



Electro-Voice®
a gulton company

Model 1772 Condenser Cardioid Vocal Microphone

SPECIFICATIONS:

Generating Element:

Electret condenser

Frequency Response:

50 Hz - 18 kHz*

Polar Pattern:

Cardioid

Impedance:

150 ohms balanced

Output Level:

-49.0 dB (0 dB = 1 mW/10 dynes/cm²)

2.5 mv/Pascal @ 1 kHz

Dynamic Range:

122 dB

Equivalent Noise Level:

Less than 30 dB

(0 dB = .0002 dynes/cm²

A-weighted)

Switch:

On/off

Power Supply:

4.5-volt battery (not included) or

24- to 48-volt phantom supply

Current Drain:

3.5 mA

Recommended Batteries: (Alkaline)

Eveready No. 523

Mallory PX 21

Pop Filter:

Built-in Acoustifoam™ filter

Grille Screen Material:

Memraflex (tempered spring steel)

Case Material:

Diecast zinc and aluminum

Finish:

Non-reflecting gray

Dimensions:

201.9 mm (7.95 in.) long

48.3 mm (1.90 in.) maximum diameter

Weight:

288 grams (10.16 oz)

Accessories Furnished:

301 stand clamp

* Useable response range.

Cable:

4.6 m (15 feet) two-conductor,

shielded, with Switchcraft A3F

connector at microphone end

Optional Accessories:

376 gray windscreen

379 colored windscreens

380 10 dB attenuator

458 simulated leather zippered pouch

PLC-25X 25 ft cable with A3F &

A3M connectors

PLC-25P 25 ft cable with A3F &

¼ in. phone plug connectors

PLC-25T 25 ft cable terminated with

A3F connector at one end and

unterminated at the other end

AC24M phantom power supply

DESCRIPTION

The Electro-Voice 1772 is a Single-D, cardioid, low impedance, electret condenser microphone for exacting needs of high quality sound reinforcement and professional performer applications where maximum gain-before-feedback is essential.

The 1772 can be powered using an internal battery or any phantom power source between 24 and 48 volts. An on/off switch is provided to mute the microphone in either battery or phantom power mode. While in the battery mode, the switch disconnects the power connection, conserving battery life. A blast filter is integral with the microphone to allow close talking without excessive "p-popping". The 1772 employs a rugged die-cast case and Memraflex grille screen that, if dropped, bounces back to retain its shape.

APPLICATIONS

The 1772 is designed for problem sound reinforcement systems where reflection and speaker placement demand a superior gain-before-feedback microphone. The 1772 minimized feedback by emphasizing: a smooth peak-free frequency response; employing a cardioid polar pattern; and, finally, transducer element positioning. The placement of the condenser element close to the front of the microphone insures the highest ratio of gain-before-feedback. Electronic tailoring is used to control the subsequent increase of bass energy. Feedback problems can be further reduced by close microphone placement to the sound source which will yield a significant reduction in undesirable background and/or reflected sound.

USING THE VARIABLE LOW-FREQUENCY RESPONSE

The 1772 low-frequency response varies with the distance from the source to the microphone as shown in the response curves. Maximum bass response is produced in close-up use with the microphone ¼ inch from the sound source with minimum bass response experienced at distances greater than 24 inches. By imaginative application of this low-frequency bass-boosting proximity effect, the 1772 may be employed to solve problems in a wide variety of applications.

Feedback in a sound reinforcement system is sustained by reflection of sound into the microphone. As the level of the voice (at the microphone) increases, the microphone's signal to the amplifier is increased. For a constant volume of sound from the system, the amplifier gain setting must be

