Electro-Voice®
a gulton company

Model 664A
Dynamic Super Cardioid Microphone

SPECIFICATIONS

Element:
Dynamic

Frequency Response:
90 to 13,000 Hz, See Figure 1

Polar Pattern:
Super cardioid

Impedance:
150 ohms/Hi-Z, selectable

Impedance Change:
Combined with on/off switch on stud (see instructions)

Output Level,
150 Ohm Impedance:
−56 dB
(0 dB = 1 mW/10 dynes/cm^2)
High Impedance:
−55.5 dB
(0 dB = 1 volt/dyne/cm^2)

EIA Sensitivity Rating,
150 Ohm Impedance:
−150 dB
High Impedance:
−150.5 dB

Diaphragm:
Electro-Voice Acoustalloy®

Case:
Pressure cast zinc

Finish:
Satin chrome

Dimensions:
181.0 mm (7.13 in.) maximum length,
38.1 mm (1.50 in.) maximum diameter (tapered shank)

Net Weight:
520 g (18.5 oz), not including cable

Cable:
4.6 m (15 ft), two-conductor, shielded, vinyl jacketed, with Switchcraft A3F connector

LC FOLLOWING THE MODEL NUMBER INDICATES MICROPHONE LESS CABLE

Optional Accessories:
314E grey pop filter
360 grey windscreen
400 desk stand
456 carrying case
PLC-25X 25 ft cable with A3F and A3M connectors
PLC-25P 25 ft cable with A3F & 1/4 in. phone plug connectors
PLC-25T 25 ft cable terminated with A3F connector at one end and unterminated at the other end.

DESCRIPTION AND APPLICATIONS

The Electro-Voice Model 664A is a rugged, super-cardioid, dynamic microphone designed to provide reliable service in the many situations in which directional microphones are required.

Nearly all directional microphones exhibit proximity effect (a boost in low frequency response) when used close to a sound source. The 664A does not because it utilizes the Electro-Voice patented Variable-D® principle. Therefore the 664A will more accurately respond in those situations that demand the talker, singer or instrument be close to the microphone. The principle underlying "close miking" is that the sound pressure level at the microphone increases 6 dB each time the distance from the sound source is halved. Obviously the output level of the microphone then increases proportionately resulting in a louder sound system or better signal to noise on a recording. "Close miking" can also reduce the often undesirable effects of reverberation as well as provide an increased separation among competing sounds.

As a super-cardioid the 664A provides maximum rejection at 150° rather than the 180° of a cardioid. This assures greatest rejection in the horizontal plane when the microphone is tilted in its most natural position, 30° from the horizontal (as on a desk or floor stand). The polar response (sound source at varying angles to the microphone diaphragm) is exceptionally uniform with little or no off axis coloration. This is important because it means the microphone's response in actual use will closely parallel the anechoic on axis curve (see Fig. 1). Many cardioids have good on axis response, but radically different response at other angles meaning the microphone's published curve (undoubtedly, on axis, anechoic) is of little practical use.

The 664A uses the mechanical nesting concept of design providing a nearly solid mechanical structure that is highly resistant to damage from shock. The exclusive non-metallic Electro-Voice Acoustalloy® diaphragm is virtually unaffected by extremes of atmospheric conditions. The case is made of pressure cast zinc with chrome plating.

IMPEDANCE CHANGE INSTRUCTIONS

The 664A features a new impedance selector combined with the on/off switch. Either balanced 150 ohms or unbalanced Hi-Z output may be selected and locked with the flip of a switch and the turn of a screw. No wires to change, and the selected impedance is plainly indicated.

Look at the on/off switch located on the microphone stud (see figure 3). Through the opening for the slider you will see either the word Hi or Lo indicating the present impedance. To change to the opposite impedance, remove the upper switch screw, the one nearer the microphone. Now push the switch button toward the indicated impedance (Hi or Lo). The switch button will slide the undesired impedance indication out of sight (Push it all the way) and bring the desired impedance into view at the opposite end of the slot. Replace the switch screw and tighten. That's all there is to it. The impedance has been switched to the condition indicated.

Note: As indicated on the stud; the microphone off position is in the middle of the switch slot; "on" Hi impedance is down and "on" Lo impedance is up.

