

CONTROLLED MAGNETIC® CITIZENS BAND MICROPHONE



GENERAL

The Model CB42 LONG RANGER CONTROLLED MAGNETIC microphone is designed especially for use with Citizens Band transceivers in either mobile or base stations. For clearer transmission and improved reliability, this small, rugged, dual-impedance microphone can be used to replace ceramic or dynamic microphones supplied as original equipment.

Model CB42 provides crisp, undistorted voice response of high intelligibility and high output. Easy impedance selection at the end of the cable makes the microphone suitable for connection to either high-impedance or low-impedance (ceramic or dynamic) inputs.

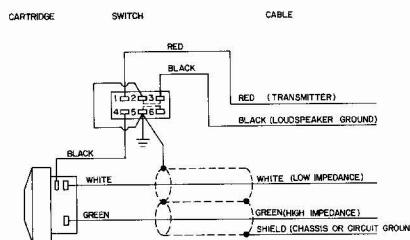
The microphone fits naturally and comfortably in the hand and is not affected by heat or humidity. The exclusive ARMO-DUR® case is immune to oil, grease, fumes, salt spray, sun, rust, and corrosion—and is outstanding in its ability to resist mechanical shocks and vibration. It is designed to withstand rigorous operating conditions and constant use.

Microphone Features:

- Highly intelligible voice response
- Replaces either ceramic or dynamic original equipment microphones
- Dual impedance—matches either high- or low-impedance inputs
- Reliable high output CONTROLLED MAGNETIC cartridge
- Unparalleled ruggedness and durability
- Tough ARMO-DUR case
- Mounting bracket supplied—fits hang-up button on back of microphone

CONNECTIONS

The internal connections of Model CB42 are shown in Figure 1.



**INTERNAL CONNECTIONS
 FIGURE 1**

Refer to the Shure CB Wiring Guide enclosed with the microphone for detailed instructions for connecting the CB42 to your transceiver. If your unit is not listed in the Guide, contact your dealer or Shure Brothers Incorporated for information. This microphone is not designed for use with transceivers requiring five-conductor shielded cable. Passage of the CB42 cable through small-diameter connectors may be eased by lubricating the outer jacket of the cable.

The general wiring procedure for transceiver connections is as follows.

Relay or Switching Circuit:

GROUNDING SWITCHING

Most transceivers employ a grounded circuit to switch from the receive to the transmit position. To connect the microphone to such a circuit, proceed as follows.

1. Connect the RED lead to the terminal used to complete the transmitter circuit.
2. Connect the BLACK lead to the terminal used to complete the receiver circuit. This will usually be a ground return from the loudspeaker. If a microphone switching contact is not required for the loudspeaker ground, insulate (wrap with tape) the BLACK cable lead.
3. Connect the shield to chassis or circuit ground of the transceiver (see Guide).

ISOLATED SWITCHING

In some transceivers, an isolated circuit is required to switch power supply voltages rather than grounds. If an isolated switching circuit is required, proceed as follows.

1. With microphone grille side down on a flat surface, remove the four No. 5 screws from the back of the microphone case; separate the case front and back. CAUTION: Microphone case is spring-loaded; care must be taken to hold the two halves of the microphone case together to retain springs in proper position.
2. Clip and remove the GRAY lead connecting switch terminals 2 and 5 (see Figure 1).
3. Unsolder the BLACK cable lead from switch terminal 3; solder the BLACK cable lead to switch terminal 2.
4. Fasten the two case halves together with the previously removed screws.

5. At the end of the cable, connect the RED lead to the isolated switch contact terminal used to complete the transmitter circuit.
6. Connect the BLACK lead to the other isolated switch contact terminal used for power supply voltage.
7. Connect the shield to chassis or circuit ground of the transceiver (see Guide).

CAUTION

Make certain that the shield is not connected to chassis ground for those models where the Guide specifies the shield should be connected to circuit ground.

Microphone Audio Input Circuit:

LOW IMPEDANCE

Connect the WHITE cable lead to the low-impedance microphone audio input terminal. Insulate (wrap with tape) the GREEN lead.

