



SHURE®

PROFESSIONAL ENTERTAINER MICROPHONES



**MODEL PE56D-CN
UNISPHERE® I**

Slips out of swivel stand
adapter, easily and quickly,
for hand-held use.

Your selection of a Shure UNISPHERE® Cardioid Microphone will contribute significantly to the professional quality of your performance. This ball-type microphone has a wire-mesh screen with a special filter which provides protection from wind, blast and "pop" (explosive breath sounds). This feature allows you to work as close to the microphone as you wish, either indoors or out-of-doors.

Another feature of your unidirectional microphone is that it effectively controls feedback (that very annoying loudspeaker "squeal") because it picks up sound only from the front of the microphone. Unwanted audience noise or other noises occurring at the rear of the microphone are eliminated or suppressed. This allows you to work at significantly greater distances from your microphone than with non-directional (omnidirectional) microphones, without picking up objectionable background sound or feedback.

*(See inside for information on how to use your
Shure Microphone more effectively.)*

HOW TO CONTROL FEEDBACK

A performer's number one enemy in using a microphone is "feedback." This is a harsh hum, howl or squeal which occurs when the microphone picks up sound from the loudspeakers, re-amplifies and rebroadcasts it over and over again.

The key factor in the prevention of feedback is the position of the loudspeakers in relation to the microphone. Feedback occurs if the microphone picks up sound coming from the loudspeakers. Keep the loudspeakers as far to the sides as possible—so they do not point toward the microphone. Always keep the microphone pointed toward the performer and away from the loudspeakers. When stage monitor loudspeakers are used, make sure they are positioned in front of the performers and face the rear of the microphone.

If you are in a room with hard walls, floor, and ceiling, the sound from the loudspeakers may bounce back into the microphone and create feedback. Solve this problem by turning down the amplifier volume control and working closer to the microphone.

(Important Note: If you cannot solve the feedback problem with your UNISPHERE® B microphone, a Shure Feedback Controller is suggested.)

BASIC POINTS FOR PROFESSIONAL MICROPHONE TECHNIQUE

Proper microphone technique will add to the overall effectiveness with which you project yourself to your audience. Keep the following points in mind when using the microphone:

1. Maintain the proper distance from the microphone. When you wish to achieve an intimate tonal quality, get closer to the microphone and lower your voice. For wide-open "driving" effects, raise your voice and back away from the microphone so that you do not overdrive your amplifier to distortion.
2. Don't change your distance from the microphone needlessly, as this will affect the level of sound coming from the loudspeakers.
3. Consider the microphone as an instrument and practice your technique to enhance your performance.

YOUR SHURE MICROPHONE IS BUILT TO LAST!

Your Shure Microphone is ruggedly built and should give you years of uninterrupted service; however, remember that it is a sensitive instrument. Avoid dropping the microphone, or subjecting it to unnecessarily rough treatment. Normal usage, of course, will not impair performance of the unit. Use the protective carrying case to prevent damage not only when traveling, but also when storing the microphone.

MICROPHONE CHECK-LIST

1. Check microphone impedance—is it correct for the amplifier input being used?
2. Check microphone cable connectors to microphone, mixer and amplifier—are they tightly plugged in?
3. Check microphone, amplifier and/or mixer.
 - a. Are they turned on?
 - b. Are volume controls turned up?

IF THE MICROPHONE DOES NOT WORK

Check the above list. If the microphone still does not appear to be operating, check it on a spare cable. If the microphone still does not appear to be operating, have the microphone and cable checked by your Shure Professional Entertainer Products Dealer, or write Service Department, Shure Brothers, Inc.

PHASING

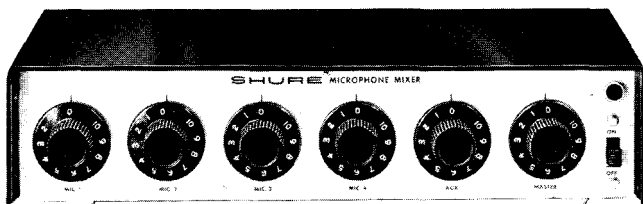
To test two microphones and/or their cables for proper phasing, connect them to an amplifier and talk or sing into them while holding them three or four inches apart. The sound from the speakers should be the same when talking into either microphone or directly between them if they are in phase with each other. If the sound drops drastically, or if a dead spot is found when talking between the two microphones, one of them or its cable (low impedance only) is out of phase. All cables and microphones should be tested in this manner to insure that they are in phase with each other.

To change the phase of a low-impedance microphone cable, either use a Shure A15PR Phase Reverser or interchange the wires connected to pins 2 and 3 of the connector. To change the phase of a microphone, the microphone cartridge leads must be interchanged (see Figure 2). This should be performed by your dealer, the Shure Factory Service Department, or other qualified service personnel.

IMPEDANCE

Your microphone as supplied is wired for low impedance for connection to low-impedance microphone inputs (rated at 19 to 300 ohms). To change microphone wiring for connection to high-impedance microphone inputs, remove male plug insert by turning slotted setscrew inward (counterclockwise). Disconnect the two-terminal impedance selection socket from the rear of the male insert, and reconnect the socket in reverse position so that pin 3 of the male insert is inserted in socket terminal "H".