Unbalanced Lo-Z and Hi-Z operation requires that the black wire at the equipment end of the cable be connected together with the ground shield to the sleeve (or ground connection) of the plug. The white wire is connected to the tip (or positive). (See Figure 6)

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a super-cardioid dynamic type with wide-range response uniform from 90 to 13,000 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 all frequencies from 200 to 3,000 Hz (referred to major axis signal value) shall exceed 15 dB at 150° from major axis in any plane. Attenuation at 180° from major axis in any plane at frequencies from 100 to 3,000 Hz shall exceed 10 dB. Attenuation above 3,000 Hz shall exceed 10 dB. Polar characteristics shall be sufficiently uniform in all planes so that it is, effectively, a super cardioid of revolution.

The microphone shall be essentially "flat" from 150 to 10,000 Hz, with an 8 dB rise in response from 50 to 150 Hz. Output level in Lo-Z operation shall be −56 dB (0 dB = 1 mW/10 dynes/cm^2), and EIA sensitivity rating shall be −150 dB. Output level in Hi-Z operation shall be −55.5 dB (0 dB = 1 volt/dyne/cm^2) and EIA sensitivity rating shall be −150.5 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 microphone case shall be made of pressure cast zinc and shall include an integral stud and swivel of the same material. The stud shall include an on/off switch with provision for selecting either 150 ohms balanced or Hi-Z unbalanced output without requiring a wiring change, either with or without cable as specified. LC suffix on model number denotes microphone less cable. The microphone shall have a maximum diameter of 38.1 mm (1.50 inches) – with tapered shank – and a maximum length of 181.0 mm (7.13 inches). Case finish shall be satin chrome. A 4.6 m (15 ft), two-conductor, shielded cable with vinyl jacket and Switchcraft A3F or equivalent connector installed shall be supplied. The stud shall have a built-in connector equivalent to the Switchcraft A3M. The Electro-Voice Model 664A is specified.

WARRANTY (Limited)

Electro-Voice Commercial/Concert Series Microphones are guaranteed for two years from date of original purchase against defects in workmanship and materials. 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 cover finish or mal-function due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For repair information and service locations, please write: Service Dept., Electro-Voice, Inc., 600 Cecil St., Buchanan, Michigan 49107 (Phone:616/695-6831) or Electro-Voice West, 8234 Doe Ave., P. O. Box 3297, Visalia, CA 93277 (Phone: 209/651-7777).

Electro-Voice also maintains complete facilities for non-warranty service of EV products.

Specifications subject to change without notice.

