



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

DESCRIPTION

The Model 644 is a highly directional dynamic microphone utilizing a combination of cardioid and distributed front opening designs. This combination gives greatly extended frontal pickup on the microphone axis, extending working distance over 2.5 times compared to present non-directional type microphones. Above 700 Hz, cancellation of sound at the rear and sides exceeds 20 db, providing unequalled rejection of random noise, reverberation, and feedback without sacrifice of frequency response. This unit allows much greater latitude in loudspeaker placement and will solve many specialized problems where microphones cannot be placed near the source of sound.

A front acceptance angle at high frequencies of 45° on each side of the microphone axis also allows best isolation of individual performers when desired. The 644 gives improved wind noise rejection, compared to conventional microphones, and is much less susceptible to generation of noise from mechanical shock.

WARRANTY

Each Electro-Voice microphone is guaranteed for the life of the microphone to be free of factory defects in materials and workmanship and will, at our option, be repaired or replaced at no charge if exhibiting malfunction from this cause. Microphones for warranty repair must be shipped prepaid to Electro-Voice, Inc., or its authorized service agency. They will be returned prepaid. This warranty does not cover finish or appearance.

Factory repair department for this product is located at: Electro-Voice, Inc./Sevierville, Tennessee 37862.

SPECIFICATIONS

- Type: Dynamic
- Frequency Response: 40 – 12,000 Hz
- Polar Pattern: Cardioid to 700 Hz, 20–25 rejection at sides and rear above 700 Hz. (See Figure 2)
- Impedance: 150 ohms and high impedance. Wired for high impedance when shipped.
- Impedance Selection: Easily made at QC-4M Quick Change Connector without tools. See instructions in this sheet. 150 ohms impedance balanced to ground.
- Output Level, High Impedance: –53 db (0 db = 1 volt/dyne/cm²)
- 150 ohm Impedance: –53 db (0 db = 1 mw/10 dynes/cm²)
- EIA Sensitivity Rating, High Impedance: –149 db
- 150 ohms Impedance: –147 db
- Diaphragm: Electro-Voice Acoustalloy®
- Switch: On/Off, sliding contact shorts microphone in “off” position.
- Case: Pressure-cast zinc and brass
- Finish: Nonreflecting gray
- Dimensions: 2-5/16” max. dia., 15-15/16” long (See Figure 3)
- Cable: 15’, 2-conductor, synthetic rubber-jacketed, broadcast type with E-V QC-4M Quick Change Connector on microphone end.
- Microphone Connector: Amphenol MC4F
- Stand Coupler: 5/8”–27 thread on stud
- Net Weight: 2 lbs., 9 oz., less cable
- Optional Accessories: Model 418 desk stand

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be an Electro-Voice Model 644 or equivalent. The microphone shall be a highly directional, dynamic type with a combination of cardioid and distributed front opening with a frequency response of from 40 to 12,000 Hz. From the rear above 700 Hz, the microphone shall exceed cancellation of 20 db.

The diaphragm shall be nonmetallic Acoustalloy and shall have a magnetic shield to prevent dust and iron particles from reaching the diaphragm. The available impedances shall be 150 ohm or high impedance. It shall be possible to select impedance desired by changing leads from one terminal to another in the QC-4M Quick Change Connector. Line shall be balanced to ground and phased on 150 ohms.

The output level shall be -53 db, with 0 db equalling 1 mw/10 dynes/cm², and EIA sensitivity rating of -147 db at 150 ohms. The output level shall be -53 db, with 0 db equalling 1 volt/dyne/cm², and EIA sensitivity rating of -149 db at high impedance. The magnetic circuit shall be a nonwelded circuit and employ Alnico V and Armo magnetic iron.

The case shall be made of pressure-cast zinc and brass. The microphone shall have a maximum diameter of 2-5/16 inches, a length of 15-15/16 inches, and a weight of 2 pounds, without cable. Finish shall be nonreflecting gray. A 15-foot, two-conductor, synthetic rubber-jacketed, broadcast-type cable shall be provided. The microphone shall have a built-in connector similar or equivalent to the Amphenol MC4F which will mate with the E-V QC-4M (similar to keying to Amphenol MC4M).

The microphone shall include a stand coupler with a 5/8"-27 thread on stud.

The Electro-Voice Model 644 is specified.

