

CONTROLLED MAGNETIC® COMMUNICATIONS HANDSET

GENERAL

The Shure Model TH100 Telephone Handset is specifically designed for Citizens Band, amateur, industrial, commercial, business, educational, and other radio communication applications such as safety, marine, forestry, etc. The handset is equipped with a hang-up cradle which contains a switch for certain control functions and is designed for panel mounting. The handset allows the operator to expand or upgrade his present equipment and to obtain a degree of privacy in his communication and two-way conversation.

Handset Features:

- Flexibility in switching and wiring, permitting:
 - Normal equipment loudspeaker operation with the handset in the cradle.
 - Automatic switching of loudspeaker signal to handset receiver when handset is lifted off the cradle.
 - Control of transmitter circuits with push-to-talk handset switch.
 - A sidetone in the handset receiver when talking or transmitting.
- CONTROLLED MAGNETIC® microphone and receiver cartridges providing crisp, natural voice response of high intelligibility.
- Double pole, leaf-type switches in both handset and cradle designed to stand up under severe operating conditions and constant usage.
- A sturdy, high impact ARMO-DUR® handset case and hang-up cradle.
- Dependability—under all operating conditions.

MOUNTING — HANG-UP CRADLE

The normal method of mounting the hang-up cradle is from the rear. Mounting holes and locations are shown in Figure 3. The mounting holes will take up to four No. 8 self-tapping screws. Figure 3 shows the side view profile. Two No. 6 fillister head machine screws are provided for front-mounting. Drill out center mounting holes from rear as indicated by dotted lines and counter-bore to recess screws.

CONNECTIONS

Internal switch and cable connections of the Model TH100 Handset and Hang-up Cradle are shown in Figure 4. Connections shown in Figures 5A, 5B, and 5C are the most commonly used general circuit arrangements for connecting the handset to various types of equipment. All circuits shown provide for the transfer of the loudspeaker signal to the handset receiver. For the type of transmitter that has no push-to-talk function, the handset can be connected as in Figure 5A except the RED wire is not used. This RED lead should be insulated with tape to prevent shorting. As in Figure 5A, the green lead is also not used.



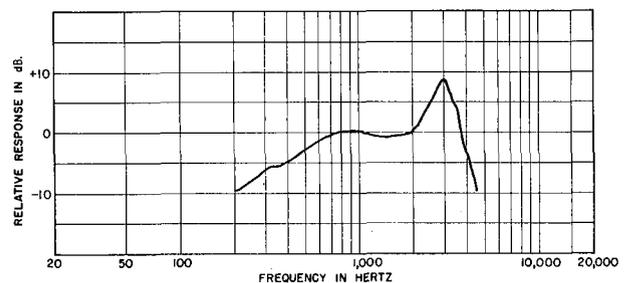
SPECIFICATIONS

Type

CONTROLLED MAGNETIC

Frequency Response

200 to 3,000 Hz (see Figure 1)



TYPICAL MICROPHONE FREQUENCY RESPONSE
FIGURE 1

Impedance

Microphone—High
 Receiver —125 ohms

Output Level (at 1,000 Hz)

Microphone

Open circuit voltage —13.5 dB* (.21 volt)
 *0 dB = 1 volt per 100 microbars

Receiver

Nominal output — 103.5 dB SPL†

†Measured in 6 c.c. closed coupler with 1 milliwatt constant available power.

Switch

Handset — Press-to-talk bar-type switch to operate transmitter circuit and external control circuit.

Cradle — Cradle-operated leaf switch to transfer speaker output to handset receiver and operate control circuit.

