

## RE90L

### Ultra-Miniature Condenser Lavalier Microphone

- Ultra-Miniature Size for Inconspicuous Attachment
- Light Weight
- Omnidirectional Polar Pattern Provides Clean Sound, and Uniform response
- Complete Assortment of Clips

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#### Description and Applications

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The Electro-Voice RE90L is an omnidirectional back-electret condenser lavalier microphone designed for the *Architectural Series Microphone* line. The RE90L is intended for sound reinforcement applications such as houses of worship, schools, or other venues where full-range, natural, well-balanced sound is required. The omnidirectional polar characteristics of the RE90L provide clean and accurate sonic quality and uniform output regardless of the microphone's position relative to the sound source.

The RE90L is designed to attach to the talker's clothing using the supplied clips. The electronics housing features a side clip to facilitate attachment to a belt or pocket. In addition, the extremely compact size of the RE90L is ideal for performance or house of worship applications where the microphone must remain as inconspicuous as possible to the viewing audience.

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#### Powering the RE90L

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The RE90L is powered by an external 9- to 52- volt phantom power supply. The electronics circuitry is wrapped with an insulated

copper foil for superior emi/rfi shielding. The module is enclosed in a high-strength polycarbonate resin housing to form a package that is very light-weight and extremely durable for outstanding reliability and long life.

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#### Operation

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To operate the RE90L use high-quality balanced cable with 3-pin XLR-type connectors to connect the electronics housing to the mixer input which is providing the phantom power. The connecting cable used should be standard two-conductor shielded type; the shield is used as ground return and must be properly connected to avoid electrical noise.

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#### Microphone Placement and Cord Looping

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Typical microphone placement is shown in the illustration. For best results, the RE90L should be positioned as close to the mouth as possible. *It is important to loop the cable as shown to eliminate cable rustling noise.*

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#### Windscreen

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Use the external windscreen to prevent wind and pop noise.

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#### Architects' and Engineer's Specifications

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The microphone shall be an ultra-miniature, back-electret condenser with an omnidirectional polar pattern. The microphone shall have a frequency response from 50 to 18,000 Hz. The product shall have a balanced output with a 100-Ohm nominal impedance. The open-circuit output voltage shall be 12.6 mV/pascal. The microphone capsule shall be black; the electronics housing made of black polycarbonate resin.

The microphone shall be permanently connected to its electronics module with a 1.8 m (6 ft) length of rugged, three conductor, shielded, miniature audio cable. The microphone shall be supplied with tie clasps and a storage pouch. The Electro-Voice RE90L is specified.

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#### Limited Warranty

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Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date

# RE90L Ultra-Miniature Condenser Lavalier Microphone

of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice Service or any of its authorized service representatives together with proof of purchase of the product in the form of a bill

of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice Service at 600 Cecil Street, Buchanan, MI 49107 (800/234-6831 or FAX 616/695-4743). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. **Electro-Voice Wired Microphones** are guaranteed against malfunction from any cause for two (2) years from the date of original purchase. In addition, the Limited Warranty for the acoustic system contained in these microphones shall apply for the life of the prod-

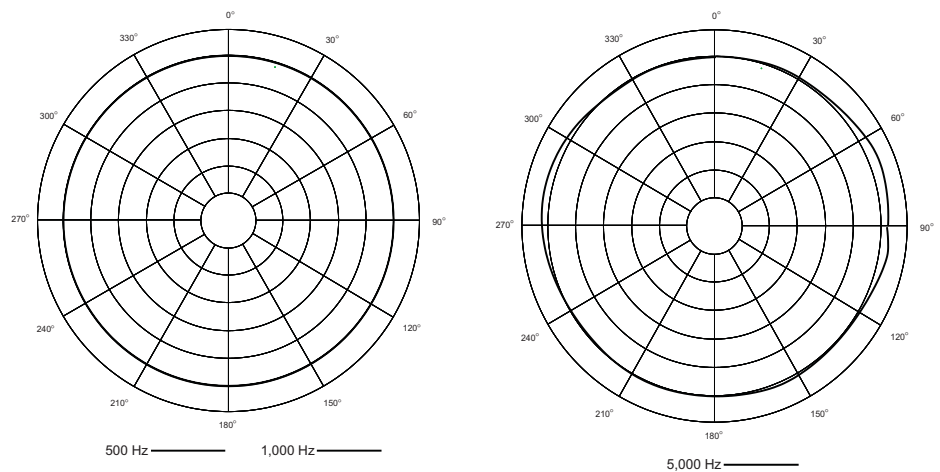
uct, defined as a period of ten (10) years from the date that the manufacture of the specific microphone has been discontinued. Any and all active electronics incorporated in these microphones are guaranteed against malfunction due to defects in materials or workmanship for a period of three (3) years from the date of original purchase. The Limited Warranty does not extend to cables, cable connectors, or switches. Additional details are included in the Uniform Limited Warranty statement.

