



## RE20 Variable-D® Dynamic Cardioid Microphone

- Favorite of broadcast show hosts and voice-over studios
- Ideal for instrument recording, especially kick drums and acoustic guitars
- Studio condenser response yet no powering required and immune to overloading
- Large Acoustalloy diaphragm and low-mass aluminum voice coil
- Dual-ported, continuously Variable-D® with minimal proximity effect
- Steel case and hum-bucking coil provide exceptional magnetic shielding

### Description and Applications

The Electro-Voice RE20 is a professional-quality dynamic cardioid microphone created specially for recording, broadcast and sound-reinforcement applications requiring essentially flat response over a very wide frequency range. The wide frequency response, coupled with excellent transient response, make the RE20 easily comparable to the finest condenser cardioid microphones and an easily operated "bass tilt down" switch corrects spectrum balance for use in long-reach situations or other applications where bass attenuation is needed.

A true cardioid microphone, the RE20 offers greatest rejection at 180° off axis — directly to the rear of the microphone. Pattern control is so consistent that the frequency response is nearly independent of angular location of the sound source, creating virtually no off-axis coloration, yet providing greatest possible rejection of unwanted sounds.

An integral blast and wind filter covers each acoustic opening on the RE20. In recording sessions or on stage, singers can "close talk" the microphone, singing with their lips almost touching the grille screen with no worry

of "P-pops" or excessive sibilance. Part of the filter also shock mounts the internal microphone element, reducing the transfer of vibrations from external sources.

The exceptional performance of the RE20 is achieved by using a large Acoustalloy diaphragm in combination with an exceptionally low-mass aluminum voice coil. Using this diaphragm assembly, the RE20 is capable of reproducing extremely high sound pressure levels with no fear of the overload and distortion often experienced with phantom-powered condensers. The RE20 will also continue to function flawlessly in high humidity and elevated temperatures that would seriously degrade competitive condenser microphones.

A massive steel housing and effective hum-bucking coil assure the RE20's resistance to magnetically induced hum and noise. This means the RE20 can be used successfully in situations where other microphones would experience unacceptable levels of hum and buzz. By exploiting the strength of its steel housing and employing a mechanical nesting concept, EV designers have created an exceptionally rugged microphone with superior handling noise rejection ideally suited for professional uses.

The bass-boosting proximity effect common to most directional microphones when used close to the sound source, is eliminated in the RE20. This is accomplished via the application of the EV-exclusive Variable-D® technology. By controlling the effect of microphone proximity, the RE20 can be located very close to sound sources without a loss in clarity or definition making the RE20 ideal for tight vocals and challenging instruments. It can be used inside bass drums, on acoustic guitars, and is found in voice booths and broadcasting studios everywhere.

### Architects' and Engineers' Specifications

The microphone shall be a cardioid type with integral blast filter protecting all acoustic openings. The blast filter shall also serve as a shock mount for the internal microphone element. The microphone shall have a wide-range uniform frequency response from 45-18,000 Hz.

An integral passive network shall be provided so that when the filter switch is in the "on" position, low-frequency response shall tilt down 4.5 dB from 400-100 Hz. With switch in "off" position, microphone shall

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be essentially "flat" from 80-6,000 Hz, with a broad 2.5 dB rise in response from 6,000-14,000 Hz, and nominally down 3 dB at 18,000 Hz. Response below 80 Hz shall be nominally down 3 dB at 45 Hz. Output level shall be -57 dB (0 dB = 1 mW/Pascal). Nominal impedance of 150 ohms.

Response at any angular position away from the major axis shall be essentially similar to the response on the major axis, but attenuated uniformly at all frequencies by an amount appropriate to that angular position. Attenuation at frequencies from 45-10,000 Hz (refer to major axis signal value) shall exceed 15 dB at 180° from major axis in any plane. Attenuation above 10,000 Hz shall exceed 13 dB. Polar characteristics shall be sufficiently uniform in all planes so that it is, effectively, a cardioid of revolution.

There shall be a shield to prevent dust and iron particles from reaching the diaphragm. The case shall be made of steel. The microphone shall have a maximum diameter of 54.4 mm (2.14 in.), a body diameter of 49.2 mm (1.94 in.) and a length of 216.7 mm (8.53 in.). Finish shall be a nonreflecting fawn beige. A stand adapter shall be supplied. The Electro-Voice RE20 is specified.

## Uniform Limited Warranty

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 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 EVI Audio Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to EVI Audio 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 EVI Audio 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 per-

sons 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.

