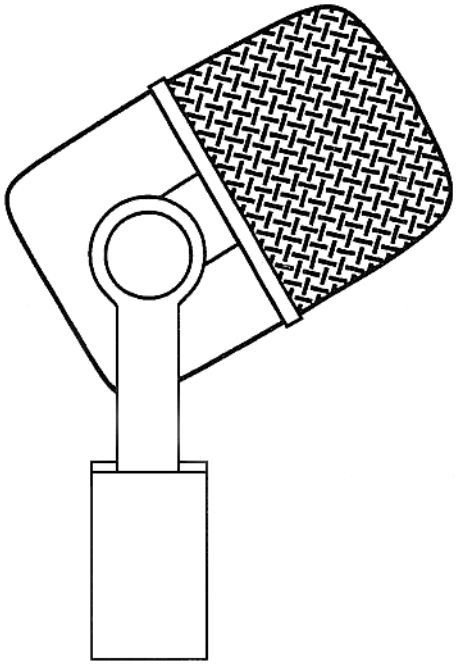
Electro-Voice®



RE38N/D

Dynamic Cardioid Microphone

- Exclusive 16-position equalization switch
- Flexible yoke for optimum positioning
- Large diaphragm for extended frequency response
- High sensitivity Neodymium® N/DYM® element

Description

The Electro-Voice Model RE38N/D is a professional quality dynamic cardioid microphone designed especially for recording, broadcast and sound reinforcement applications requiring smooth tailorable response over a wide frequency range. The extended high frequency response and the 16-position equalization switch give the RE38N/D great flexibility in obtaining the appropriate sound for any situation. For those applications that require a deeper sound, the microphone has bass-boosting "proximity effect" when used up close. The amount of this "proximity effect" can be reduced by adjusting the equalization switch as shown on the frequency response curves. The "brightness" of the high frequency response is also adjustable with the equalization switch.

The RE38N/D incorporates a revolutionary neodymium alloy magnet to provide high sensitivity. Combined with the inherent low noise of a dynamic transducer, the high sensitivity ensures a superior signal-to-noise ratio ready for digital recording and sampling. To further reduce noise, the microphone uses a humbucking coil to attenuate from lighting and other sources. The RE38N/D utilizes DynaDamp™, an advanced vibration-isolation material, so that a large external shockmount is not required for studio use. DynaDamp™ is a unique foamed elastomer, specially formulated for vibration control.

The dynamic element of the RE38N/D provides reliable operation in humidity and temperature extremes. An Acoustifoam™ pop filter reduces both wind noise and "P-pop" breath sounds. The microphone features a rugged machined aluminum case and Memraflex™ grille screen designed to withstand all the rigors of professional use.

To solve the problem of microphone placement the RE38N/D features a pivoting yoke configuration. With the unique pivoting yoke, the microphone can be easily adjusted to position the front toward the sound source. The yoke positions are detented to assure the microphone doesn't shift during usage. This adjustment option in combination with the stand adapter provides a highly flexible mounting system.

The cardioid polar pattern of the RE38N/D provides excellent isolation at all frequencies. The directional control is smooth in transition from front to back to keep off-axis coloration to a minimum.

Using the Equalization Adjustments

The graphic pictorials on the RE38N/D nameplate provide an approximation of the 16 possible far-field (distant) frequency responses which may be selected. This flexibility allows the user to obtain a desired sound character in almost any situation right at the microphone. There are eight low frequency tailoring combinations and two high frequency combinations to yield a total of 16 possible frequency responses built into the RE38N/D. With these options, the user can compensate for proximity effect, low frequency noise and sibilance to get that "right sound." The control is easy to adjust with a small screwdriver (provided) yet cannot be accidentally changed during use.

Experimentation is encouraged with the equalization positions to get the performance best for your application. To aid in determining the frequency response which is right for your application, the typical responses for the positions are shown in Figures 1 through 16.

Switch position 1 yields the flattest frequency response of all the positions to give a clean, uncolored representation of the input sound for signals in the far field.