Cable

1.2m (4 ft) four-conductor, one shielded, plastic-jacketed coil cord on handset

1.2m (4 ft) four-conductor, one shielded, plastic-jacketed cable on hang-up cradle

Case

High impact, black ARMO-DUR®

Dimensions

See Figures 2 and 3

Net Weight

581 grams (1 lb, 4½ oz)

Packaged Weight

851 grams (1 lb, 14 oz)

REPLACEMENT PARTS

Microphone CartridgeR5D
Receiver CartridgeR1

GUARANTEE

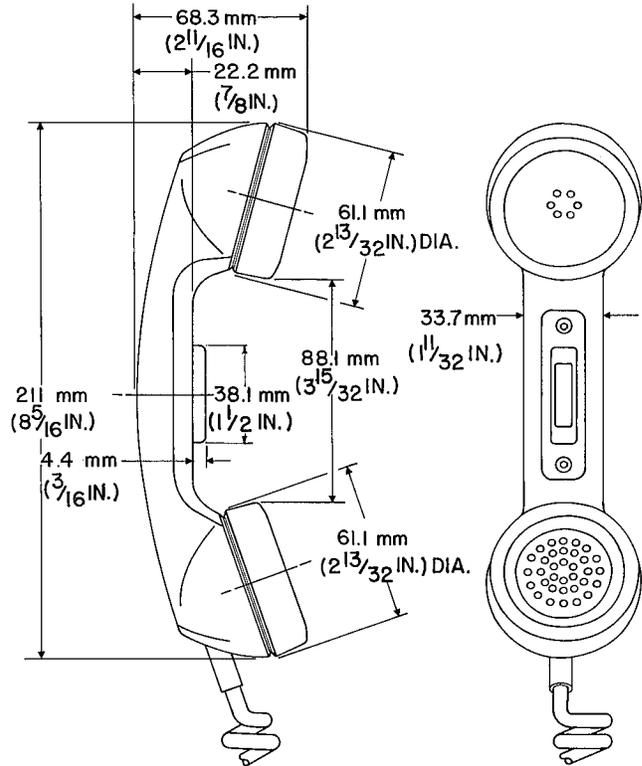
This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

SHIPPING INSTRUCTIONS

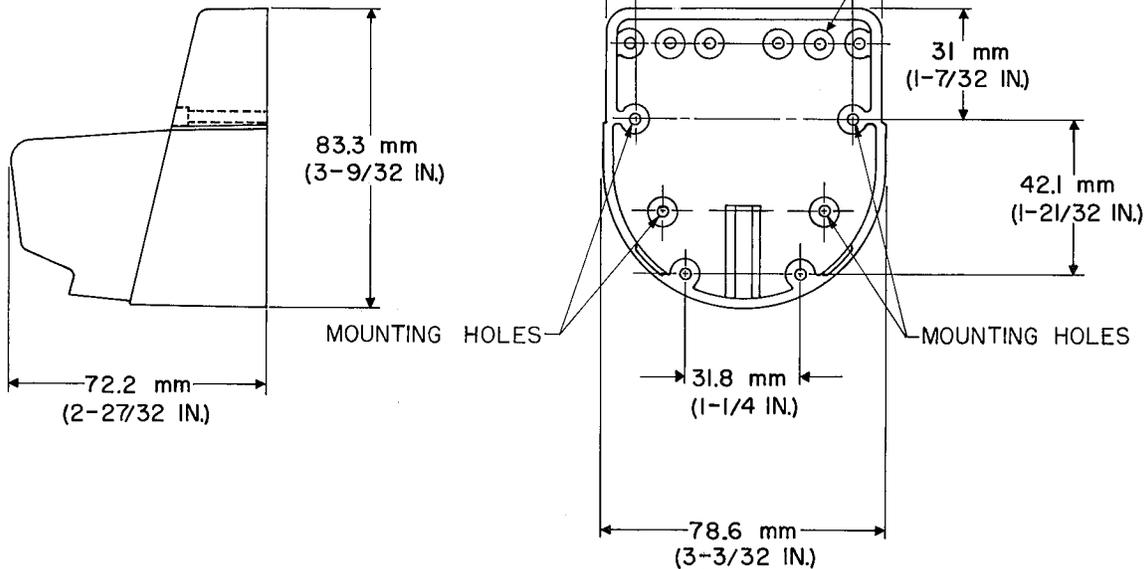
Carefully repack the unit and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
1501 West Shure Drive
Arlington Heights, Illinois 60004