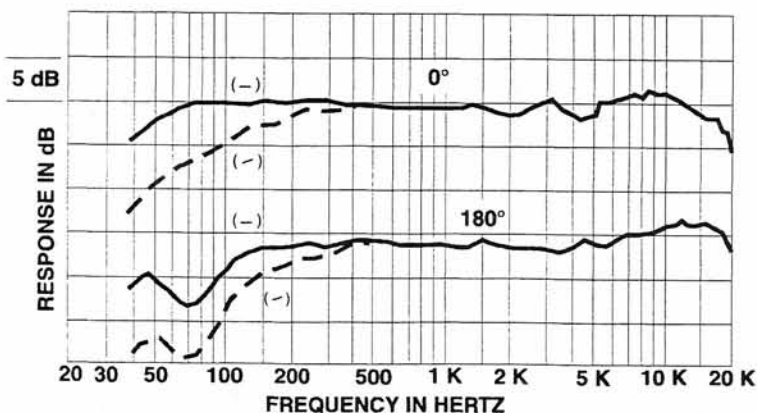
**Electro-Voice Wired Microphones** are guaranteed against malfunction from any cause for two (2) years from the date of original purchase. In addition, the Limited Warranty for the acoustic system contained in these microphones shall apply for the life of the product, defined as a period of ten (10) 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, service information, or a listing of the repair facilities nearest you, 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—Frequency Response



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Figure 2—Wiring Diagram

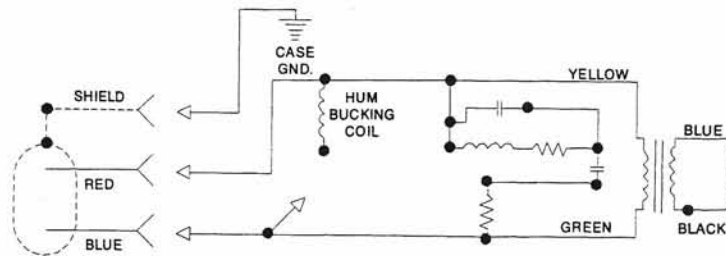


Figure 3—Dimensions

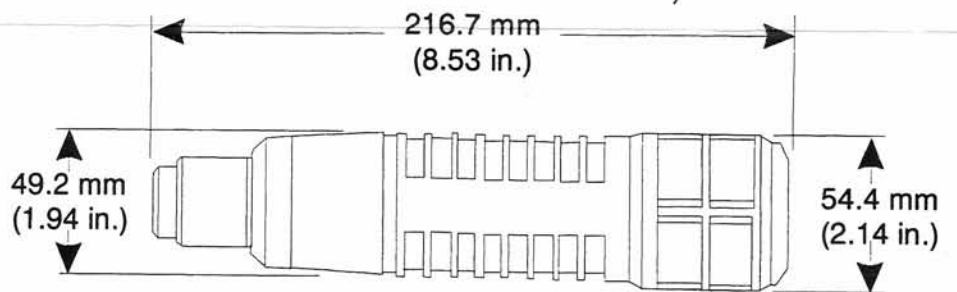


Figure 4—Disassembly

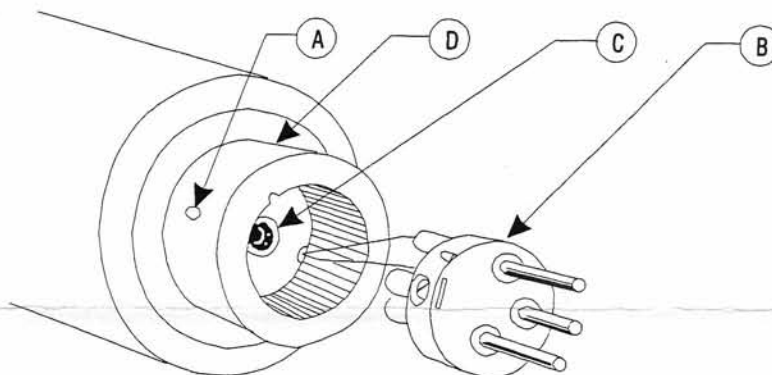
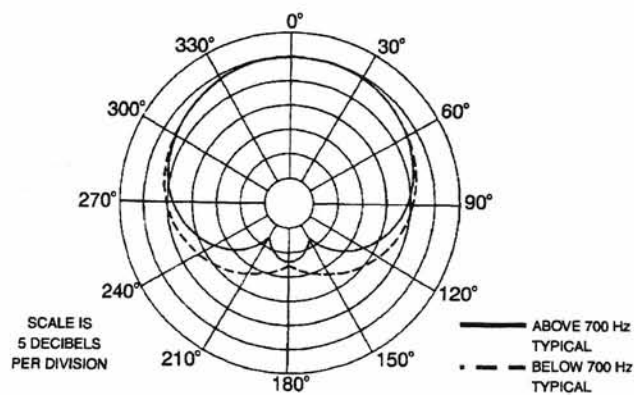


Figure 5—Polar Response



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## Specifications

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**Element:**

Dynamic

**Frequency Response**

45-18,000 Hz

**Polar Pattern:**

Cardioid

**Impedance:**

150 ohms

**Sensitivity,****Open Circuit Voltage:**

1.5 mV/Pascal at 1,000 Hz

**Power Level (0 dB = 1 mW/Pascal):**

-57 dB at 1,000 Hz

**Case Material:**

Steel

**Dimensions,****Length:**

216.7 mm (8.53 in.)

**Widest Diameter:**

54.4 mm (2.14 in.)

**Body Diameter:**

49.2 mm (1.94 in.)

**Finish:**

Fawn beige

**Net Weight:**

737 g (1 lb, 10 oz)

**Accessories Furnished:**

Stand adapter

**Optional Accessories:**

309 shock-mounted stand adapter for use with floor stand or recording boom

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# Electro-Voice<sup>®</sup>

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