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The far field response shown is the output when the sound source is at least 24 inches from the microphone grille. The low frequency response increases due to "proximity effect" when the sound source is less than 24 inches from the microphone. This low frequency response will continue to increase as the sound source moves closer to the microphone. The amount of "proximity effect" in the output of the microphone can be controlled by placing the microphone at different distances from the sound source and with the equalization choices provided in the RE38N/D. Positions 9 through 16 have the same low frequency shape as the respective positions 1 through 8, the difference being that high end response is "bright" in positions 9 through 16.

Architects' and Engineers' Specifications

The microphone shall be a dynamic cardioid type with a wide uniform frequency response from 70 to 20,000 Hz. The microphone shall have bass-boosting "proximity effect" when used up close and an easy to adjust equalization switch permitting the selection of 16 different frequency response adjustments.

The open circuit voltage sensitivity shall be 2.5 mV/Pascal at 1000 Hz and the power level sensitivity shall be –53 dB at 1000 Hz where 0 dB equals 1 mW/Pascal. The magnetic circuit shall be a nonwelded circuit and employ a neodymium alloy magnet. The transducer shall employ a hum-buck coil with a resulting hum sensitivity of –135 dBm at 60 Hz in a 1 milli-œrsted field and a shield to prevent dust and iron particles from reaching the diaphragm. Rated impedance shall be 150 ohms. Line shall be balanced to ground and phased. Pin 2 shall have a positive voltage with reference to Pin 3 with positive pressure on the diaphragm.

The microphone shall be supplied with a Memraflex™ grille screen, pop filter and an exceptional shock isolation system using DynaDamp™, an advanced foam elastomer formulated for vibration control. Response at any angular position away from the major axis shall be essentially similar to the response on the major axis, except attenuated uniformly at all frequencies by an amount appropriate to that angular position. Polar characteristics shall be sufficiently uniform in all planes so that it is, effectively, a cardioid of revolution.

Case material shall be aluminum and steel. The microphone shall have a unique pivoting yoke, detented to hold a set position, and a stand adapter, to provide a highly flexible mounting system. The microphone shall have a maximum height of 122 mm (4.8 in.), length of 89 mm (3.5 in.), width of 109 mm (4.3 in.) and a net weight of 380 grams (13.4 oz). The finish shall be a non-reflecting satin nickel. The microphone shall have a built-in cable connector insert similar or equivalent to a Switchcraft QG3M. Accessories shall include an 81715 stand adapter, carrying case and 3/32 inch screwdriver.

The Electro-Voice RE38N/D is specified.

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 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 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 or Electro-Voice service information, contact the Service Repair Department at: 616/695-6831 or 800/685-2606.

For technical assistance, contact Electro-Voice 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.