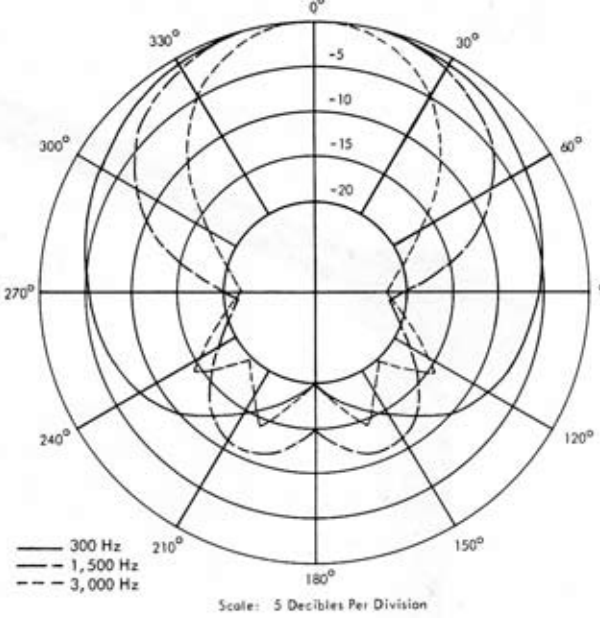


Figure 2 - Polar Pattern

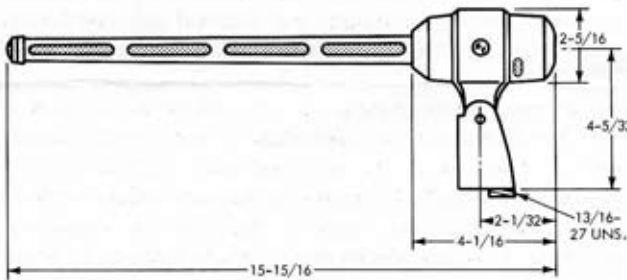


Figure 3 - Dimensions

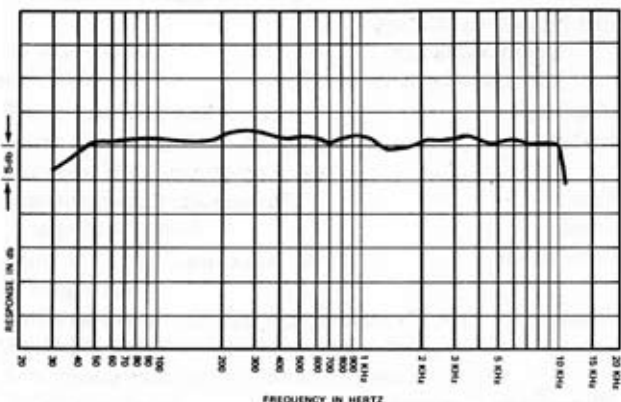


Figure 1 - Frequency Response

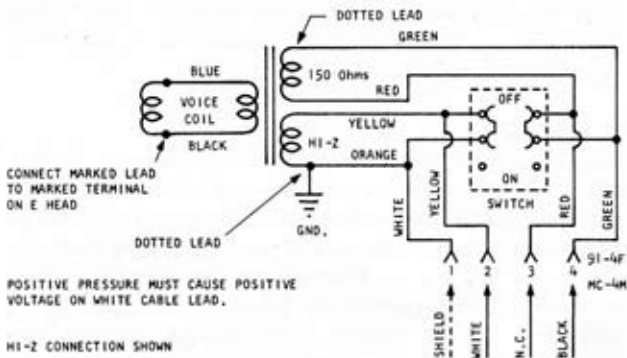


Figure 4 - Wiring Diagram

IMPEDANCE CHANGE PROCEDURE FOR E-V QUICK-CHANGE CONNECTOR

For added convenience and flexibility, an Electro-Voice innovation, the QC-4M Quick-Change Connector, is supplied with your Model 644 microphone. Change from high impedance (Hi-Z) to low impedance (Lo-Z), or the reverse, can now be made quickly and easily without tools.

Figure A shows the basic internal wiring diagram of E-V dual impedance microphones.

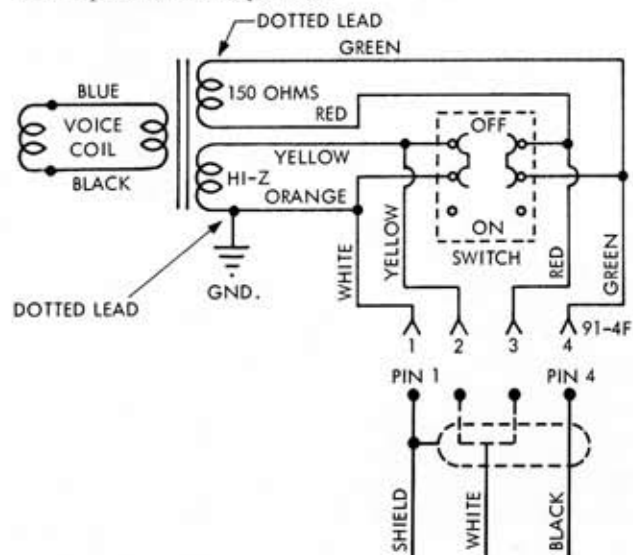


Figure A

Note that moving white cable conductor from Pin 2 to Pin 3 converts the microphone from Hi-Z to Lo-Z.

To change impedance, proceed as follows:

1. Remove cable from microphone by turning the connector shell to left (counter clockwise) until free and then gently pull it away from the microphone.
2. Grip connector shell firmly in one hand and cable (near connector) in other hand, firmly push cable

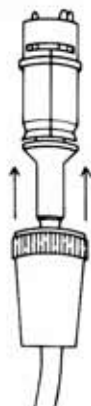


Fig. B

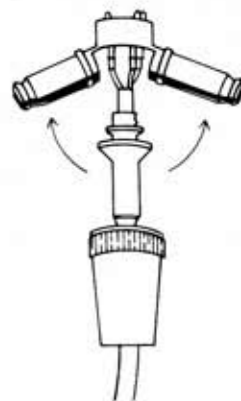


Fig. C

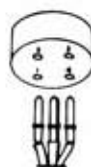


Fig. D

into shell so that molded plastic insert slips from shell. (See Figure B)

3. Separate molded insert as shown in Figure C.
4. Note that cable shield and conductors are connected to "slip in" pins. Shield pin is in hole 1 of alignment frame, and pin on black conductor is in hole 4. *These should not be changed.*
5. The pin connected to the white conductor of your cable should be inserted in hole 2, if high impedance operation is desired, or hole 3 if low impedance is desired. (See Figure D)
6. Snap molded insert halves into position. (See Figures B and C)
7. Firmly push connector shell back into position (reverse of Step 2). Pressure will be required since these parts are designed to provide close fit.
8. Align connector guide pin with key slot in the microphone and slip connector into position. Tighten connector shell by turning in a clockwise direction.

Your E-V dual impedance microphone is now ready for operation in the impedance you have selected.