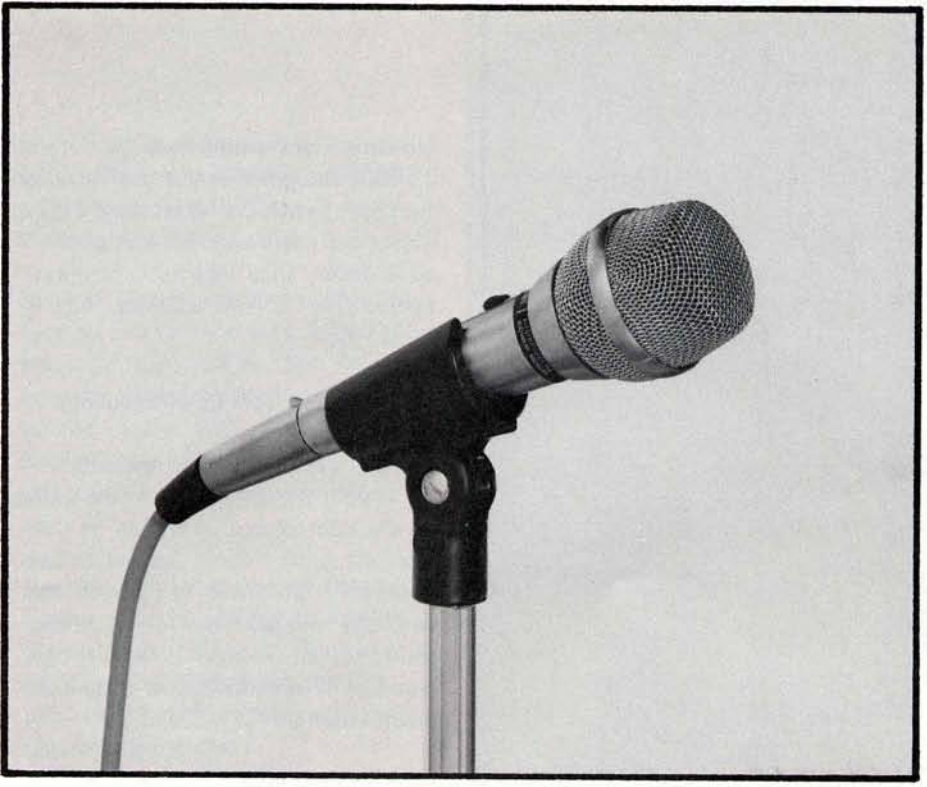

Electro-Voice®
a gulton company

Model 681
Dynamic 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:
–59.5 dB
(0 dB = 1 mW/10 dynes/cm²)
High Impedance:
–61 dB
(0 dB = 1 volt/dyne/cm²)

EIA Sensitivity Rating,
150 Ohm:
–154 dB
Hi-Z:
–156 dB

Diaphragm:
Acoustalloy®

Switch:
On-Off (lockable)

Case:
Zinc die cast

Finish:
Satin chrome

Accessory Included:
358 stand adapter

Optional Accessories:
351 windscreen
456 carrying case

Dimensions:
157.2 mm (6.19 in.)long
(excluding cable connector),
50 mm (1.97 in.) largest diameter

Weight:
226.8 g (8 oz), excluding cable

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

DESCRIPTION & APPLICATIONS

The new Electro-Voice Model 681 features high output level while providing a smooth frequency response and excellent gain-before-feedback characteristics. It is a 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 681 is ruggedly designed and attractively styled. The 681 uses the broadcast standard three-pin type connector.

A new head design provides exceptionally wide, linear response for high gain-before-feedback in sound reinforcement applications, and virtual elimination of off-axis coloration. An 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.

