

SHURE[®]

PROFESSIONAL ENTERTAINER MICROPHONES



MODEL PE50SP

Super-Pro[™]

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

Your selection of a Shure SUPER-PRO Cardioid Microphone will contribute significantly to the professional quality of your performance. This ball-type microphone has a super rugged steel 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, to reduce the pickup of unwanted sounds either indoors or out-of-doors.

Your microphone helps control feedback because it is uni-directional. Since it picks up sound only from the front of the microphone, audience noise and other unwanted sounds occurring at the rear or sides of the microphone are suppressed. This permits a greater working distance from the microphone with minimal background sound pickup. The PE50SP also features instant usage with low- or high-impedance microphone inputs using the line matching transformer supplied.

*(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 SUPER-PRO™ 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 is supplied wired for low impedance for connection to low-impedance microphone inputs (rated at 19 to 300 ohms). For instant change for connection to high-impedance ($\frac{1}{4}$ in. phone jack) microphone inputs, connect the supplied cable (or any number of additional C51CNs) to the low-impedance side of the furnished A95FP Line Matching Transformer and plug the high-impedance side ($\frac{1}{4}$ in. phone plug) into the input.

For internal impedance change, remove male plug insert by turning slotted setscrew inward (counterclockwise). Disconnect two-terminal impedance selection socket from rear of male insert, and reconnect socket in reverse position so that pin 3 of male insert is inserted in socket terminal "H". NOTE: After following the above directions, the PE50SP with the supplied two-conductor C51CN cable will be suitable for connection 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.



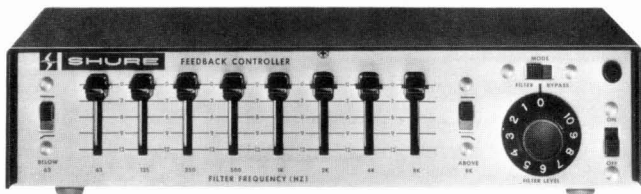
USING MORE THAN ONE MICROPHONE

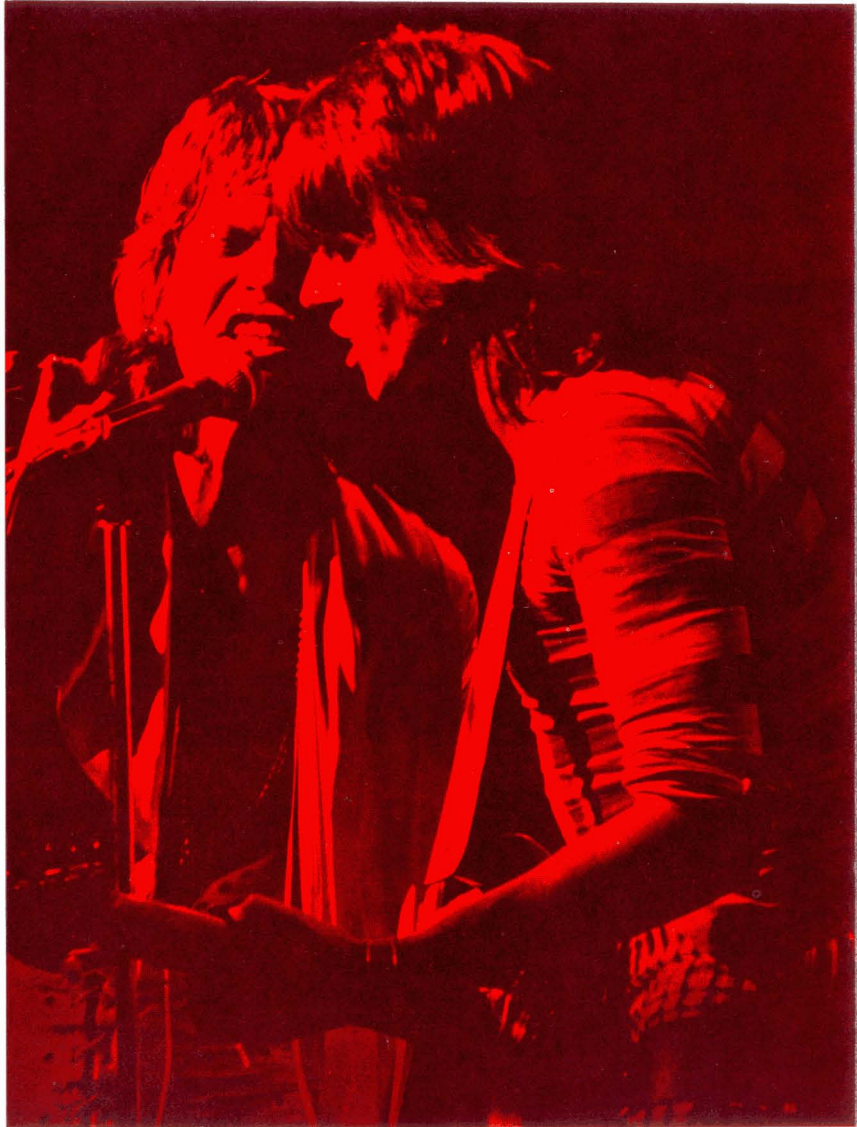
It is often desirable for a group to use a separate microphone for each individual performer. In this case, the following points should be remembered:

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 PE50SP SPECIFICATIONS

Type: Dynamic, Cardioid (Unidirectional)

Frequency

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

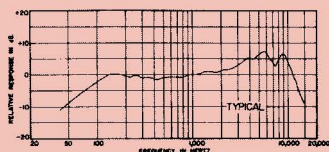


FIGURE 1

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. Instant conversion to high impedance with furnished Line Matching Transformer. (Internal impedance change instructions on 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 per 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.)

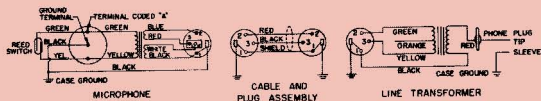


FIGURE 2

Switch:

Built-in magnetic reed On-Off 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 PE50SP SPECIFICATIONS (Continued)

Connector:	Equipped with professional three-pin audio connector (male) designed to mate with furnished cable or Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.
Shock Mount:	Internal rubber vibration-isolator
Swivel Adapter:	Adjustable through 90° from vertical to horizontal, to fit 5/8"-27 stand thread
Line Matching Transformer:	Provides instant conversion of 19 to 300 ohm microphone line to high-impedance. Equipped with professional three-pin audio connector (female) on low-impedance end and 1/4 in. phone plug on high-impedance end.
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:	1.8 kg (4 lb)

FURNISHED ACCESSORIES

Swivel Adapter:	A25B
Line Matching Transformer:	A95FP
Carrying Case:	90M1404

OPTIONAL ACCESSORIES

Desk Stand:	S33B, S37A, S38B, S39A, S40A
Disconnect Adapter:	A45
Windscreen:	A61WS

REPLACEMENT PARTS

Cartridge:	R65
Cable:	C51CN
Switch:	RK106S
Grille Assembly:	RK143G
Plug Element:	RK40P
Case Assembly:	RK168C

AREA CODE 312/866-2200

CABLE SHUREMICRO

SOUND OF THE PROFESSIONALS®



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