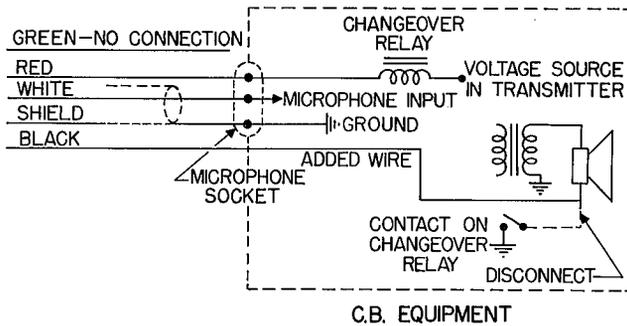
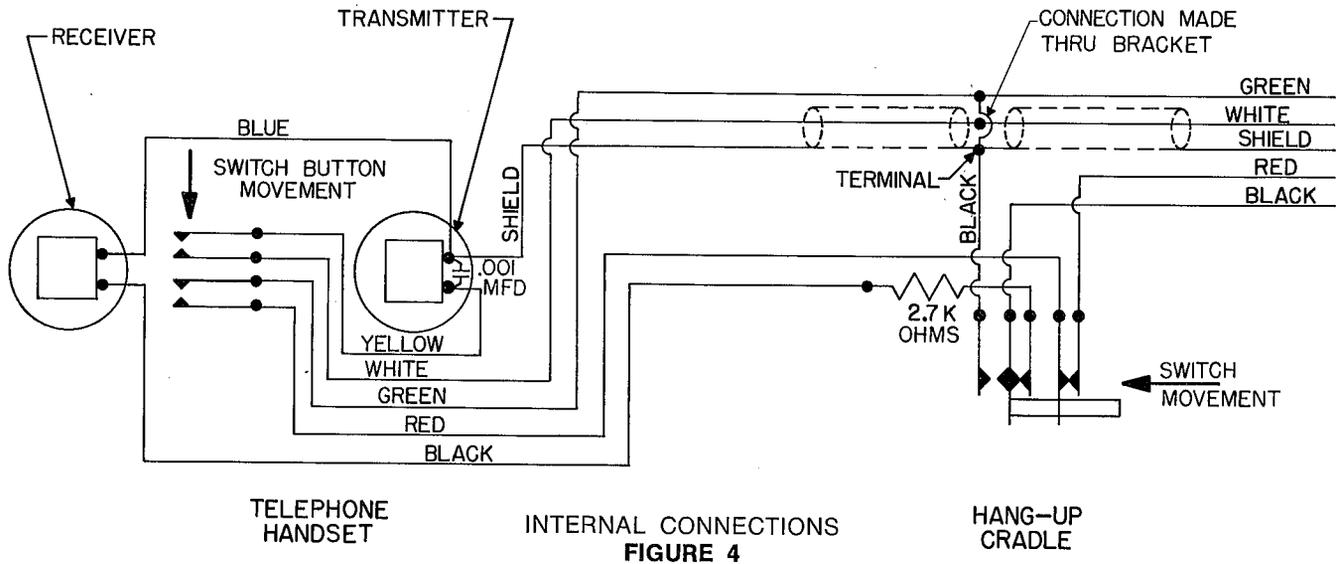
If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.



