matching Transformers are available 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 522 microphone.

POSITIVE PRESSURE PRODUCES POSITIVE VOLTAGE  
ON GREEN CABLE LEAD—HIGH IMPEDANCE;  
ON WHITE CABLE LEAD—LOW IMPEDANCE



INTERNAL CONNECTIONS

FIGURE 1

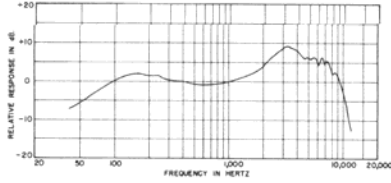
For unbalanced high-impedance operation, with the Impedance Switch in the "HI" position (as shipped), the WHITE cable lead is the "hot" conductor for the microphone circuit; the GREEN cable lead and the shield are connected to the amplifier or chassis ground. The RED and BLACK leads control an external 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.

## SPECIFICATIONS

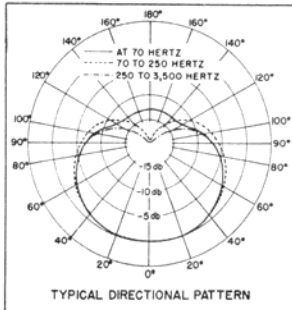
**Type**  
Dynamic

**Frequency Response**  
60 to 11,000 Hz (see Figure 2)



TYPICAL FREQUENCY RESPONSE  
**FIGURE 2**

**Polar Pattern**  
Cardioid (unidirectional)—uniform with frequency, symmetrical about axis (see Figure 3)



**FIGURE 3**

### Impedance

Dual. Microphone rating impedance is 150 ohms (170 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms and "High" for connection to high-impedance microphone inputs. Switch is in high-impedance position as supplied. To change impedance, see sections on Impedance Selection and Connections.

### Output Level (at 1,000 Hz)

	Impedance	
	LOW	HIGH
Open Circuit Voltage*	-80 dB (.10 mV)	-57 dB (1.42 mV)
Power Level**	-57 dB	

\*0 dB = 1 volt per microbar

\*\*0 dB = 1 milliwatt with 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 both high and low impedance

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

### Cartridge Shock Mount

Internal rubber vibration-isolator

### Cable

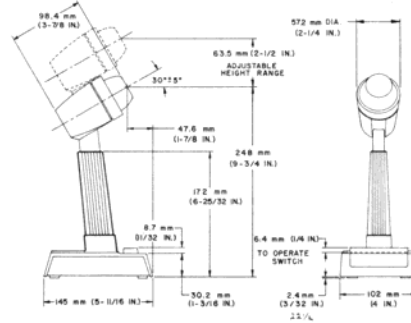
2.1m (7 ft) four-conductor, two conductors shielded, nondetachable

### Case

Two-tone gray ARMO-DUR® with dull-chrome plated copper-brazed steel screen

### Dimensions

See Figure 4



OVERALL DIMENSIONS

**FIGURE 4**

### Net Weight

736 grams (1 lb 10 oz)

### Shipping Weight

1020 grams (2 lb 4 oz)

## REPLACEMENT PARTS

Cartridge .....	R89
Cable .....	C70
On-Off Switch .....	RK141S
Screen and Grille Assembly .....	RK131G
Housing Assembly .....	RK130C
Base Assembly .....	RK139B
Bottom Plate Assembly .....	RK132B
Transformer .....	51B44

## 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.