

Electro-Voice[®]
a gulton company



Model 671 Single-D Cardioid Microphone

SPECIFICATIONS

Element:

Dynamic

Frequency Response:

60-14,000 Hz

Polar Pattern:

Cardioid

Impedance:

150 ohm/Hi-Z, Selectable

Impedance Change:

Rear of connector insert

Output Level,

Low impedance:

-50 dB (0 dB = 1 mW/10 dyne/cm²)

High impedance:

-61 dB (0 dB = 1 v/dyne/cm²)

EIA Sensitivity Rating,

150 ohm:

-154 dB

Hi-Z:

-156 dB

Diaphragm:

Laminated Mylar/Acoustalloy[®]

Switch:

On-Off (lockable)

Case:

Zinc die cast

Finish:

Satin chrome

Accessories Included:

358 stand adapter

Dimensions:

157.2 mm (6.19") long
(excluding cable connector),
49 mm (1.97") largest diameter

Weight:

226.8 g (8 oz.) — excluding cable

Cable:

671:

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

671P, 671PC:

4.6 m (15 foot), two-conductor, shielded, vinyl jacketed, with Switchcraft A3F connector at the microphone end and ¼" phone plug at equipment end. (671PC includes carrying case)

DESCRIPTION & APPLICATIONS

The Electro-Voice Model 671 is a newly designed Single-D cardioid microphone which emphasizes low frequencies when used "close up." Perfect for the exacting needs of high quality sound reinforcement, public address, and other applications, the 671 is ruggedly designed and attractively styled.

The 671 uses the broadcast standard three-pin "XLR" type connector. In addition the 671P and 671PC have a ¼" phone plug at the equipment end of the cable. The 671P & 671PC can be operated Hi-Z or unbalanced Lo-Z. (See instructions for changing impedance)

A new head design and an exclusive Volumetric-hologram designed diaphragm provide exceptionally wide, linear response at all angles of incidence for high gain-before-feedback in sound reinforcement applications, and virtual elimination of off-axis coloration. The head subassembly is user replaceable. As part of this assembly, a newly designed extremely effective shock absorber isolates the transducer assembly from mechanical noises. An internal Acoustifoam™ filter allows close talking without excessive "P-popping" and prevents dirt and magnetic particles from accumulating on the diaphragm.

The microphone is equipped with a lock to keep the switch in the "on" position if this is desired.

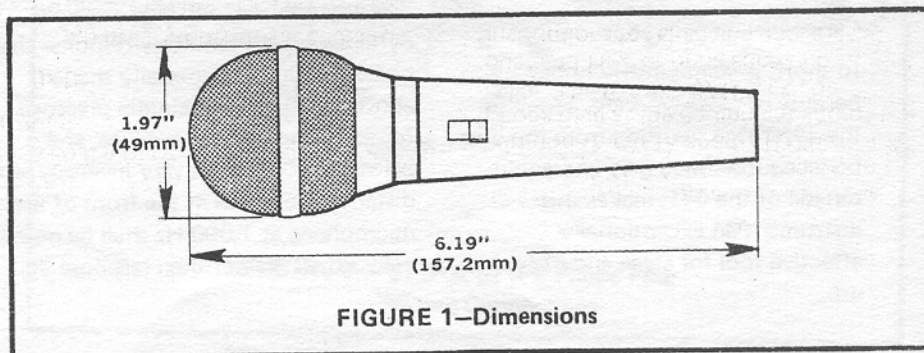


FIGURE 1—Dimensions

Utilizing The Locking Feature:

To lock the switch in the "on" position, first turn switch on. Next, using a sharp object such as a nail file or a small screwdriver, slide lock to a position behind the switch actuator (See Fig. 2).

Using The Variable Low-Frequency Response:

The 671's low-frequency response varies with the distance from the sound to the microphone as shown in the response curve (Fig. 3). Maximum bass response is produced in close-up use with the microphone $\frac{1}{4}$ " from the sound source (Fig. 3/A). Minimum bass response is experienced at distances greater than 24" (Fig. 3/C).

