

CONTROLLED MAGNETIC MICROPHONES

GENERAL

Models 520SL and 520SLB are integral assemblies of a microphone, a grip-to-talk, slide-to-lock switch, and a desk stand, with a high quality, shielded, detachable cable. The microphones are Controlled Magnetic units with a frequency response of 200 to 5,000 Hz and an omnidirectional pickup pattern.

The long-life grip-to-talk switch controls both the microphone circuit and an external relay or control circuit. The switch will withstand the rigorous field requirements of paging and dispatching systems. It has a large, comfortable grip bar which minimizes hand and finger fatigue. After the bar is pressed, a positive downward pressure locks the switch. The switch cannot be accidentally locked, and the unit can be picked up without actuating the switch.

APPLICATION

Models 520SL and 520SLB are very suitable for fixed station use in police, fire, utility, forestry and transportation services, for paging and dispatching systems, for radio telephone and amateur use, and for similar applications.

Model 520SL is a high-impedance microphone with a high output level, making it suitable for public address amplifier installations where a cable length of 15.2m (50 ft) or less is needed.

Model 520SLB is a low-impedance microphone (150-250 ohms) and is recommended where long cable lengths are required.

Models 520SL and Model 520SLB are both suited for use with transistor or vacuum tube amplifiers: Model 520SL for amplifiers with high-impedance inputs, Model 520SLB for amplifiers with low-impedance inputs.

INSTALLATION

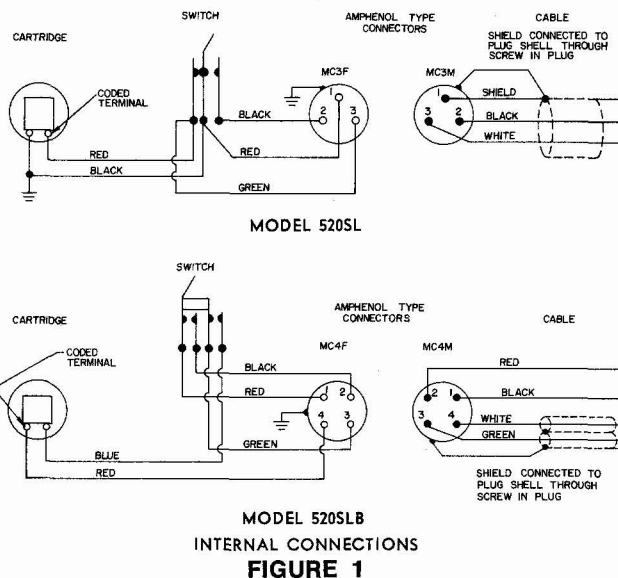
Models 520SL and 520SLB are supplied with the microphone and switch assembly separate from the base and cable. To assemble the unit, proceed as follows:

1. Place the microphone and switch assembly in the recess at the top of the base. Fasten the switch to the base with the special attachment screw supplied. Use a large screwdriver or coin to tighten the screw firmly.
2. Insert the cable connector plug into the receptacle in the base of the switch. Tighten the locking ring securely.
3. Place the cable in the groove in the bottom rear of the base. Clamp the cable to the base by means of the clamping plate and two machine screws supplied.



CONNECTIONS

The internal connections of Models 520SL and 520SLB are shown in Figure 1.



Model 520SL is a high-impedance microphone with a 2.1m (7 ft) two-conductor shielded cable and a single-pole double-throw switch to control the microphone circuit and an external relay or control circuit. The WHITE lead is the "hot" conductor for connection to the microphone circuit; the shield is

connected to the amplifier or chassis ground. The BLACK cable lead controls the external relay circuit.

Model 520SL can be used with any amplifier having an input impedance of 100,000 ohms or more. If both the microphone circuit and the relay circuit are to be extended, a two-conductor shielded cable should be used. If the relay circuit is not used, pins 1 and 2 of the cable connector should be shorted together and a single-conductor shielded cable can be used to extend only the microphone circuit. Cable lengths over 15.2m (50 ft) are not recommended.

Model 520SLB is a low-impedance microphone with a 2.1m (7 ft) four-conductor, two conductors shielded, cable and a double-pole single-throw switch to control the microphone circuit and an external relay or control circuit. The WHITE and GREEN cable leads are the "hot" conductors for balanced-line connections to the microphone circuit; the shield is connected to the amplifier or chassis ground. The RED and BLACK leads control the external relay circuit.

