



**Electro-Voice®**

a MARK IV company

# Model RE16

## Variable-D®

### Dynamic Super-Cardioid

### Microphone

#### SPECIFICATIONS

Element:  
Dynamic

Frequency Response:  
80-15,000 Hz

Polar Pattern:  
Super-cardioid

Impedance:  
Lo-Z (150 ohms nominal)

Output Level:  
-56 dB  
(0 dB = 1 mW/IO dynes/cm<sup>2</sup>)

EIA Sensitivity Rating:  
-150 dB

Hum Pickup Level:  
-125 dBm (re: .001 gauss field)

Diaphragm:  
Electro-Voice Acoustalloy

Case Material:  
Steel

Dimensions:  
187.3 mm (7.38 in.) long  
45.2 mm (1.78 in.) diameter  
19.1 mm (0.75 in.) shank diameter

Finish:  
Fawn beige micomatte

Net Weight:  
227 g (8 oz), not including cable

Cable:  
4.6 m (15 ft), two-conductor, shielded,  
broadcast-type cable, rubber-jacketed with  
Switchcraft A3F connector

Accessories Furnished:  
Model 310A stand adapter  
Zippered vinyl pouch

Optional Accessories:  
307 suspension shock mount  
312A stand adapter  
313A shock mount  
340 security clamp  
381 swdch/connecto assembly  
400, 422 or 423A desk stand

#### DESCRIPTION AND APPLICATIONS

The Electro-Voice Model RE16 is a Variable-D dynamic supercardioid microphone designed for the most exacting professional use. It is like the RE15, except that it uses a unique blast filter. The blast filter, an integral part of the RE16, permits hand-held and outdoor use without "P-popping" or excessive wind noise. Utilizing the Variable-D design the RE16 features a directional characteristic independent of frequency. The result is a microphone that generates little off-axis coloration while providing the greatest rejection of unwanted sounds. A super-cardioid, the RE16 provides its greatest rejection at 150° off axis. (Typical cardioids provide greatest rejection in the horizontal plane when the microphone is tilted in its most natural position -30° from horizontal (as on a boom or floor stand). An easily operated "bass-tilt" switch corrects spectrum balance for boom use and other longer reach situations.

A "hum-buck" coil and screw-machined steel outer casing provide 25 dB of hum rejection. Hum pickup level is -125 dBm (re: .001 gauss field).

Using the mechanical nesting concept of design, by means of which the internal transducer parts are nested one within

another, the RE16 transducer is a nearly solid mechanical structure that is highly resistant to damage from mechanical shock. The Memreflex grille screen resists deformation. The exclusive non-metallic Electro-Voice Acoustalloy diaphragm is virtually unaffected by extremes of atmospheric conditions. A carefully designed steel outer case provides additional mechanical protection. Finish is non-reflecting fawn beige micomatte.

#### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a Variable-D(TM) super-cardioid dynamic type with integral blast filter and with wide range response uniform from 80.15,000 Hz. Proximity effect shall be 10 dB less at 100 Hz than with comparable Single-D designs. Response at any angular position away from the major axis shall be essentially similar to the response on the major axis, attenuated uniformly at all frequencies by an amount appropriate to that angular position. Attenuation at frequencies from 100 to 4,000 Hz (referred to major axis signal value) shall exceed 25 dB at 150 deg. from major axis in any plane. Attenuation above 4,000 Hz shall exceed 20 dB. Attenuation at 180° from major axis at frequencies from 100 to 4,000 Hz shall exceed 15 dB. Attenuation above 4,000 Hz shall exceed 12 dB. Polar characteristics shall be sufficiently uniform in all planes so that it is, effectively, a super-cardioid of revolution.

A hum-buck coil shall be provided in series with the microphone element. Hum pickup level shall be -125 dBm (re: .001 gauss field). The hum-buck coil shall decrease hum pickup by at least 25 dB.