RE38N/D Dynamic Cardioid Microphone

Figure 1—Switch Position 1

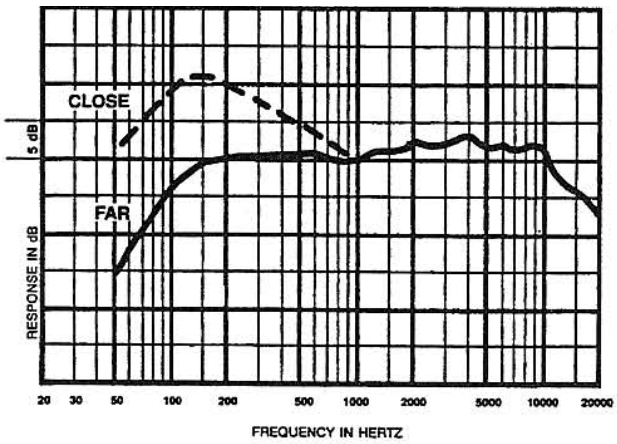


Figure 2—Switch Position 2

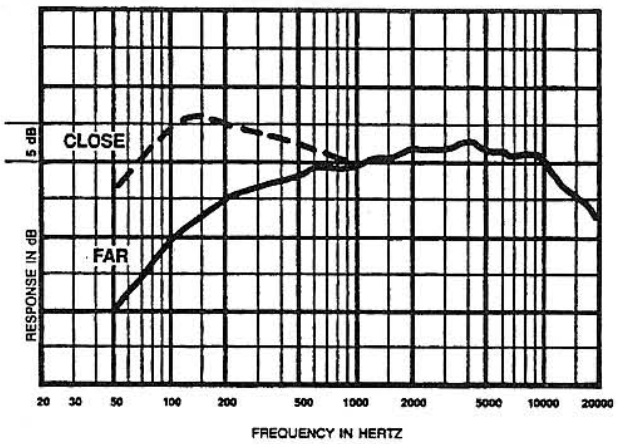


Figure 3—Switch Position 3

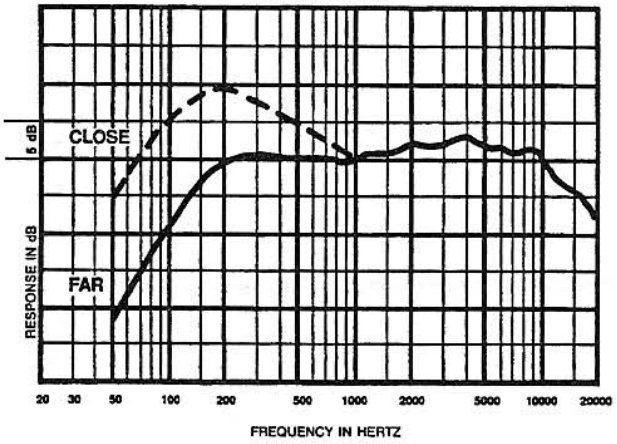


Figure 4—Switch Position 4

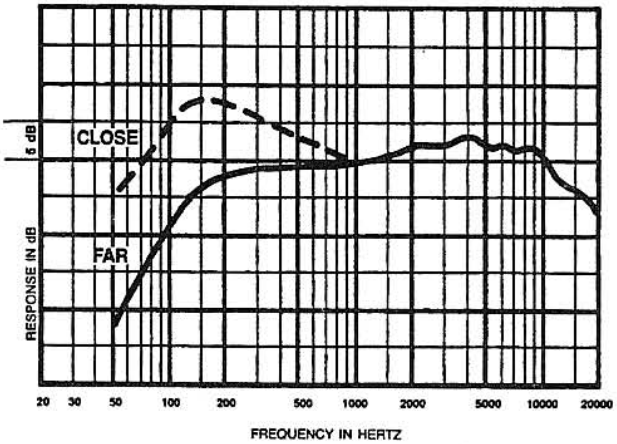