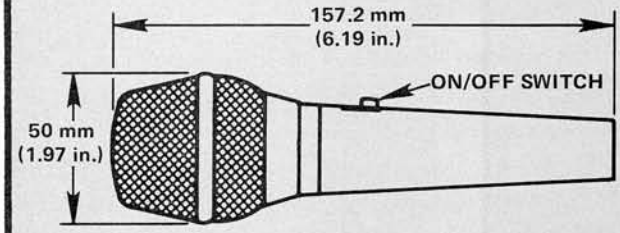

FIGURE 1
Dimensions

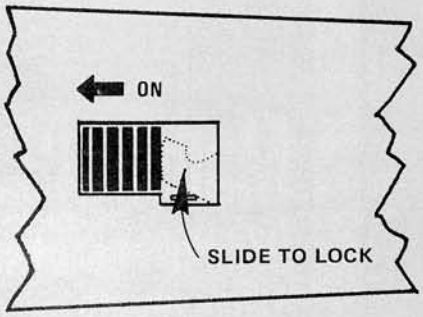

FIGURE 2
Locking Feature

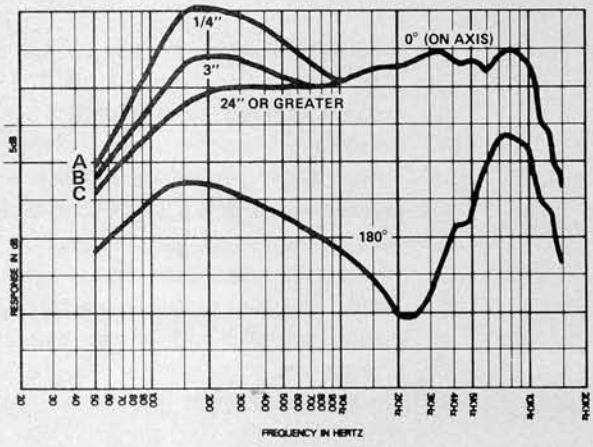

FIGURE 3
Frequency Response

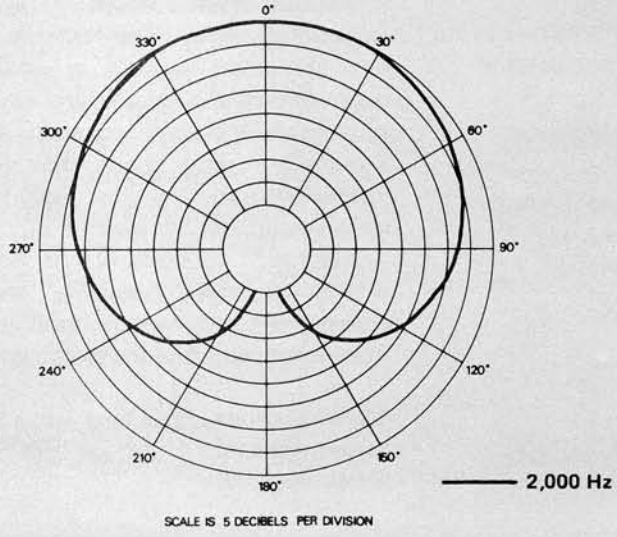

FIGURE 4
Polar Response

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 Figure 2).

Using The Variable Low-Frequency Response:
The 681'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 1/4" from the sound source (Fig. 3/A). Normal 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 681 provides a further feedback reducing advantage in close talking applications. At 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 681, 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 681 to a few inches from the instrument, bass will be increased.

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 1/4" phone plug. The white wire is connected to the tip (or positive). (See Fig. 7) Impedance may be changed to unbalanced Lo-Z as described above. Figure 7 also shows the connection for a balanced Lo-Z operation using standard 3-pin connector such as the Switchcraft A3M.

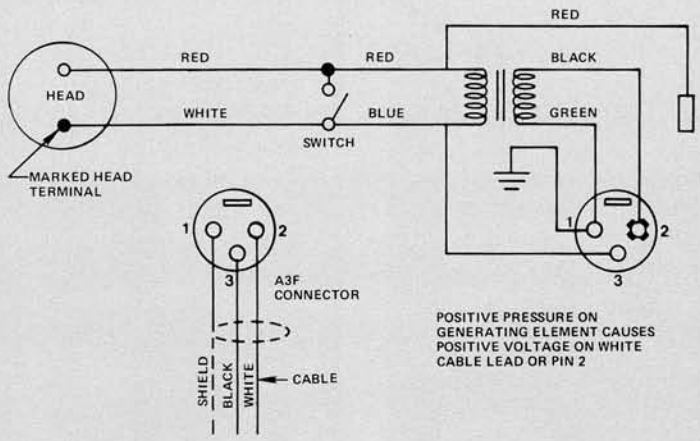

FIGURE 5 – Wiring Diagram

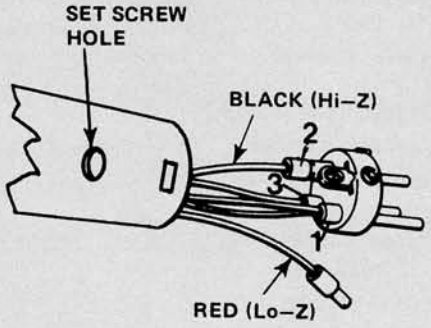

FIGURE 6 – Changing Impedance

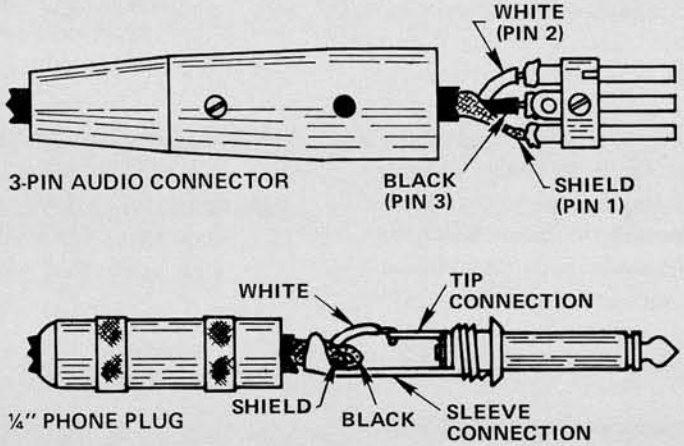

FIGURE 7 – 3-Pin Connector & ¼" Phone Plug Wiring Connections