RE16 DYNAMIC CARDIOID MICROPHONE

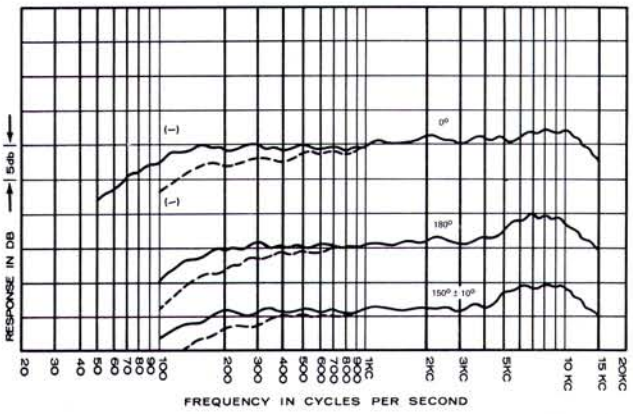

Figure 1 – Frequency Response

DESCRIPTION

The Electro-Voice Model RE16 is a dynamic cardioid microphone created especially for the most exacting professional use. It is much like the RE15 except that it uses a new and unique blast filter. The blast filter, an integral part of the RE16, makes possible hand-held use with lips almost touching the microphone and outdoor use without danger of "p-popping" or excessive wind noise. Emphasizing a major technological breakthrough, the RE16 features a degree of directional control so effective that frequency response is virtually independent of angular location of sound source. The result is a microphone that generates little or no off axis coloration, yet provides greatest possible rejection of unwanted sounds. A super cardioid, the RE16 provides its greatest rejection at 150° off axis. (Typical cardioids provide greatest rejection at 180°.) This assures 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 has been added (See Figure 4) to the RE16, in addition to its screw-machined steel outer casing, to insure rejection of hum under all conditions. When a dynamic microphone is subjected to extremely heavy magnetic fields caused by AC currents due to heavy stage lighting, proximity to power transformers, or due to many other conditions that can occur in remote operation, it has a tendency to pick up hum. The hum buck coil in the RE16 gives an additional 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 esclusive 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 nonreflecting fawn beige Micomatte.

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/10 dynes/cm²)
EIA Sensitivity Rating:	–150 db
Hum Pickup Level:	–125 dbm (re: .001 gauss field)
Diaphragm:	Electro-Voice Acoustalloy®
Case Material:	Steel
Dimensions:	7-3/8" long, 1-25/32" dia. (¾" shank diameter)
Finish:	Fawn beige Micomatte
Net Weight:	8 oz., not including cable
Cable:	18' 2-conductor shielded, broadcast type cable, synthetic rubber jacketed with Switchcraft A3F connector
Accessories Furnished:	Protective metal carrying case, Model 310A stand adapter
Optional Accessories:	311A Snap-Out stand adapter Model 314 windscreen Model 307 suspension mount Model 421 or 422 desk stand

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a super cardioid type with integral blast filter. It shall have a wide-range uniform frequency response from 80 to 15,000 Hz. 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° 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 characteristic 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.

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 1000 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^2), and EIA sensitivity rating shall be −150 db. The diaphragm shall be non-metallic Acoustalloy and shall have a magnetic 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 1-25/32 inches (with ¾-inch diameter shank) and a maximum length of 7-3/8-inches not including cable connector. Finish shall be fawn beige Micomatte. An 18-foot, 2-conductor shielded, broadcast type, synthetic 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 metal carrying case shall be supplied.

The Electro-Voice Model RE16 is specified.

WARRANTY

The Model RE16 is guaranteed unconditionally against malfunction for two years from date of purchase. Within this period, Electro-Voice will repair or replace, at no charge, any RE16 exhibiting any malfunction regardless of cause, including accidental abuse. In addition, the RE16 is guaranteed for life against defects in original workmanship and materials.

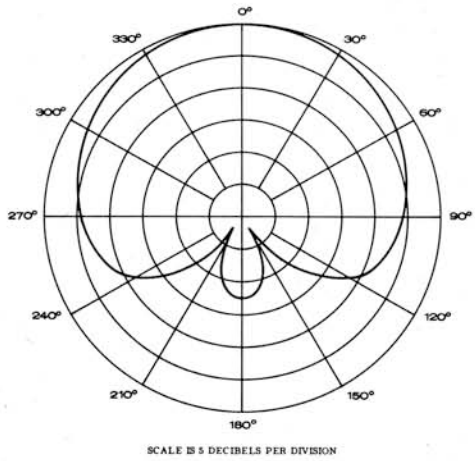

Figure 3 – Polar Response

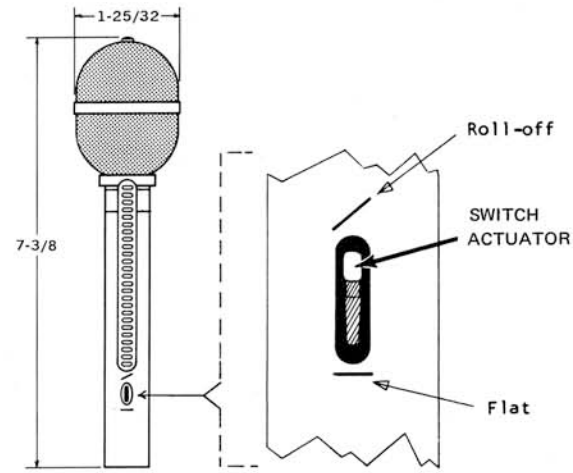

Figure 2 – Dimensions

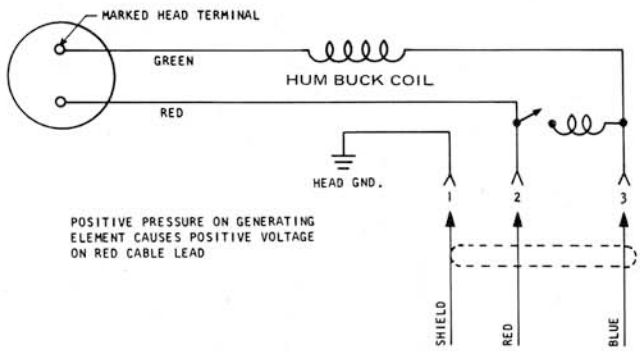

Figure 4 – Wiring Diagram