

CONTROLLED MAGNETIC[®] HAND MICROPHONE**GENERAL**

The Shure 407B microphone is a high-quality, extremely reliable, hand-held CONTROLLED MAGNETIC[®] microphone designed for clear, crisp, natural voice response of high intelligibility. The microphone features professional design, small size, light weight, and modular construction, providing extreme dependability and exceptional ease of field service.

The modular construction of the 407B accounts for its tremendous ease of field serviceability. The cartridge, switch, and cable are of modular design which makes them replaceable in a matter of minutes if replacement is ever necessary.

The unit 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 withstand mechanical shocks and vibration. The “Million-Cycle” leaf-type switch is double-pole, single-throw, and designed to withstand severe operating conditions and constant usage.

Features:

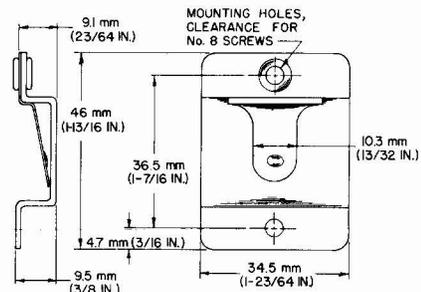
- Highly intelligible voice response
- Unparalleled ruggedness and reliability
- CONTROLLED MAGNETIC[®] element
- ARMO-DUR[®] case
- “Million-Cycle” leaf-type switch controlling microphone and external relay or switching circuits
- Modular construction
- Exceptional ease of field service
- Lifetime hang-up button and mounting bracket
- TRIPLE-FLEX[®] cable provides 3 to 4 times the flex life of other coiled cords

APPLICATIONS

The 407B microphone is highly recommended for all types of mobile communications; for hams; industrial and commercial paging; outdoor public address systems; and all applications where a rugged hand microphone is required. The 407B is a low-impedance microphone and is recommended where long cable lengths are required. The 407B is suited for use with transistor or vacuum tube amplifiers with low-impedance inputs.

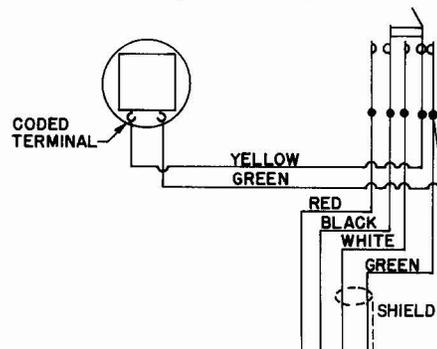
INSTALLATION AND CONNECTIONS

A mounting bracket for permanent installation is supplied with each microphone. (See Figure 1)

**MOUNTING BRACKET**
FIGURE 1

The internal switch connections of the 407B are shown in Figure 2.

The 407B is a low-impedance microphone with a four-conductor coiled-cord cable (two conductors shielded) and a double-pole, single-throw leaf-type switch to control the microphone circuit and an external relay or switching circuit. The WHITE and GREEN leads are the “hot” conductors for balanced-line connection to the microphone circuit; the shield is connected to the microphone circuit ground. The RED and BLACK leads control the relay or switching circuit. The microphone circuit of the switch is normally open but may be easily modified for normally shorted operation.

**INTERNAL CONNECTIONS**
FIGURE 2

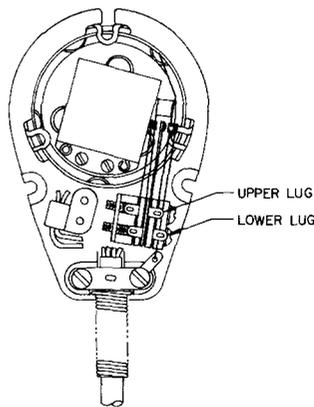
MICROPHONE CIRCUIT MODIFICATION

The microphone circuit of the 407B is normally open when the microphone switch button is in the normal position. The microphone switch of the 407B may be rewired to have a normally shorted microphone circuit. To modify the Model 407B for a normally shorted microphone circuit, proceed as follows:

1. Remove the three No. 6 Phillips self-threading screws from the back of the microphone case.
2. Separate the case front and back and remove the microphone switch button.
3. Unsolder or clip the WHITE cable lead from the upper switch solder lug. See Figures 2 and 3.
4. Solder the WHITE cable lead to the lower terminal lug (the lug with the YELLOW lead going to the microphone cartridge). See Figures 2 and 3.
5. Place the microphone switch button in the normal position on the case front. Place the case back on the case front and firmly press the cases together. Fasten the case back to the case front with the Phillips self-threading screws previously removed.

OPERATION

The 407B will operate satisfactorily under all ordinary conditions of humidity, heat, and cold. Dropping the microphones or other severe mechanical shocks should be avoided.

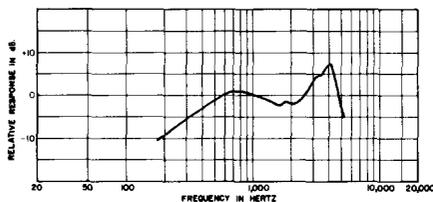


REAR VIEW OF CHASSIS (CASE REMOVED)
FIGURE 3

SPECIFICATIONS

Type
CONTROLLED MAGNETIC®

Frequency Response
300 to 4,000 Hz (see Figure 4)



TYPICAL FREQUENCY RESPONSE
FIGURE 4

Output Level (at 1,000 Hz)

Open Circuit Voltage* -33.0 dB (22 mV)
Power Level** -52.0 dB
*0 dB = 1 volt per 100 microbars
**0 dB = 1 milliwatt per 10 microbars

Impedance

Microphone rating impedance is 150 ohms (200 ohms actual)

Load Impedance Range

Minimum: 200 ohms
Recommended: 1000 ohms

Cable

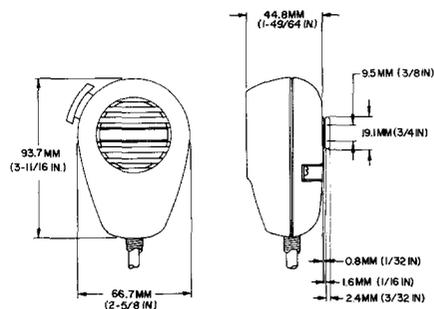
1.8m (6 ft), 4-conductor, 2-conductor shielded, attached, coiled cable

Case

Two-tone light gray and charcoal ARMO-DUR®

Dimensions

See Figure 5



OVERALL DIMENSIONS
FIGURE 5

Net Weight

312 grams (11 oz)

Packaged Weight

510 grams (1 lb, 2 oz)

FURNISHED ACCESSORY

Mounting Bracket (3 in kit) RK6MB

REPLACEMENT PARTS

Cartridge 99AL556
Cable 70A4107
Switch 90A3507