HIGH IMPEDANCE (ceramic microphone replacement)

Connect the GREEN cable lead to the high-impedance microphone audio input terminal. Insulate (wrap with tape) the WHITE lead.

NOTE

The high-impedance connection will generally be used when replacing a ceramic microphone supplied with original equipment. If you do not know whether your transceiver requires a high-impedance or a low-impedance microphone, follow the wiring instructions for the low-impedance connection. Check whether there is sufficient output from your transceiver. If the modulation output is too low, reconnect the microphone for high impedance.

OPERATION

Model CB42 will operate satisfactorily under all ordinary conditions of humidity, heat, and cold. Dropping the microphone, or other severe mechanical shocks should be avoided.

SPECIFICATIONS

Type

CONTROLLED MAGNETIC®

Frequency Response

200 to 4,000 Hz

Impedance (at 1,000 Hz)

Dual. Microphone rating impedance is 150 ohms (190 ohms actual) and "High". For impedance selection, see section on Connections.

Load Impedance Range

Low Impedance 200 ohms to 1,000 ohms
High Impedance 15 kilohms to 100 kilohms

Output Level (at 1,000 Hz)

	IMPEDANCE	
	Low	High
Open Circuit Voltage*	- 32.0 dB (25 mV)	- 13.0 dB (225 mV)
Power Level**	- 51.0 dB	

*0 dB = 1 volt per 100 microbars

**0 dB = 1 milliwatt per 10 microbars

Switch

Push-to-talk switch to actuate microphone circuit and transceiver relay or switching circuit. Microphone circuit normally open in either high or low impedance.

Cable

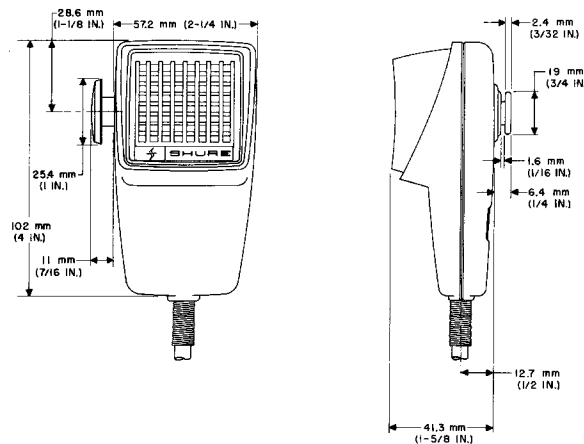
1.8m (6 ft) extended, four conductor, two conductors individually shielded, coiled cable

Case

Light gray ARMO-DUR®

Dimensions

See Figure 2



OVERALL DIMENSIONS
FIGURE 2

Net Weight

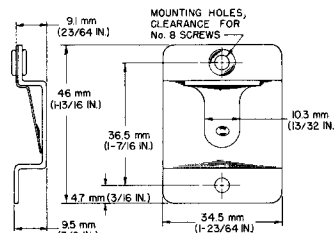
340 grams (12 oz)

Packaged Weight

510 grams (18 oz)

MOUNTING

A mounting bracket for permanent installation is supplied with each microphone (see Figure 3).



MOUNTING BRACKET
FIGURE 3

FURNISHED ACCESSORY

Mounting Bracket RK6MB

REPLACEMENT PARTS

Cartridge R44D
Switch 55A51
Switch Button and Main Plate Assembly 90C2264
Cable 70A4136
Case Front 65A191H
Case Back 90R830

FULL ONE YEAR WARRANTY

Shure Brothers Incorporated ("Shure"), 222 Hartrey Avenue, Evanston, Illinois 60204, warrants to the owner of this product that it will be free, in normal use, of any defects in workmanship and materials for a period of one year from date of purchase. You should retain proof of date of purchase. Shure is not liable for any consequential damages. If this Shure product has any defects as described above, carefully repack the unit and return it prepaid to the above address. If you are not in the United States, return the unit to your dealer or authorized Service Center for repair. The unit will be repaired or replaced and returned to you promptly, and if it cannot be repaired or replaced, you may elect to receive a refund.