Figure 5—Switch Position 5

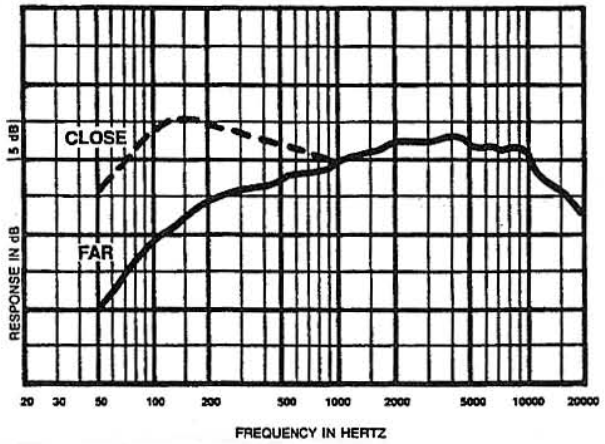


Figure 6—Switch Position 6

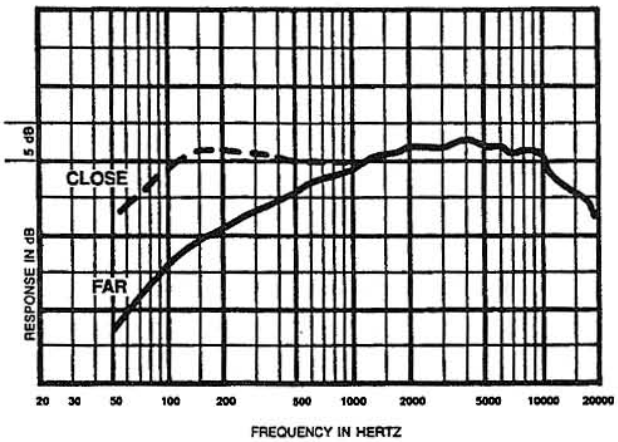


Figure 7—Switch Position 7

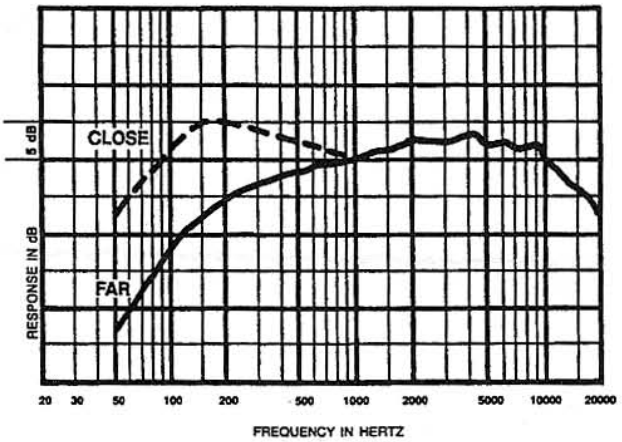


Figure 8—Switch Position 8

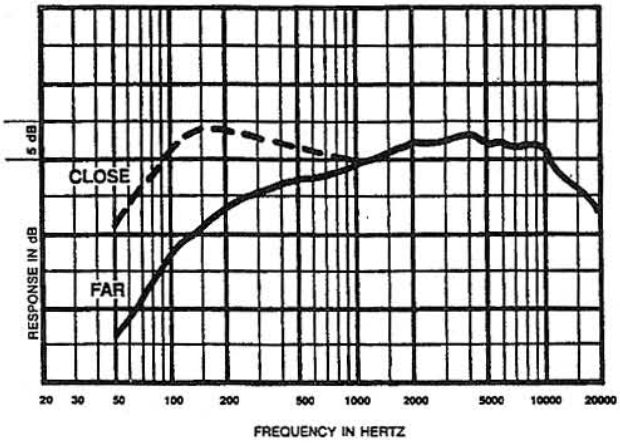


Figure 9—Switch Position 9

