

Electro-Voice®
a gulton company

Model 644 Sound-Spot® Microphone

SPECIFICATIONS

Element:

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 ohm/Hi-Z, selectable. Wired for high impedance when shipped

Impedance Change:

See Figures 5-8. 150-ohm impedance balanced to ground

Output Level:

-53 dB
(0 dB = 1 volt/dyne/cm²)

EIA Sensitivity Rating,

High Impedance:

-149 dB

150 Ohm Impedance:

-147 dB

Diaphragm:

Electro-Voice Acoustalloy®

Switch:

On/Off, sliding contact shorts microphone in "off" position

Case Material:

Pressure-cast zinc and brass

Finish:

Non-reflecting gray

Dimensions:

58.7 mm (2.31 in.) maximum dia.
404.8 mm (15.94 in.) long
(see Figure 1)

Cable:

4.6 mm (15 ft), 2-conductor, synthetic rubber-jacketed, broadcast type with EV QCTM-4M Quick Change Connector on microphone end

Microphone Connector:

Amphenol MC4F

Stand Coupler:

5/8 in.—27 thread on stud

Net Weight:

1.16 kg (2 lbs 9 oz), without cable

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.

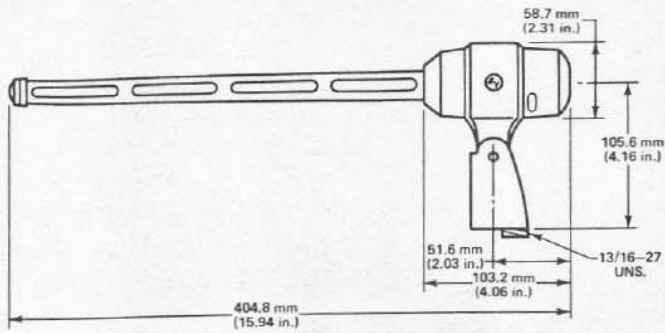


FIGURE 1 – Dimensions

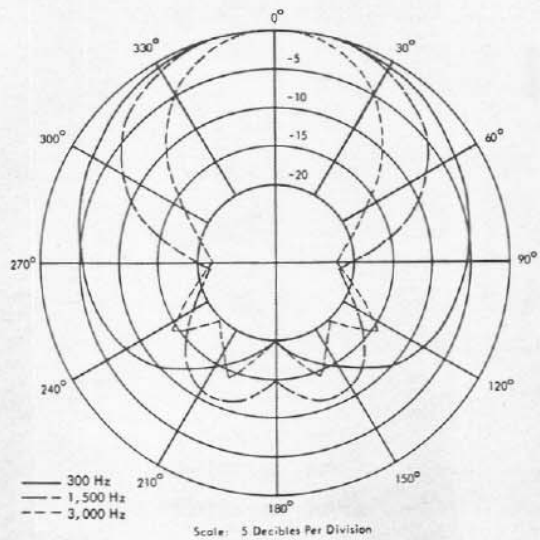


FIGURE 2 – Polar Pattern

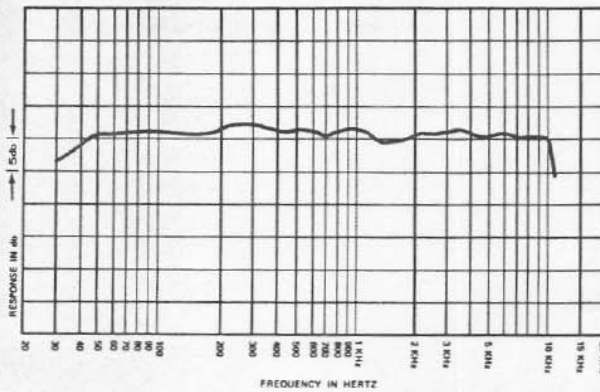


FIGURE 3 – Frequency Response

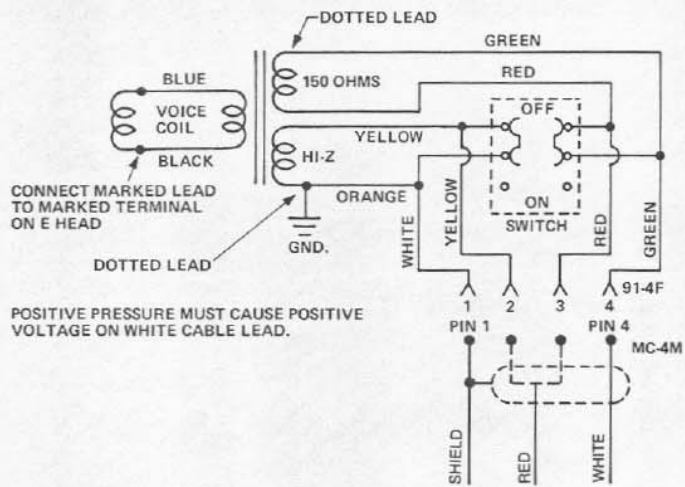


FIGURE 4 – Wiring Diagram



FIGURE 5

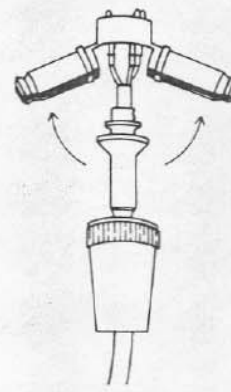


FIGURE 6

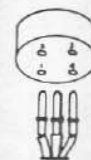


FIGURE 7

IMPEDANCE CHANGE PROCEDURE FOR EV 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 4 shows the basic internal wiring diagram of EV dual impedance microphones.

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 (counterclockwise) 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 into shell so that molded plastic insert slips from shell (see Figure 5).
3. Separate molded insert as shown in Figure 6.
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 white conductor is in hole 4. These should not be changed.
5. The pin connected to the red conductor of your cable should be inserted into hole 2, if high impedance operation is desired, or hole 3, if low impedance is desired (see Figure 7).
6. Snap molded insert halves into position (see Figures 5 and 6).