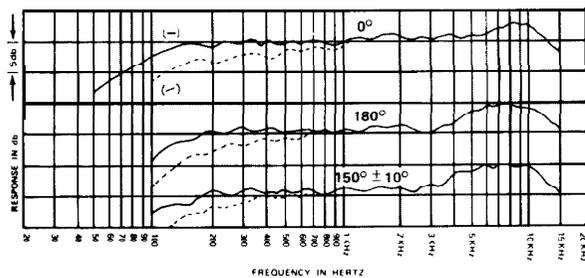


FIGURE 1 - Frequency Response

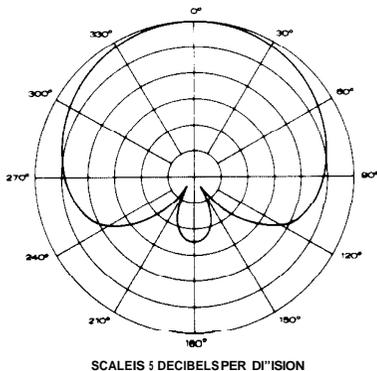


FIGURE 3 - Polar Response

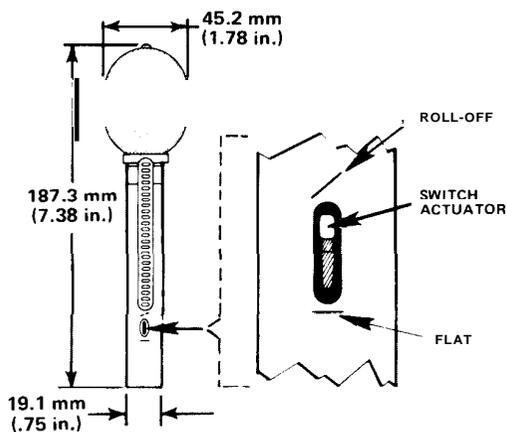
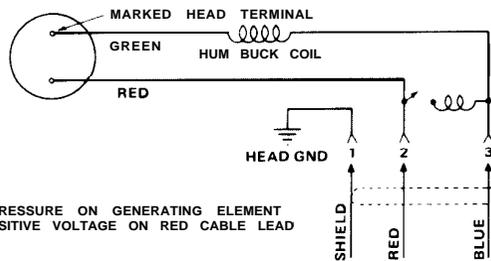


FIGURE 2 - Dimensions



POSITIVE PRESSURE ON GENERATING ELEMENT CAUSES POSITIVE VOLTAGE ON RED CABLE LEAD

FIGURE 4 - Wiring Diagram

An Integral passive filter network shall be provided such that when filter switch is in "on" position, low-frequency response shall be so deviated from "flat" response that a fall of 6 dB from 1,000 to 100 Hz shall be effected. With switch in "off" position, microphone shall be essentially "flat" from 100 to 1,500 Hz, with a 6 dB rise in response from 50 to 100 Hz, and a 2 dB rise occurring at 2,000 Hz extending to 12,000 Hz. Output level shall be -56 dB (0 dB = 1 mW/10 dynes/cm<sup>2</sup>), and EIA sensitivity rating shall be -150 dB. The diaphragm shall be non-metallic Acoustalloy and shall have a shield to prevent dust particles from reaching the diaphragm.

The case shall be made of steel. The microphone shall have a maximum diameter of 45.2 mm (1.78 in.), with 19.1 mm (.75 in.) diameter shank, and a maximum length of 187.3 mm (7.38 in.), not including cable connector. Finish shall be fawn beige mcomatte. A 4.6 m (15 ft), 2-conductor shielded, broadcast-type, rubber-jacketed cable with Switchcraft A3F connector installed shall be provided. The microphone shall have a built-in connector similar or equivalent to the Switchcraft A3M. A

Model 310A stand adapter and vinyl carrying pouch shall be supplied.

The Electro-Voice Model RE16 is specified

**WARRANTY (Limited)**

Electro-Voice Professional, PL& BK Series Microphones are guaranteed against malfunction from any cause for a period of two years from date of original purchase. Also, these microphones are guaranteed without time limit against malfunction in the acoustic system due to defects in workmanship and material. Any active electronics incorporated in the microphone are guaranteed for three years from date of original purchase for parts and labor against such malfunction. If such malfunction occurs, microphone will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not extend to finish, appearance items, cables, cable connectors, switches, or malfunction due to abuse or operation under other than specified conditions, nor does it extend to

Incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized warranty service agencies will void this guarantee. A list of authorized warranty service centers is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-6956831), or Electro-Voice West, 8234 Doe Avenue, Visalla, CA 93291 (AC/209-651-7777). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without notice.