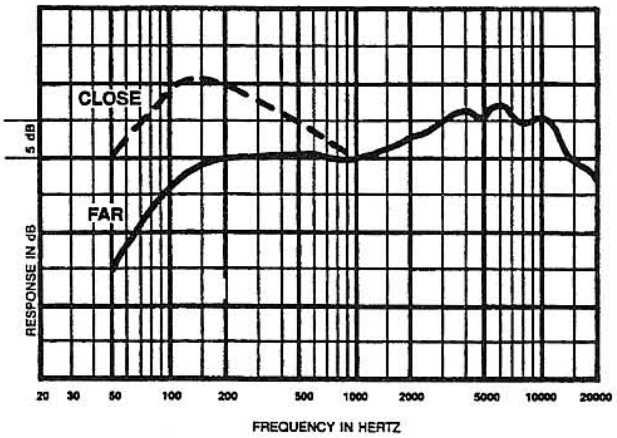


Figure 10—Switch Position 10

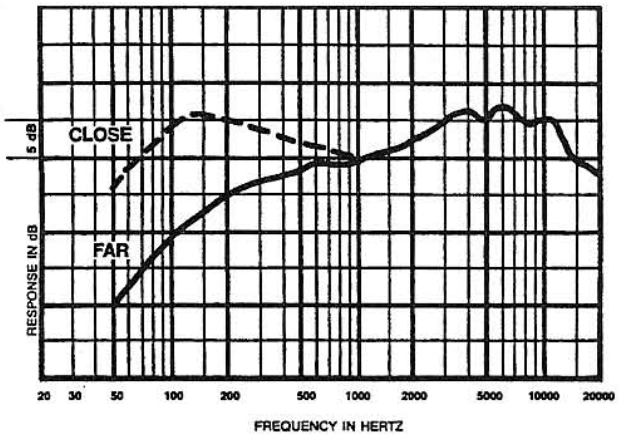


Figure 11—Switch Position 11

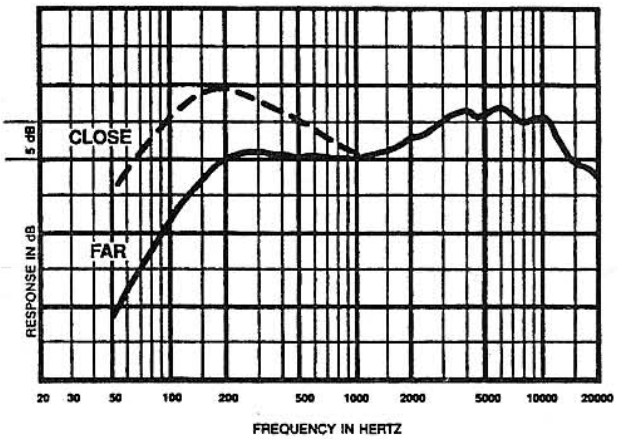


Figure 12—Switch Position 12

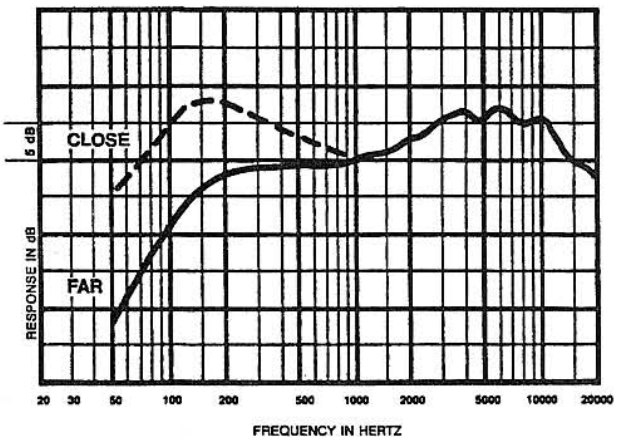


Figure 13—Switch Position 13

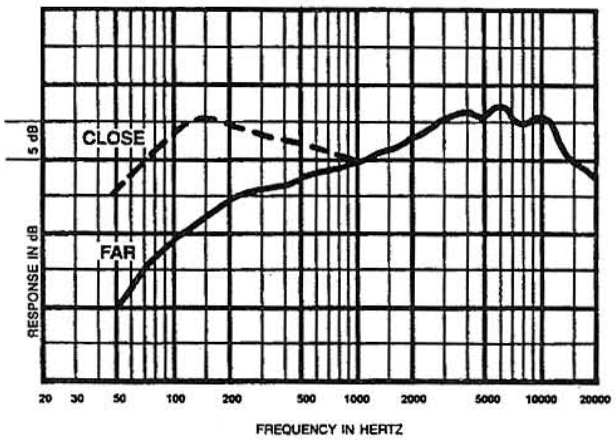