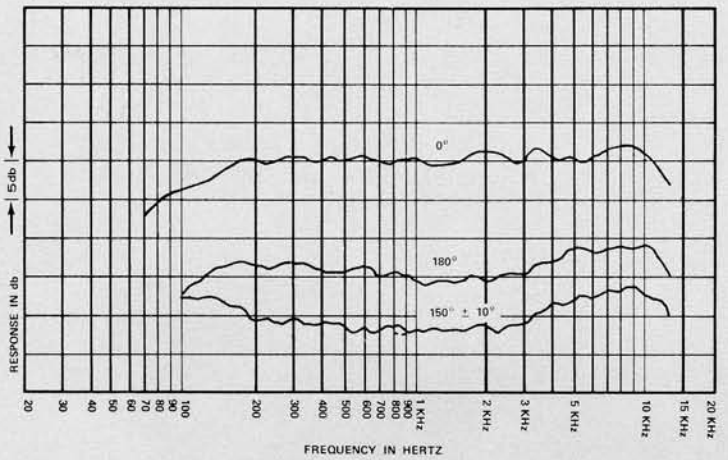

FIGURE 1 – Typical Frequency Response

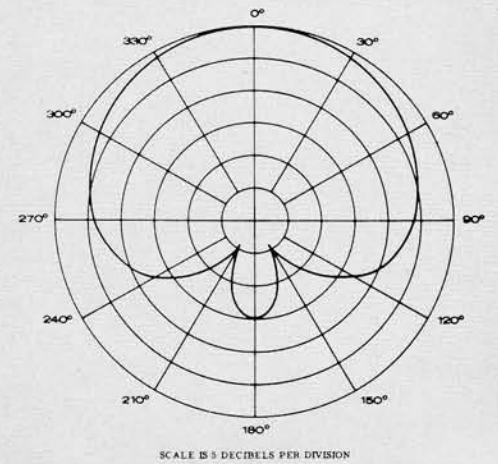

FIGURE 2 – Polar Response

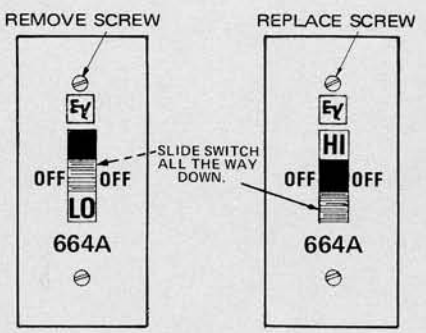

FIGURE 3 – Changing Impedance

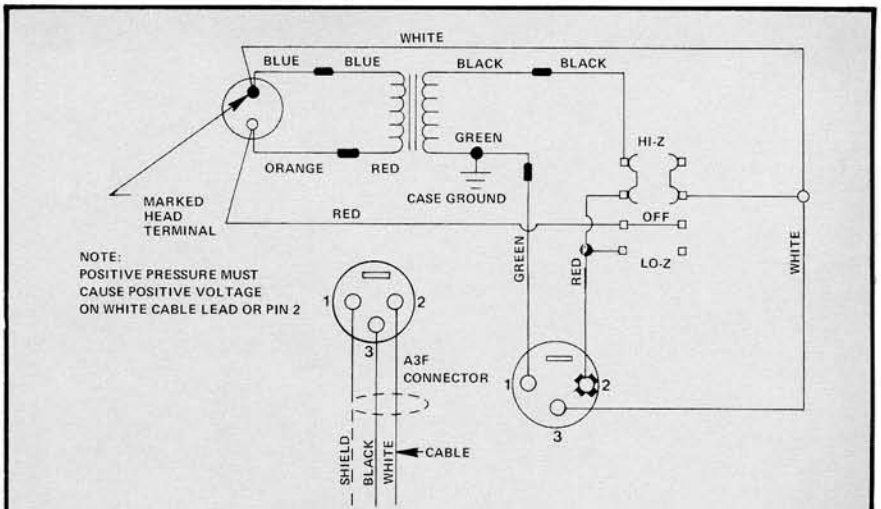

FIGURE 4 – Wiring Diagram

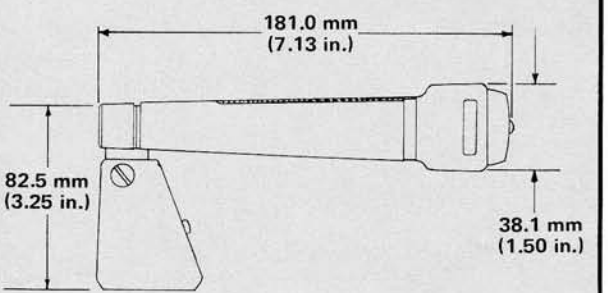

FIGURE 5 – Dimensions

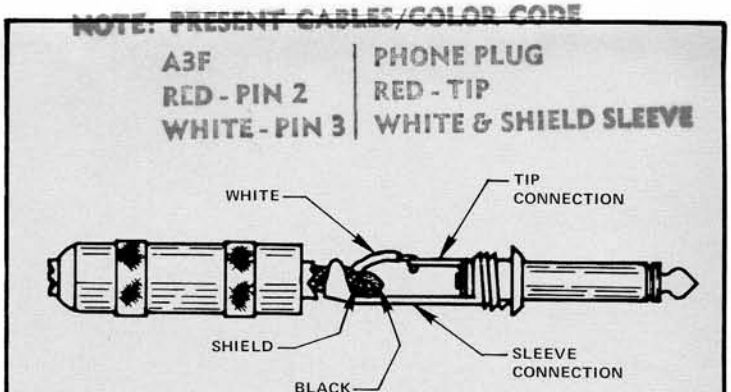

FIGURE 6 – Phone Plug Wiring Connections