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 EV dual impedance microphone is now ready for operation in the impedance you have selected.

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 non-welded circuit and employ Alnico V and Armco magnetic iron.

The case shall be made of pressure-cast zinc and brass. The microphone shall have a maximum diameter of 58.7 mm (2.31 in.), a length of 404.8 mm (15.94 in.), and a weight of 1.16 kg (2 lbs 9 oz), without cable. Finish shall be non-reflecting gray. A 4.6 m (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 EV QC-4M (similar to keying to Amphenol MC4M).

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

The Electro-Voice Model 644 is specified.

WARRANTY (Limited)

Electro-Voice Commercial/Concert Microphones are guaranteed for two years from date of original purchase against malfunction due to 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 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 service agencies will void this guarantee. A list of authorized warranty service agencies is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); Electro-Voice, Inc., 3810 148th Avenue, N.E., Redmond, WA 98052 (AC/206-881-9555) and/or Electro-Voice West, 8234 Doe Avenue, Visalia, 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.



ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107

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SOUND SPOT MICROPHONE



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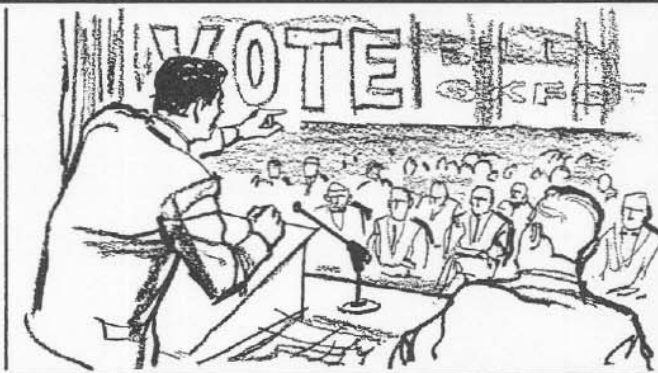
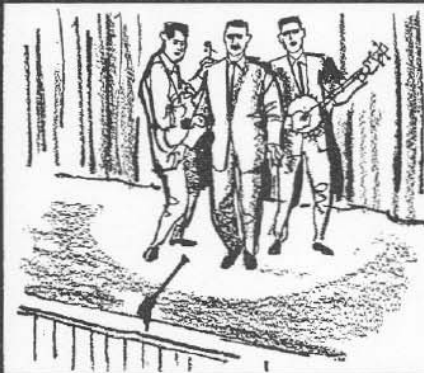
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If you are in the commercial sound business, you have had your share of . . . "they couldn't be done" . . . jobs at one time or another in your business life. These jobs could not be solved because general purpose microphones just couldn't do the job. That, fortunately, is past history. E-V's new Model 644 ushers in a new era in the concept of microphone pick-up. So *take another look* and see how many of those "tough" jobs the 644 reclassifies to "simple and easy". Your local E-V distributor has all the details on the Model 644. Why not call him today or write Dept. 10A for our new Commercial Sound Catalog No. 132.