Useful special effects can be created by an imaginative application of the variable low-frequency response:

1. By working closer to the microphone, the human voice will sound more robust, although intelligibility may be adversely affected.
2. Feedback in a public address system is sustained by reflection of sound into the microphone. For all microphones, as the artist moves closer, the level of his voice (at the microphone) increases and the microphone's signal to the amplifier is increased. For a constant volume of sound from the system, the amplifier gain setting must be proportionately reduced. This results in a reduction of the system's sensitivity to reflected sound, hence a reduction of the tendency to feedback.

The variable low-frequency response of the 671 provides a further feedback reducing advantage in close talking applications. At $\frac{1}{4}$ ", low-frequency response is greatly enhanced, while response to distant sound (as from sound system loudspeakers) is unaffected. The result is a reduced tendency to feedback, over and above that provided by the cardioid directional characteristic alone.

In short, system sensitivity reduction because of close working, added to the advantage resulting from the bass boosting low-frequency characteristic of the 671, makes this instrument an exceptionally effective tool for stage and nightclub use.

3. For musical pickup, the variable bass response can be utilized to achieve "clean" bass pickup at distances of 24" or more. By moving the 671 to a few inches from the instrument, bass will be increased.

Caution notes: With the sound source (lips) closer than 2", bass response is increased dramatically (as shown in Fig. 3/A/B). If too much signal is generated at the microphone, overloading in the amplifier input circuits may occur, causing severe distortion.

Impedance Change Instructions:

Impedance may be changed from Hi- to Lo-Z, or vice-versa, by changing one pin-connector at the rear of the microphone. Turn the setscrew in the connector-insert counter clockwise (it is a reverse-threaded screw and will not come out, but rather disappear into the insert). Pull the insert straight out from the end of the microphone exposing the wires connected to it. (See Fig. 6) For high impedance, the black wire should be connected to Pin 2 of the insert. For low impedance, the red wire should be connected to Pin 2. (A sleeve on the connector slides over the pin to insulate and assure a tight connection.)

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 Fig. 7) This is the way plugs are connected on 671P and 671PC microphone models. Impedance may be changed to unbalanced Lo-Z as described above.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a cardioid dynamic type. Frequency response shall be 60-14,000 Hz, specially shaped above 1,000 Hz to maintain presence for vocal and musical pickups, and below 1,000 Hz shall vary inversely with distance. Response at the front of the microphone at 1,000 Hz shall be nominally 20 dB greater than response at rear.

The microphone shall be a switchable impedance type (high impedance or 150 ohm balanced or unbalanced low impedance). Output level for high impedance shall be -61 dB (0 dB equaling 1 v/dyne/cm²). Output level for low impedance shall be -60 dB (0 dB equals 1 mW/10 dynes/cm²). Microphone shall have a laminated Mylar/Acoustalloid[®] diaphragm. An on-off switch shall be provided and so connected that the transducer is "shorted" when switch is in off position. A 4.6 m (15 ft) two-conductor shielded, vinyl jacketed cable with Switchcraft A3F connector installed at the microphone end shall be provided.

The case shall be die cast zinc. Dimensions shall be 157.2 mm (6.19") long, 49 mm (1.97") diameter. Net weight (less cable) shall be 226.8 g (8 oz.). Finish shall be satin chrome. A Model 358 stand adapter shall be furnished.

The Electro-Voice Model 671 is specified.

WARRANTY (Limited) -

Electro-Voice microphones are guaranteed for the life of the microphone 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 cover finish, appearance items, cables, cable connectors, or switches and does not cover malfunction 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 correct shipping address and instructions on return of Electro-Voice products for repair and locations of authorized service agencies, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831).