Figure 14—Switch Position 14

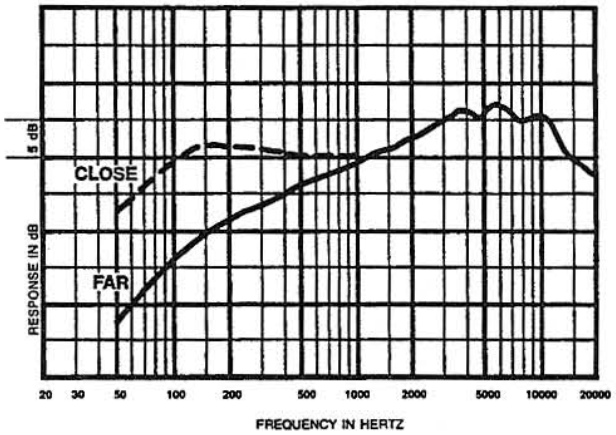


Figure 15—Switch Position 15

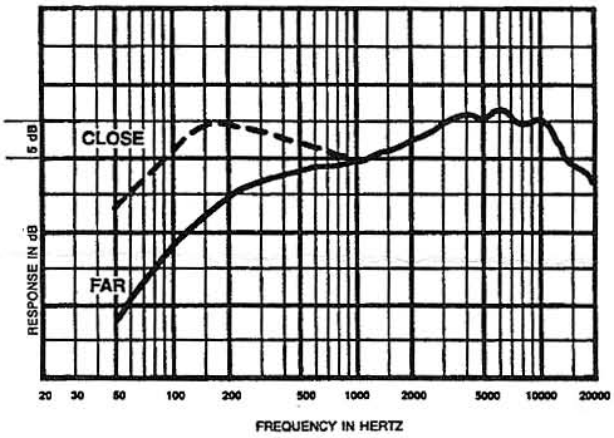


Figure 16—Switch Position 16

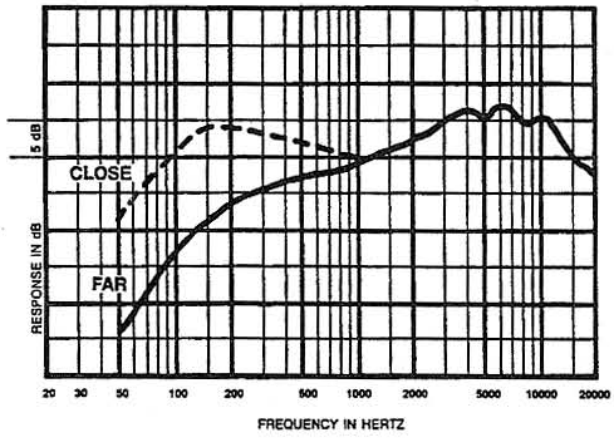


Figure 17—Polar Response at 250 Hz

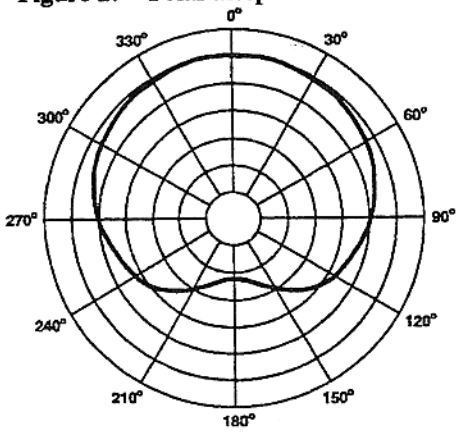
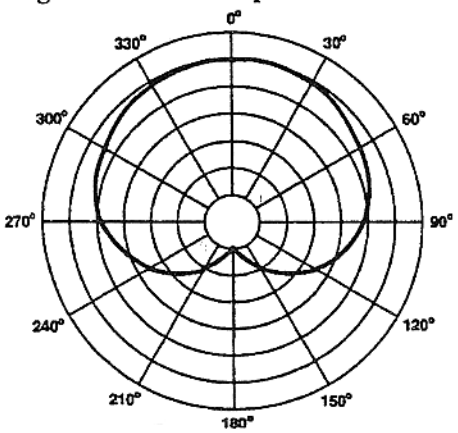