Electro-Voice[®]



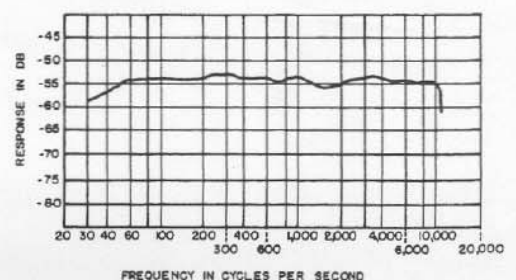
Jobs like these are no problems for the
MODEL 644

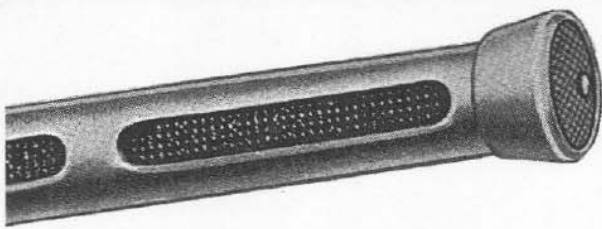


PERFORMS UNDER THE MOST TRYING PHYSICAL CIRCUM

The model 644 is a highly directional dynamic microphone utilizing a combination of cardioid and distributed front opening designs. This combination gives greatly extended pickup directly in front of the microphone extending working distance four times compared to present conventional cardioid microphones and depending upon room acoustics. Above 700 cps sound coming from the rear and sides is reduced more than 20 db providing unequalled rejection of random noise, reverberation and feedback without sacrifice of frequency response. The Model 644 allows much greater latitude in loudspeaker placement for P. A. and will also solve many specialized recording problems where microphones cannot be placed at conventional distances from the source of sound. The front acceptance angle at high frequencies at 45° each side of the microphone axis also allows best isolation of individual performers when desired. The Model 644 gives improved wind noise rejection compared with conventional microphones and is much less susceptible to mechanical shock noise.

FREQUENCY RESPONSE





those "impossible" sound jobs!

compare polar patterns yourself

NON-DIRECTIONAL



CARDIOID



SOUND SPOT



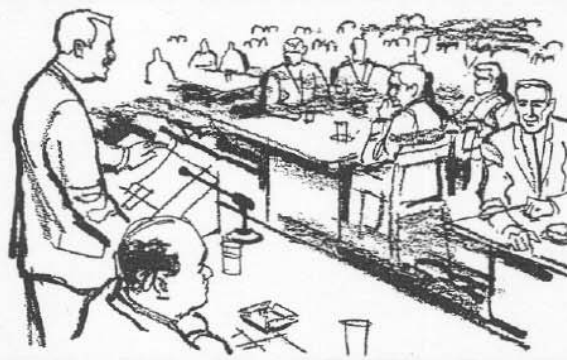
- Four times greater working distance than the best cardioids, depending on acoustics
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SPECIFICATIONS

Type: Dynamic cardioid plus distributed front opening.

Frequency Response: 40 to 12,000 cps.

Directional Characteristics: Cardioid to 700 cycles, 20 to 25 db of rejection at the sides and rear above 700 cycles.

On-Off Switch: Sliding contact shorts microphone in "OFF" position.

Impedance: 150 ohms or High Impedance. (Normally connected as high-impedance when shipped.)

Output Level: High Impedance: -53* db; EIA sensitivity rating: -149 db;

150 ohm impedance: -53** db; EIA sensitivity rating: 147 db.

*0 db = 1 volt/dyne/cm²

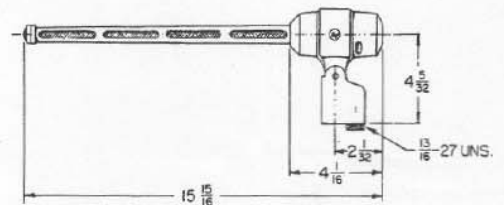
**0 db = 1 mw/10 dynes/cm²

Diaphragm: Electro-Voice Acoustalloy.

Magnetic Circuit: Employs Alnico V and Armco magnetic iron in a nonwelded circuit.

Case: Pressure cast zinc and brass.

Finish: Satin Chrome.



DIMENSIONS