Model 520SLB is recommended for use where long cable lengths are required or under conditions where severe hum pickup may exist. Model 520SLB can be connected directly to the input of a low-impedance amplifier. If both the microphone circuit and the relay circuit are to be extended, a four-conductor cable should be used with two shielded conductors for the microphone circuit. If the relay circuit is not used, a two-conductor shielded cable can be used to extend only the microphone circuit. Shure Model A95 Series Line Matching Transformers can be used for coupling the 520SLB to the input of a high-impedance amplifier. These transformers provide a proper impedance match between a low-impedance microphone line and a high-impedance input and are available with various input and output connectors.

OPERATION

The microphones are supplied with the switch operating as a momentary-contact, grip-to-talk type. The switch may be converted to a slide-to-lock type by loosening the 5-40 Phillips head screw located directly below the switch bar. Rotate the stop plate (see Figure 3) 180° and retighten the screw. The switch can then be used as a momentary-contact type or locked in the On position. To lock, grasp the switch and simultaneously apply force downward with the index finger until the switch bar slides and is locked in position. To unlock, slide the bar upward.

SPECIFICATIONS

Type

Controlled Magnetic

Frequency Response

200 to 5,000 Hz (see Figure 2)

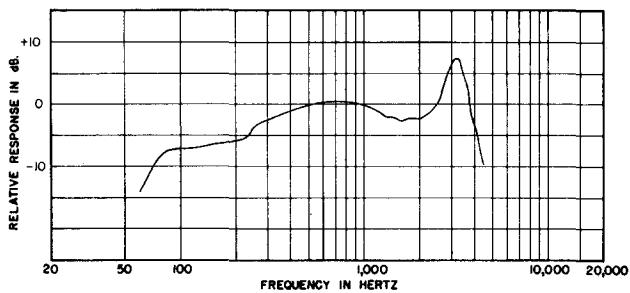


FIGURE 2

Polar Pattern

Omnidirectional

Impedance (at 1,000 Hz)

Model 520SL—Microphone impedance is "High"
 Model 520SLB—Microphone rating impedance is 150 ohms (200 ohms actual)

Load Impedance Range

	MINIMUM	RECOMMENDED
Model 520SL	15 kilohms	100 kilohms
Model 520SLB	150 ohms	1,000 ohms

Output Level (at 1,000 Hz)

	520SL	520SLB
Open Circuit Voltage*	-54.5 dB (1.88 mV)	-71.5 dB (.265 mV)
Power Level**		-50.5 dB

*0 dB = 1 volt per microbar

**0 dB = 1 milliwatt with 10 microbars

Switch

Built-in grip-to-talk, slide-to-lock switch to control microphone circuit and external relay or switching circuit

Cable

Model 520SL—2.1m (7 ft) two-conductor shielded, detachable, with Amphenol MC3M type connector on microphone end

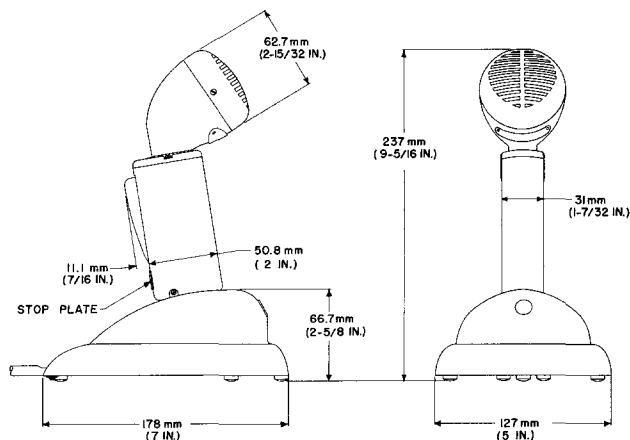
Model 520SLB—2.1m (7 ft) four-conductor, two conductors shielded, detachable with Amphenol MC4M type connector on microphone end

Case

Metallic green enamel and satin-chrome plated die casting

Dimensions

See Figure 3



OVERALL DIMENSIONS

FIGURE 3

Net Weight

1186 grams (2 lb 13 oz)

Packaged Weight

1517 grams (3 lb 5½ oz)

REPLACEMENT PARTS

	520SL	520SLB
Cartridge	R5	R5B
Cable	90A1014	90A1031
Grille Assembly	32A259D	32A259D
Desk Stand Assembly	94C102	94C102

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.

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.