

**CONTROLLED MAGNETIC® BASE STATION CITIZENS BAND MICROPHONE**



**GENERAL**

The Shure Model CB41 LONG RANGER base station microphone is designed especially for use with Citizens Band transceivers. For clearer transmission and improved reliability, this sturdy dual-impedance microphone can be used to replace ceramic or dynamic microphones supplied as original equipment.

Model CB41 provides crisp, undistorted voice response of high intelligibility and high output. Easy impedance selection at the end of the coiled cable makes the microphone suitable for connection to either high-impedance or low-impedance (ceramic or dynamic) inputs.

Height adjustment for maximum user comfort, a momentary or locking press-to-talk transmit-receive switch for greatest ease of use, and a selector switch for either grounded or isolated transceiver switching (no internal microphone wiring change required) make the Model CB41 the choice for unparalleled versatility.

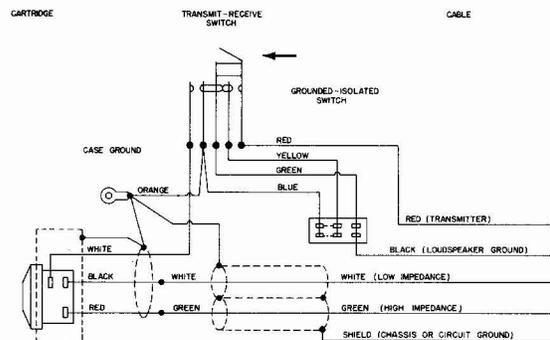
The microphone is not affected by heat or humidity. Its exclusive ARMO-DUR® case is immune to oil, grease, fumes, salt spray, sun, rust, and corrosion—and is outstanding in its ability to resist mechanical shocks and vibration. The "Million-Cycle" leaf-type switch is designed to withstand rigorous operating 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
- Adjustable height for maximum comfort
- Momentary or locking press-to-talk transmit-receive switch
- Selector switch for either grounded or isolated transceiver switching—no internal wiring change required
- Unequaled ruggedness and durability
- Tough ARMO-DUR case

**CONNECTIONS**

The internal connections of Model CB41 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 CB41 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 CB41 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. Turn the microphone upside down and check that the Grounded-Isolated switch in the base-plate is in the Grounded position.
2. Connect the RED lead to the terminal used to complete the transmitter circuit.
3. 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.
4. 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. Turn the microphone upside down and check that the Grounded-Isolated switch in the base-plate is in the Isolated position.
2. Connect the RED lead to the isolated switch contact terminal used to complete the transmitter circuit.
3. Connect the BLACK lead to the other isolated switch contact terminal used for power supply voltage.

4. 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 CB41 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 6,000 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)
Open Circuit Voltage** .....	-72.0 dB (.25 mV)	-53.0 dB (2.25 mV)
Power Level*** .....	-51.0 dB	

\*0 dB = 1 volt per 100 microbars  
\*\*0 dB = 1 volt per microbar  
\*\*\*0 dB = 1 milliwatt per 10 microbars

**Switches**

Transmit-Receive Switch: Press-to-talk, momentary or locking, leaf-type, to actuate microphone circuit and transceiver relay or switching circuit. Micro-

phone circuit normally open in either high or low impedance.

Grounded-Isolated Switch: Slide switch in microphone base. See section on Connections for function.

**Cable**

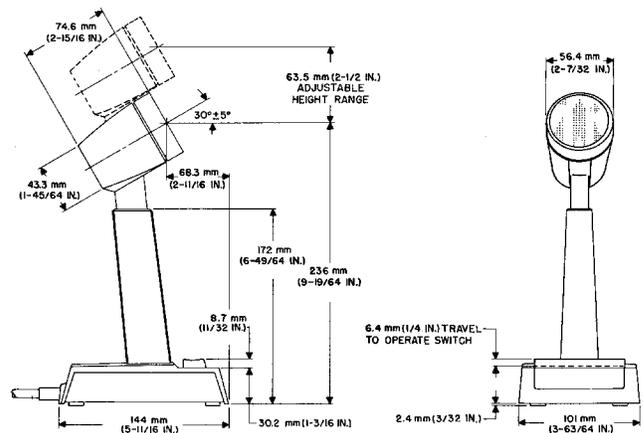
1.8m (6 ft) extended, four conductor, two conductors individually shielded, coiled cable

**Case**

Black ARMO-DUR®

**Dimensions**

See Figure 2



OVERALL DIMENSIONS  
**FIGURE 2**

**Net Weight**

680 grams (1½ lb)

**Packaged Weight**

964 grams (2¼ lb)

**REPLACEMENT PARTS**

Cartridge .....	R44D
Cable .....	70A4135
Screen and Grille Assembly .....	90E1060
Press-to-Talk Switch .....	90A1033
Base Plate and Switch Assembly .....	90A1864

**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.