**For warranty repair** or service information, contact the service repair department at: 616/695-6831 or 800/685-2606.

**For technical assistance,** contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Standard Time.

Specifications subject to change without notice.

Figure 1—Polars



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Figure 2—Frequency Response

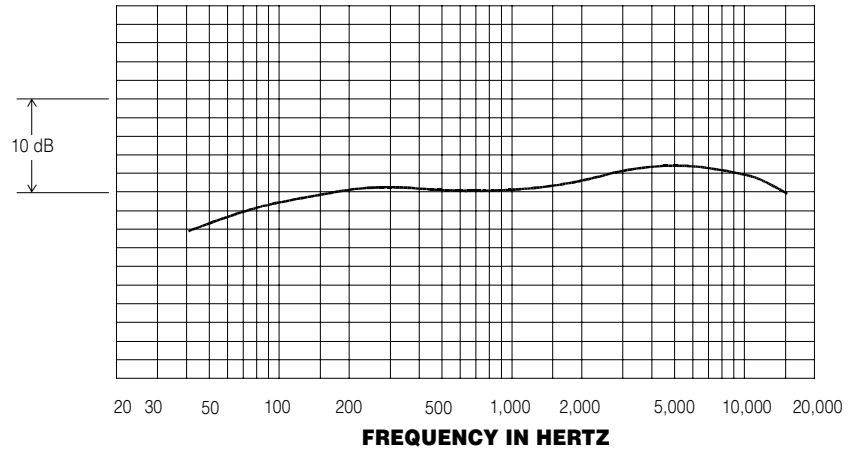


Figure 3—Looping the Cable to Eliminate Cable Rustling Noise

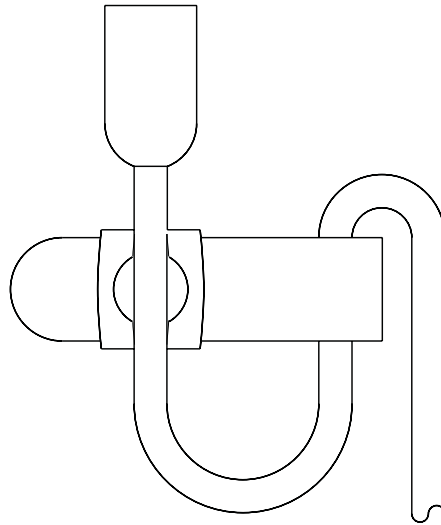
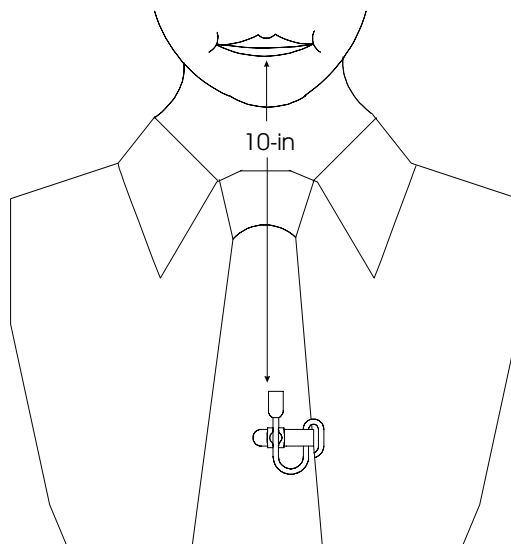


Figure 4—Microphone Placement



# RE90L Ultra-Miniature Condenser Lavalier Microphone

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## Specifications

### Generating Element:

Condenser, back electret

### Frequency Response:

50 to 18,000 Hz

### Polar Pattern:

Omnidirectional

### Sensitivity,

#### Open-Circuit Voltage:

12.6 mV/pascal

#### Power Level:

-34 dB at 1,000 Hz

(0 dB = 1 mW/pascal)

### Maximum SPL at 1% THD:

130 dB SPL

### Equivalent Noise:

Less than 29 dB SPL, typical, A weighted

(0 dB = 20 micropascals)

### Dynamic Range:

Greater than 100 dB

### Output Impedance at 1,000 Hz:

100 Ohms typical

### Power Requirements:

9 to 52 V dc phantom supply

### Current Consumption:

1.0 mA typical

### Polarity:

A positive pressure on the diaphragm produces a positive voltage on output pin 2 (+)

### Finish:

Nonreflecting black

### Dimensions:

#### Electronics Module,

##### Length:

93 mm (3.65 in.)

##### Body Diameter:

19 mm (0.75 in.)

### Capsule Diameter:

4.9 mm (0.19 in.)

### Cable Length:

1.8 m (6 ft), permanently attached

### Net Weight:

33.5 g (1.2 oz)

### Shipping Weight:

235 g (8.3 oz)

### Furnished Accessories:

External windscreen

Replacement Part Number: 73974

Universal tie clip

Replacement Part Number: 73972

Tie tac

Replacement Part Number: 73973

Zippered gig bag

Replacement Part Number: 73740

### Accessories:

Dual microphone clip

Order Part Number: 73975

# Electro-Voice®

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