NOTE: After following the above directions, the PE56D-CN with the supplied two-conductor C51CN cable will be suitable for connection directly to high-impedance inputs using three-pin professional audio connectors. For direct connection to $\frac{1}{4}$ in. phone jack inputs, replace the C51CN cable with the C5-X: 6.1m (20 ft) single-conductor shielded with three-pin professional audio connector (female) on microphone end and $\frac{1}{4}$ in. phone plug on equipment end.



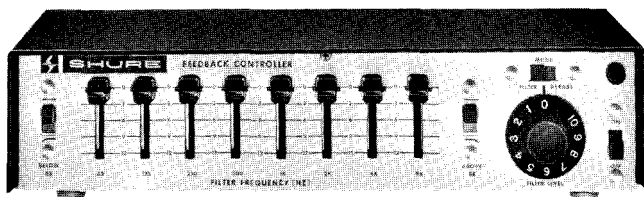
USING MORE THAN ONE MICROPHONE

It is often desirable for a group to use a separate microphone for each individual performer. In this case, the following points should be remembered:

1. It is best if the microphones are individually controlled for volume through a separate Shure microphone mixer. *If this is not possible, it is desirable that each performer use the same type and model of microphone so that the group as a whole will be "balanced."*
2. Check the placement of the microphones with relation to loudspeakers (as previously mentioned) so that feedback is minimized.
3. As additional microphones are added the possibility of feedback increases. Turn off, or down, unused microphones to help solve this problem.

SHURE FEEDBACK CONTROLLER

Lets you "tune" your sound system to the acoustics of the room. The result is more overall sound power *without* feedback. Eight linear-motion filter controls are infinitely variable from 0 to 12 dB cut. Below 63 Hz and Above 8 kHz roll-off switches attenuate low and high frequencies. Can be installed between mixer or console and amplifier for total system control, or following each microphone as a single-channel preamplifier with feedback control.





**THE VITAL LINK
BETWEEN YOU AND
THE AUDIENCE**

SHURE PROFESSIONAL ENTERTAINER
MICROPHONES

MODEL PE56D-CN SPECIFICATIONS

Type: Dynamic, Cardioid (Unidirectional)

Frequency Response: 50 to 15,000 Hz (see Figure 1)

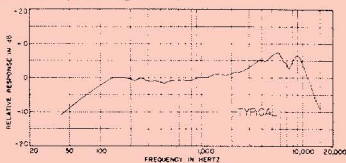


FIGURE 1

Impedance: Dual. Low: Microphone rating impedance is 150 ohms (285 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms.
High: Microphone impedance is "High" for connection to high-impedance microphone inputs.
Wired for low impedance as supplied (see Page 4.)

Output Level
(at 1,000 Hz):

	IMPEDANCE	
	Low	High
Open Circuit Voltage*	-77.0 dB (.141 mV)	-54.5 dB (1.89 mV)
Power Level**	-57.5 dB	

*0 dB = 1 volt per microbar

**0 dB = 1 milliwatt with 10 microbars

Phasing:

Low Impedance: Positive pressure on diaphragm produces positive voltage on Pin 2. (See Figure 2 and Page 4.)

High Impedance: Positive pressure on diaphragm produces positive voltage on Pin 1. (See Figure 2 and Page 4.)

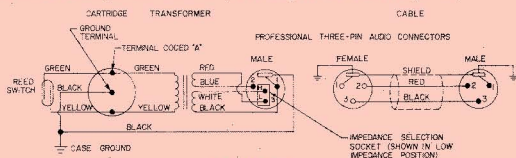


FIGURE 2

Switch:

Built-in magnetic reed switch with lockplate installed in unlocked position. To lock switch in On position, move to On position, loosen screw on lockplate, and turn lockplate 180°. Retighten screw.

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.

MODEL PE56D-CN SPECIFICATIONS (Continued)

- Connector:** Equipped with professional three-pin audio connector (male) designed to mate with furnished cable or Cannon XL series, Switchcraft A3 (O.G.) series or equivalent connectors.
- Shock Mount:** Internal rubber vibration-isolator
- Swivel Adapter:** Adjustable through 90° from vertical to horizontal, to fit 5/8"-27 stand thread
- Cable:** 7.6m (25 ft) two-conductor shielded, TRIPLE-FLEX®, detachable, with professional three-pin audio connectors (male and female)
- Net Weight:** 298 grams (10½ oz) less cable
- Packaged Weight:** 1.72 kilograms (3 lb 12½ oz)

FURNISHED ACCESSORIES

- Swivel Adapter:** A25B
- Carrying Case:** 90M1404

OPTIONAL ACCESSORIES

- Desk Stand:** Models S33B, S37A, S38B, S39A, S40A
- Disconnect Adapter:** Model A45
- Line Matching Transformer:** Model A95 Series
- Windscreen:** Model A61WS

REPLACEMENT PARTS

- Cartridge:** R65
- Cable:** C51CN
- Switch:** RK106S
- Grille Assembly:** RS65
- Plug Element:** RK40P
- Case Assembly:** RK150C

AREA CODE 312/866-2200

CABLE SHUREMICRO



SHURE BROTHERS INC.
222 HARTREY AVENUE
EVANSTON, ILLINOIS 60204
U.S.A.

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