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

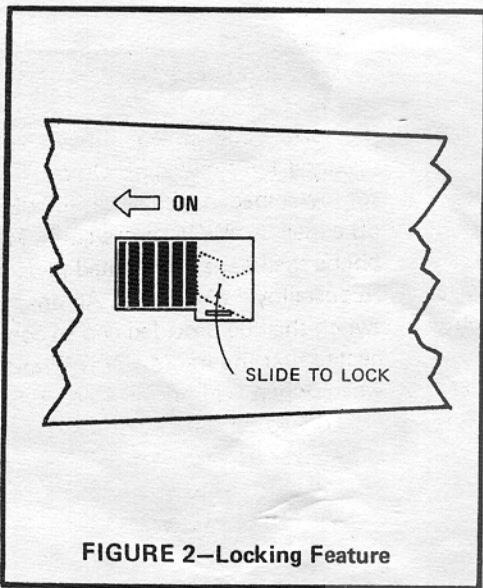


FIGURE 2—Locking Feature

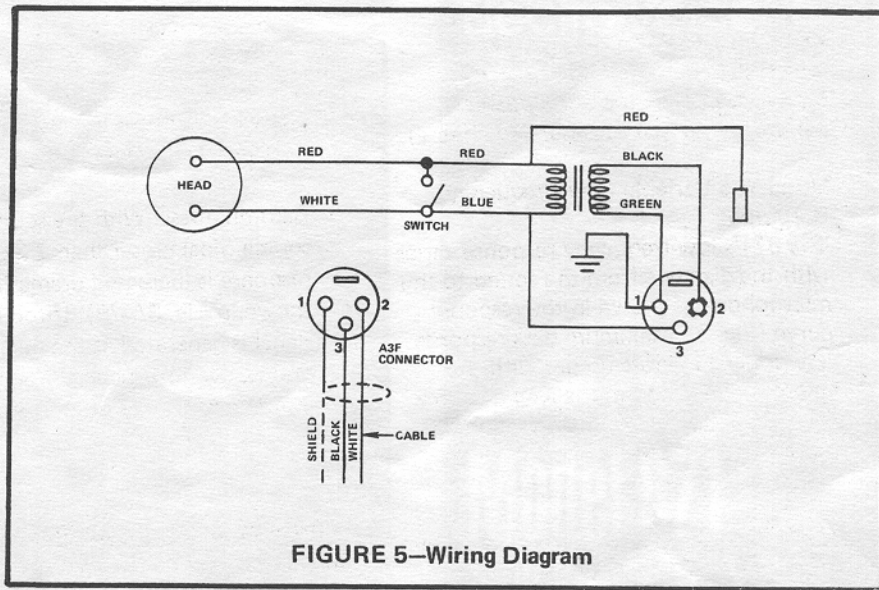


FIGURE 5—Wiring Diagram

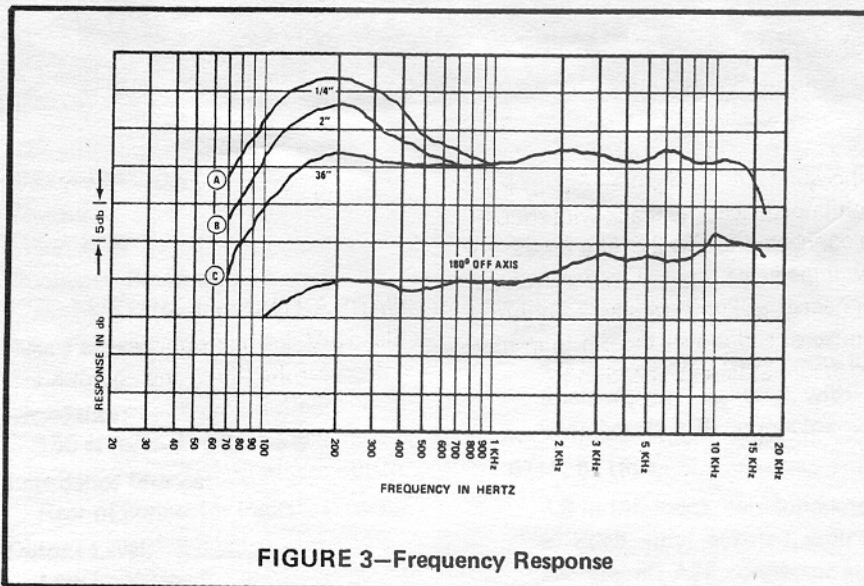


FIGURE 3—Frequency Response