OVERALL DIMENSIONS
FIGURE 2



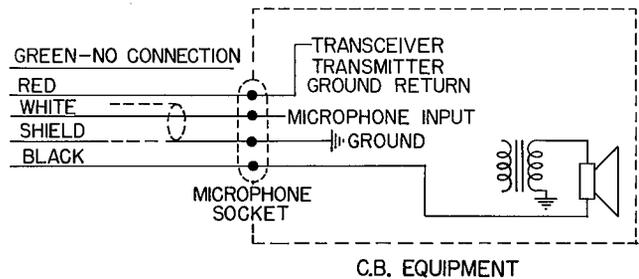
CRADLE OVERALL AND MOUNTING DIMENSIONS
FIGURE 3



GROUNDING RELAY CIRCUIT
FIGURE 5A

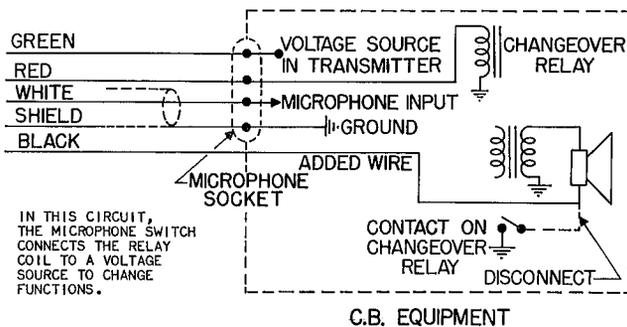
1. CONNECT THE SHIELD OF THE CABLE FROM THE HANG-UP CRADLE TO THE GROUND CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.
2. CONNECT THE WHITE WIRE TO THE MICROPHONE (HOT) SIGNAL INPUT ON THE MICROPHONE SOCKET.
3. CONNECT THE RED WIRE TO THE RELAY CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.
4. DISCONNECT THE GROUND RETURN WIRE OF THE SPEAKER, AND CONNECT THE WIRE FROM THE SPEAKER TO THE BLACK WIRE FROM THE HANG-UP CRADLE CABLE.
5. THE GREEN WIRE IS NOT USED.

1. AT THE REAR OF THE HANG-UP CRADLE ASSEMBLY, REMOVE THE GREEN LEADS FROM UNDER THE SCREW HOLDING THE METAL BRACKET. RETIGHTEN THIS SCREW SECURELY. RELOCATE THE GREEN LEADS ON BOSS INDICATED IN FIGURE 2 USING THE NO.5 SELF-TAPPING SCREW PROVIDED. THIS REMOVES THE GREEN LEADS FROM THE GROUND CONNECTION.
2. CONNECT THE SHIELD OF THE CABLE FROM THE HANG-UP CRADLE TO THE GROUND CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.
3. CONNECT THE WHITE WIRE TO THE MICROPHONE (HOT) SIGNAL INPUT ON THE MICROPHONE SOCKET.
4. CONNECT THE RED WIRE TO THE RELAY CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.
5. DISCONNECT THE GROUND RETURN WIRE OF THE SPEAKER, AND DISCONNECT THE WIRE FROM THE SPEAKER TO THE BLACK WIRE FROM THE HANG-UP CRADLE CABLE.
6. CONNECT THE GREEN WIRE FROM THE HANG-UP CRADLE TO THE OTHER RELAY CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.



DIRECT SWITCHING CIRCUIT
FIGURE 5C

1. CONNECT THE SHIELD OF THE CABLE FROM THE HANG-UP CRADLE TO THE GROUND CONNECTION ON THE TRANSMITTER MICROPHONE SOCKET.
2. CONNECT THE WHITE WIRE TO THE MICROPHONE (HOT) SIGNAL INPUT ON THE MICROPHONE SOCKET.
3. CONNECT THE RED WIRE TO THE TRANSMITTER GROUND RETURN ON THE TRANSMITTER MICROPHONE SOCKET.
4. CONNECT THE BLACK WIRE TO THE SPEAKER GROUND RETURN.
5. THE GREEN WIRE IS NOT USED.



UNGROUNDING RELAY CIRCUIT
FIGURE 5B

IN THIS CIRCUIT, THE MICROPHONE SWITCH CONNECTS THE RELAY COIL TO A VOLTAGE SOURCE TO CHANGE FUNCTIONS.

