Model 522 User Guide

MODEL 522 UNIDIRECTIONAL DYNAMIC BASE STATION MICROPHONE

The Model 522 is a dynamic base station microphone designed especially for radio communications, paging, and dispatching systems. Its 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. It also eliminates or reduces feedback in public address paging applications. The 522 can be converted to Monitor/Transmit switching with the Shure RK199S Split-Bar Conversion Kit.

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 micro-phone case
- Adjustable microphone height
- Dependability - under all operating conditions
- Conversion kit available for Monitor/Transmit switching

PRESS-TO-TALK SWITCH OPERATION

The finger-tip control bar can be used as a locking or non-locking switch. To use as a non-locking 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

Use the switch located on the under side of the microphone base, near the cable entry, to select high or low impedance. The microphone is shipped with the switch in the “HI” position.

Use the low-impedance position for long cable lengths under conditions of severe hum disturbance. Unlimited cable lengths are possible without appreciably affecting response or level. Use Shure Model A95 Series Line Matching Transformers when using a low-impedance microphone line with a high-impedance amplifier 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.

AUDIO CONNECTIONS (See Table 1)

Unbalanced high-impedance operation:

Set the impedance switch to the “HI” position (as shipped). Connect the GREEN cable lead and the shield to the amplifier or chassis ground. The WHITE cable lead is the “hot” conductor.

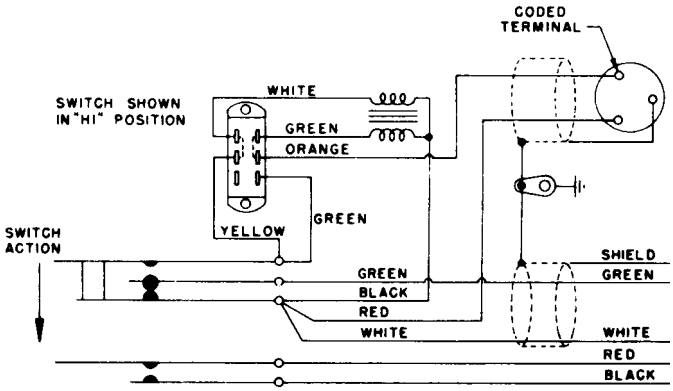
Balanced-line low-impedance operation: Set the impedance switch to the “LO” position. Connect the shield to the amplifier or chassis ground. The WHITE and GREEN cable leads are the “hot” conductors.

TABLE 1. CABLE-TO-CONNECTOR WIRING

INPUT TYPE	WIRE COLOR	FUNCTION	XLR CONNECTOR	1/4 IN. PHONE PLUG
UNBALANCED	WHITE	AUDIO	PIN 2	TIP
	GREEN	AUDIO GROUND	PIN 3	SLEEVE
	SHIELD	CHASSIS GROUND	PIN 1	SLEEVE
BALANCED	WHITE	AUDIO +	PIN 2	TIP
	GREEN	AUDIO -	PIN 3	RING
	SHIELD	CHASSIS GROUND	PIN 1	SLEEVE

LOGIC CONNECTIONS

The RED and BLACK leads may be used to control an external relay or switching circuit.



INTERNAL CONNECTIONS

FIGURE 1

OPTIONAL CONVERSION

A split-bar Transmit/Monitor Switch is available for use with transceivers with a receiver squelch circuit. Depressing the Monitor bar disables the receiver squelch circuit so that the operator can

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determine the presence of signals below the squelch threshold before transmitting. The Monitor switch is either momentary or locking; and the switch can be wired either to ground or to unground the squelch circuit. The Transmit switch bar can be depressed only while the Monitor bar is depressed, thus requiring the operator to verify that the channel is idle before transmitting. The Transmit switch is momentary only and cannot be locked. The Transmit/Monitor Switch Kit is Shure Model RK199S. General microphone wiring instructions are supplied with the kit, but specific transceiver wiring details must be obtained from the transceiver schematic and/or the manufacturer of the unit.

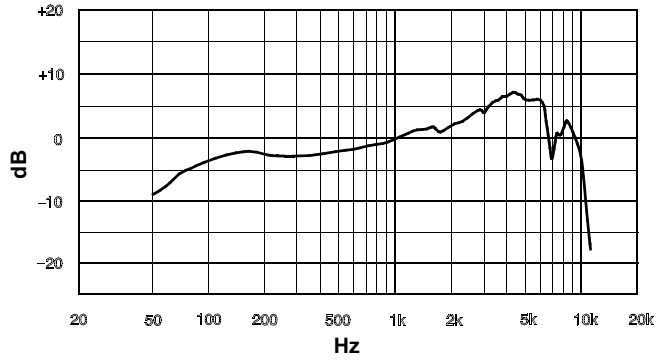
SPECIFICATIONS

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)

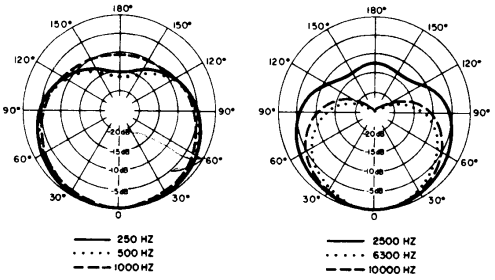


FIGURE 3

Impedance

Dual. Microphone rating impedance is 150 ohms (260 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.

SENSITIVITY (AT 1,000 HZ):	LOW	HIGH
Open Circuit Voltage*	-57.5 dB	-38.5 dB
(Ref. 1V/Pascal	(1.3 mV)	(12 mV)

*(1 Pa = 94 dB SPL)

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

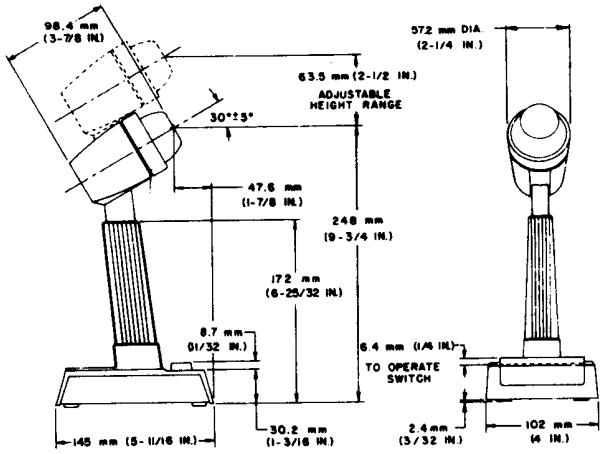
2.1 m (7 ft) four-conductor, two conductors shielded non-detachable

Case

Two-tone gray ARMO-DUR® with dull-chrome-plated 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	C31C
On-Off Switch	RK141S

OPTIONAL CONVERSION PART

Transmit/Monitor Split-Bar Switch Kit	RK199S

For additional service or parts information, please contact Shure's Service department at 1-800-516-2525. Outside the United States, please contact your authorized Shure Service Center.

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