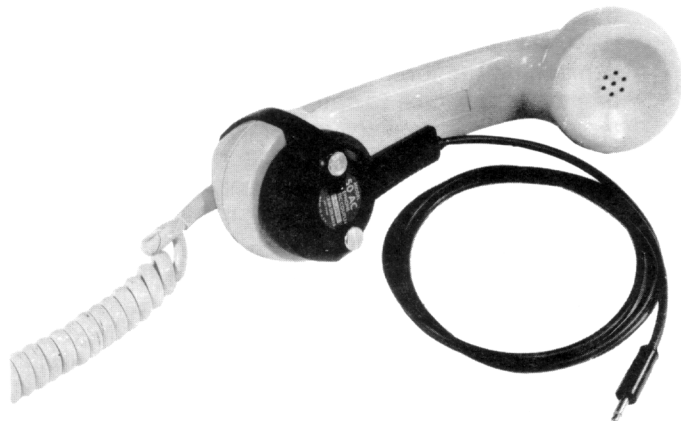


TELEPHONE ACOUSTIC COUPLER**DESCRIPTION**

The Shure Model 50AC Telephone Acoustic Coupler is designed to acoustically couple recorded information into a telephone transmitter. This is most useful in delayed broadcast applications where a tape recorder cannot be "hard-wired" into a telephone line. The Model 50AC also permits simultaneous or alternate voice conversation by the user. In this way, the user can comment or add supplemental material without interrupting the tape or removing the Model 50AC from the telephone transmitter. The Model 50AC may also be used in real-time broadcast applications using a Shure M267 or M67 Microphone Mixer (with a suitable cable adapter) or other mixers having a line level output. The Model 50AC may also be used as a tape recorder microphone; its frequency response approximates that of a telephone.

The Model 50AC is easily attached and removed from a telephone handset, and once attached, remains in position on the handset. In its normal operating position, the Model 50AC allows the recorded information to enter the telephone transmitter and attenuates external sounds.

The Model 50AC consists of a dynamic transducer cartridge in a small, lightweight molded rubber and plastic case which is attached to a 1.5m (5 ft) shielded cable. The cable contains a "mini-plug" connector for attachment to the earphone or external speaker output connector of most cassette tape recorders. A detachable molded rubber strap holds the Model 50AC in position on the telephone handset.

The Model 50AC is 84 mm (3-5/16 in.) in length, 27 mm (1-1/16 in.) in height, and 51 mm (2 in.) in diameter, and weighs 112 grams (3.95 oz).

Model 50AC Features:

- Ideal for voice transmission from remote locations where "hard wiring" to telephone lines is impractical or impossible
- Convenient, hands-free operation with most cassette tape recorders
- Provides for simultaneous or alternate normal conversation without removing coupler
- Reliable transmission in high noise environments
- Small and lightweight—easily carried—adds little bulk or weight to telephone handset
- Attaches quickly and easily to virtually any handset
- Ruggedly constructed of rubber and high-impact plastic
- Functions as tape recorder microphone with telephone-type response

SPECIFICATIONS**Transducer Type**

Dynamic

Frequency Response

300 to 3,000 Hz

Impedance

As Acoustic Coupler: Rated impedance at 1,000 Hz is 200 ohms (195 ohms actual) for connection to tape recorder outputs rated at 3.2 to 200 ohms

As Microphone: Rated impedance at 1,000 Hz is 150 ohms (195 ohms actual) for connection to tape recorder inputs rated at 150 to 10,000 ohms.

Output Level (at 1,000 Hz)

As Acoustic Coupler: 119 dB SPL at 1 V_{rms} into 6 cc cavity

As Microphone:

Open Circuit Voltage -73 dB (.22 mV)
(0 dB = 1 volt per microbar)

Power Level -52 dB
(0 dB = 1 milliwatt with 10 microbars)

Distortion

Less than 3% THD at 1,000 Hz with 10 V_{rms} input

Temperature Range

-40° to 74°C (-40° to 165°F)

Construction

Coupler: Neoprene rubber

Case: High-impact thermosetting plastic

Cable

1.5m (5 ft) single-conductor, shielded, plastic-jacketed with "mini-plug" miniature phone plug

Overall Dimensions

84 mm (3-5/16 in.) long x 27 mm (1-1/16 in.) high x 51 mm (2 in.) diameter

Weight

Net: 112 grams (3.95 oz)

Packaged: 200 grams (7 oz)

INSTALLATION

Install the Model 50AC as follows:

1. Place the Model 50AC over the telephone transmitter cup, coupler strap retaining post upward, and lever or "paddle" pointed towards the telephone receiver. Make sure the transmitter holes are covered.
2. Wrap the coupler strap around the telephone transmitter and attach the loose end to the unused retaining post on the Model 50AC.
3. Connect the Model 50AC mini-plug to the earphone or external speaker jack of the tape recorder. NOTE: Some cassette tape recorders will oscillate when used with the Model 50AC. The resulting high-pitched squeal is due to a circuit instability in the recorder, and can usually be eliminated by connecting a 10- to 22-ohm load resistor in parallel with the Model 50AC.
4. To use the Model 50AC in real-time applications with a microphone mixer or amplifier such as the Shure M267, M67, FP11, FP12, FP31 or FP32, install a suitable adapter between the Model 50AC mini-plug and the mixer line-level output. Connect the microphones to the mixer and set levels as desired. NOTE: With certain telephone handsets that do not have a circular transmitter cup, make sure that the Model 50AC covers the transmitter holes completely. Some unconventional handsets may not permit use of the coupling strap; with these units, the Model 50AC must be held in place during transmission.

OPERATION

Operate the Model 50AC as follows:

1. With the Model 50AC installed, dial the desired

number. Depress the lever on the Model 50AC to permit normal conversation.

2. When telephone contact is made and the tape is ready to play, release the lever and turn on the tape recorder. Adjust the tape recorder volume and tone controls until a desirable sound level is heard in the telephone receiver.
3. If conversation is desired at any time during transmission, depress the lever approximately 6 mm (1/4 inch) and speak normally. Bear in mind that depressing the lever during tape transmission also permits room noise to enter the telephone transmitter. Avoid unnecessary movement or handling of telephone handset when using the Model 50AC; handset movement can cause noise or change the volume level of the transmitted signal.
4. Telephone systems are equipped with limiters and clipping diodes to prevent crosstalk and overload. Carefully adjust the tape recorder or mixer volume control to provide sufficient volume for good intelligibility. Operation at a high volume level will cause distortion of the audio signal and should be avoided.

If the Model 50AC is being operated from a Shure M267 or M67 Microphone Mixer, the mixer output should be adjusted for an average VU meter indication of -10 with the VU range switch set to +4.

If the Model 50AC is to be used with a battery-powered, line-level condenser microphone such as the Shure SM82, wire the 50AC to a three-socket professional audio connector (conductor to pin 3, shield to pin 2, no connection to pin 1).

REPLACEMENT PART

Coupling Strap 36A424

WARNING

The Model 50AC is *not* intended for use as an ear-phone speaker (held close to the ear). Sound pressure levels produced by the 50AC may adversely affect the user's hearing if held close to the ear for prolonged periods.