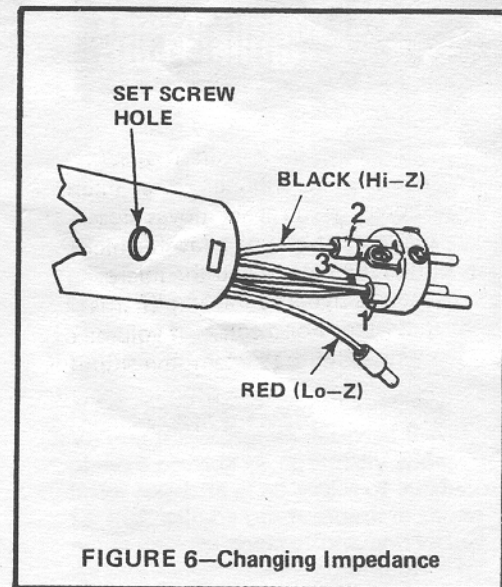


FIGURE 6—Changing Impedance

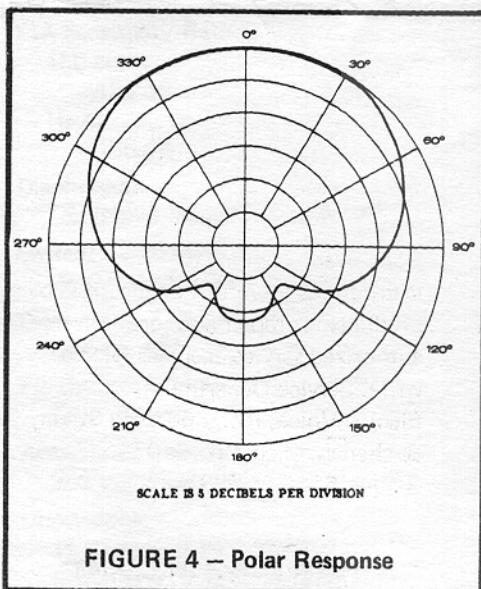


FIGURE 4 — Polar Response

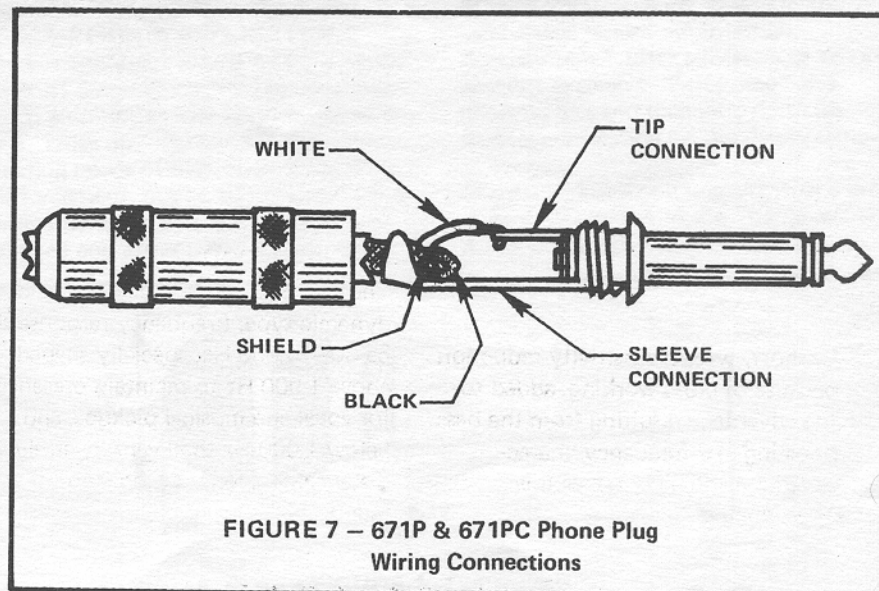


FIGURE 7 — 671P & 671PC Phone Plug Wiring Connections