Figure 18—Polar Response at 1000 Hz



5 dB per division

Figure 19—Polar Response at 2000 Hz

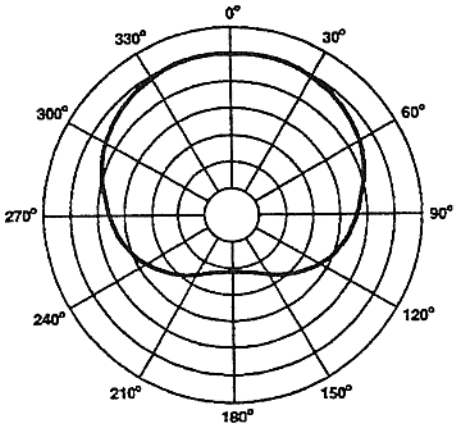


Figure 20—Polar Response at 5000 Hz

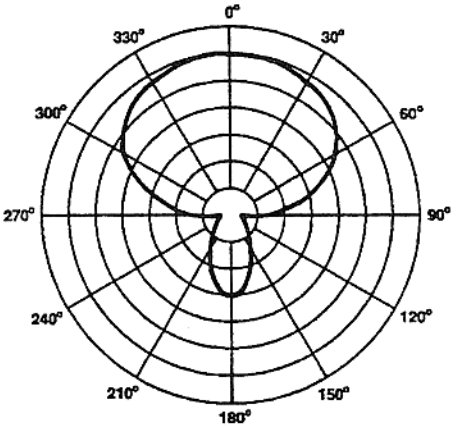
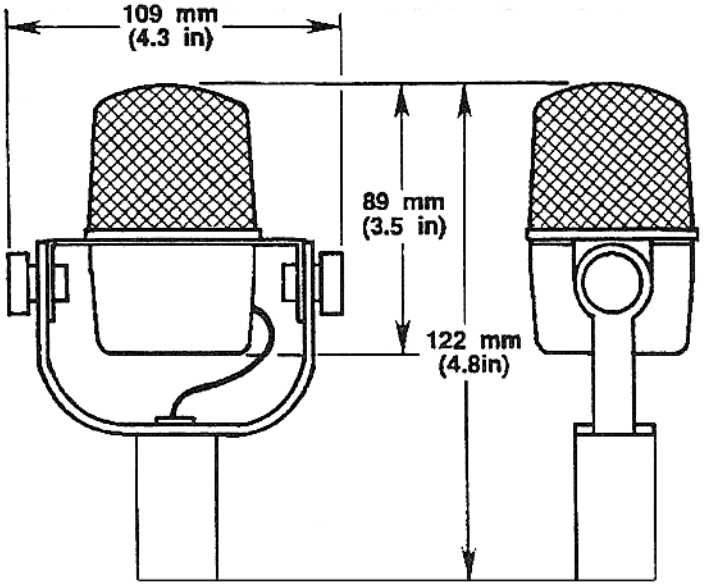
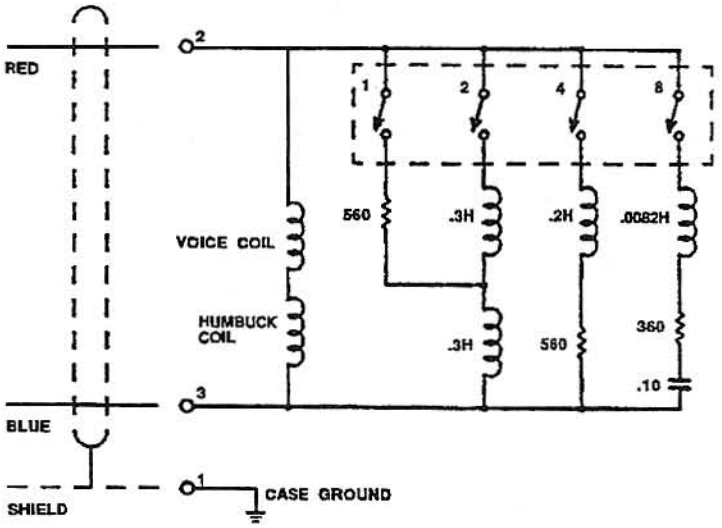


Figure 21—Dimensions



RE38N/D Dynamic Cardioid Microphone

Figure 22—Wiring Diagram



Specifications

Generating Element:
Dynamic
Frequency Response:
70 to 20,000 Hz (Far)
25 to 20,000 Hz (Close)
(see Figures 1-16)
Polar Pattern:
Cardioid
(see Figures 17-20)
Equalization:
16 positions, switch selectable
(see Figures 1-16)
Impedance:
150 ohms, balanced
Sensitivity,
Open Circuit Voltage:
2.5 mV/ Pascal at 1000 Hz
Power Level:
-53 dB at 1000 Hz
(0 dB = 1 mW/Pascal)
Hum Pickup Level:
-135 dBm typical at 60 Hz in a 1 m OE field
Magnetic Circuit:
N/DYM® magnet in a non-welded circuit
Phasing:
Pin 2 will be positive referenced to pin 3 with a positive pressure on diaphragm
Case Material:
Aluminum and Steel
Dimensions:
122 mm (4.8 in.) Height
109 mm (4.3 in.) Width
89 mm (3.5 in.) Length
(see Figure 21)
Finish:
Satin Nickel
Net Weight:
380 g (13.4 oz)
Shipping Weight:
1.56 Kg (3 lbs, 7 oz)
Package Dimensions:
355.6 mm (14 in.)
x 215.9 mm (8.5 in.)
x 152.4 (6 in.)
Accessories Included:
81715 stand adapter
Carrying case
3/32 inch screwdriver

Electro-Voice®
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800/234-6831, 616/695-6831, 616/695-1304 Fax

Part Number 531198 — 9826