PROFESSIONAL ENTERTAINER  
MODEL PE9 UNIDIRECTIONAL  
DYNAMIC MICROPHONES

PE9H-C: High impedance, nondetachable  
1-conductor shielded cable and ¼"  
phone plug  
PE9L-CN: Low impedance, nondetachable  
2-conductor shielded cable and 3-pin  
professional connector  

The PE9 Series offers the features demanded by the professional entertainer.  
- Unidirectional (cardioid) pickup pattern minimizes feedback in live performance  
- Wide frequency response provides clean and natural reproduction of voice and instruments  
- Shock-mounted cartridge reduces handling noise  
- Lockable On-Off switch  
- Nonreflective dark gray finish for professional appearance on stage  
- Rugged, reliable, and backed by the Shure guarantee

SPECIFICATIONS

Type Dynamic  
Frequency Response 80 to 13,000 Hz (see Figure 1)  

Polar Pattern  
Cardioid (unidirectional) See Figure 2  

Impedance  
PE9H-C: High (greater than 30 kilohms)  
PE9L-CN: Low (150 ohms rating)  

Output Level (at 1,000 Hz)  
<table>
<thead>
<tr>
<th>PE9H-C</th>
<th>PE9L-CN</th>
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<tbody>
<tr>
<td>Open Circuit Voltage*</td>
<td>-59.0 dB</td>
</tr>
<tr>
<td>*0 dB = 1V/µbar</td>
<td>(1.1 mV)</td>
</tr>
<tr>
<td>Power Level**</td>
<td>-61.0 dB</td>
</tr>
<tr>
<td>**0 dB = 1 mW/10 µbar</td>
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</tbody>
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Phasing  
PE9H-C: Positive pressure on diaphragm produces positive voltage on sleeve of phone plug  
PE9L-CN: Positive pressure on diaphragm produces positive voltage on pin 2 of connector

Switch  
Built-in On-Off switch with lockplate. To lock switch On, remove screw and turn lockplate 180°. Reassemble and tighten screw.

Cable  
PE9H-C: 6.1m (20 ft) attached, 1-conductor shielded, with ¼-inch phone plug  
PE9L-CN: 6.1m (20 ft) attached, 2-conductor shielded, with 3-pin professional audio connector

Case  
Dark gray with black screen and black ARMO-DUR® grille

Cartridge Shock Mount  
Internal rubber vibration isolator

Net Weight (less cable) 312 grams (11 oz)

Swivel Adapter  
Positive action, adjustable from vertical to horizontal, for mounting on ½"—27 thread

FURNISHED ACCESSORIES  
Swivel Adapter ................. A25B  
Padded Gig Bag ................. 26A07

OPTIONAL ACCESSORIES  
Windscreen ..................... A1WS Series  
Floor Stand (Weighted base) .... MS-10C  
Floor Stand (Tripod base) ...... S15  
Baby Boom ..................... BB-44

REPLACEMENT PARTS  
Cartridge ...................... R15  
Screen and Grille .............. RK219G  
Switch ......................... RK57S
SHURE—QUALITY IS OUR FIRST CONSIDERATION

Congratulations on the purchase of your new Shure microphone. It will serve you faithfully even in the most difficult circumstances. Because more than 50 years of experience with microphones has taught us one thing: they are not always used under ideal conditions. Far from it! So Shure develops, designs, builds, and tests them for the worst conditions we can imagine.

We know they’ll be flung into equipment boxes after performances. We know they’ll be called upon to function at humidity levels near 100%. We know they’ll be left in the direct rays of the midday sun for hours, waiting for outdoor concerts to begin. Professional vocalists depend upon their microphones much as musicians depend upon their instruments, but many don’t hesitate to throw their Shure microphones across the stage and down on the floor — violently — as part of their performance. They never give it a second thought. They know that Shure microphones shrug off abuse that would make others fail.

The test for quality is the test for Shure. A unidirectional microphone aids in preventing feedback because it rejects sound that originates from the sides and rear. Sound picked up from the sides is reduced by about one half, and pickup from the rear is reduced by about nine tenths. You can demonstrate this reduction in pickup by repeating “Test one, two” or some other convenient phrase as you rotate the microphone from front to back.

Using unidirectional microphones close to the performer or instrument enhances that the direct sound will be much louder than the feedback-producing amplified sound. Because the amplifier gain can be turned up less to achieve the desired overall loudness, the amplified sound will likely remain below the volume that triggers feedback.

Other helps in preventing feedback are: keep the loudspeaker as far to the sides as possible; be sure that the microphones point toward the performers and away from the loudspeakers; and make certain that any stage monitor speakers are positioned in front of the performers and face the insensitive rear of the microphone.

Feeding the Shure Microphone

FEEDBACK AND UNIDIRECTIONAL MICROPHONES

A performer’s worst enemy in using a microphone is “feedback”. This is a harsh hum, howl, or squeal that occurs when the microphone picks up sound from the loudspeakers, reamplifies and rebroadcasts it over and over again. This vicious circle results in feedback.

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Proximity effect can be used to improve your sound.
1. With vocalists, it increases warmth, giving a fuller quality to the voice.
2. With instruments, it provides a flat or boosted bass output without tone controls, simply by changing the distance between source and microphone; and close miking provides natural isolation by minimizing bass pickup of other instruments.

Because of their usefulness in reducing the likelihood of feedback, unidirectional microphones are best in sound reinforcement and public address; while omnidirectional microphones are best in recording where feedback problems do not arise, or for close-miking instruments and amplifiers.

When unidirectional microphones are used close to a vocalist or musical instrument, there is an increase in bass (low-frequency) output called proximity effect. At a distance of about 6 mm (1/4 in.) a typical increase is shown on the curve below.

SHIPPING INSTRUCTIONS

Carefully repack the unit, have it insured, and return it prepaid to:
Shure Brothers Incorporated
Attention: Service Department
222 Hartrey Avenue
Evanston, Illinois 60202-3696

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.