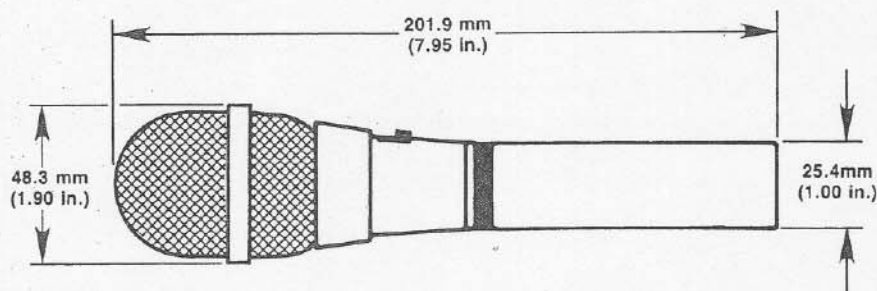


FIGURE 1 — Dimensions

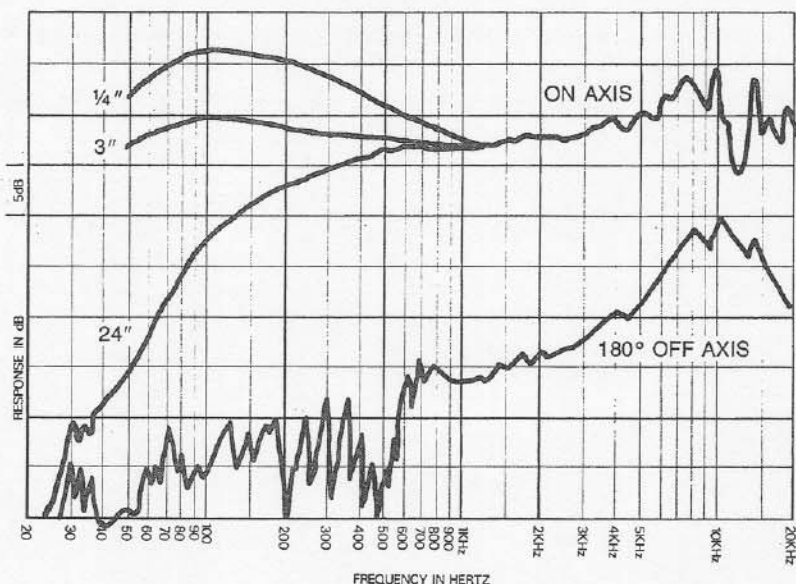


FIGURE 2 — On/Off Axis Responses

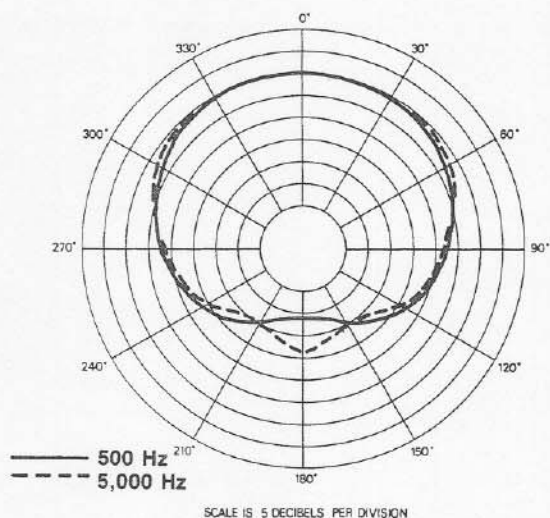


FIGURE 3 — Polar Response

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 1772 provides a further feedback reducing advantage in close talking applications. At $\frac{1}{4}$ inch, 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, sound system sensitivity is reduced because of close working to the sound source, increased microphone output level (-49 dB), and the advantages of a modest bass boost. The 1772 microphone is an exceptionally effective tool for podium, hand-held vocal, and other close talking applications.

CAUTION NOTES: With the sound source (lips) closer than 4 inches, bass response is increased dramatically (as shown in Figure 2). The resulting signal may be beyond the input range of your mixer or amplifier which can cause distortion. In these cases an in-line attenuator or "pad" installed between the microphone and the mixer will eliminate the distortion. However, because such pads do not allow phantom power to pass, phantom power must be applied between the pad and the microphone.

MAINTENANCE INSTRUCTIONS

You have purchased one of the finest electret condenser microphones available. A little care will allow you continued use of this precision instrument for many years.

Your electret condenser microphone should not be left in the open sun or other hot environments where temperatures may approach or exceed 54.4 degrees C (130 degrees F) for any period of time. Following this suggestion will prolong the life of the generating element.

If you feel your unit is malfunctioning, have it examined and repaired only by an Electro-Voice authorized repair service station.

POWERING THE 1772

Unlike normal condenser microphones, the electret condenser does not need a polarizing voltage because a permanent charge is captured in the diaphragm material. However, a small voltage with low current drain is necessary to power the FET impedance converter which must be used to lower the extremely high impedance of the electret head.

The 1772 may be operated from any phantom power source between 24 and 48 volts. The microphone may also be operated from a phantom supply with a battery installed without any affect on microphone performance.

To power the 1772 by battery, gain access to the battery compartment by unscrewing, then pulling away the rear sleeve of the microphone, exposing the battery clips (see Figure 5). A $4\frac{1}{2}$ -volt alkaline battery must be

inserted, being certain to follow the polarization label in the microphone housing and on the battery. With the very small current drain of 3.5 ma, it is common to have 150 hours or more of battery life. An Alkaline-type battery is recommended because of its much greater shelf life and less likelihood of leakage. A noticeable reduction in output gradually occurs well before complete failure, usually allowing replacement of the battery without program interruption. To lengthen the battery life, be sure to always turn off the microphone after use.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a Single-D cardioid electret condenser type with frequency response of 50 to 18,000 Hz.

The microphone shall have an 150-ohm balanced output, with an output level of -49.0 dB (0 dB = 1 mW/10 dynes/cm²), and 2.5 mv/Pascal @ 1 kHz. The microphone shall have an electret condenser generating element whose output shall not be appreciably affected by temperature extremes from -17.8 degrees C (0 degrees F) to 54.4 degrees C (130 degrees F) and/or by humidity extremes. An on/off switch shall be provided. A 4.6 m (15 ft), two-conductor shielded, brown, rubber-jacketed cable with a Switchcraft A3F connector installed at the microphone end shall be provided.

The case shall be zinc die-cast with an aluminum battery compartment cover. The finish will be a non-reflecting gray paint. Dimensions shall be 201.9 mm (7.95 in.) long, not including cable connector, with shank diameter of 25.4 mm (1.00 in.). Net weight (including the battery, but less cable) shall be 288 grams (10.6 oz.). A black stand clamp shall be furnished.

The Electro-Voice Model 1772 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, the 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. The unit will be returned prepaid. Warranty does not cover finish or 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 repair information and service locations, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, 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.

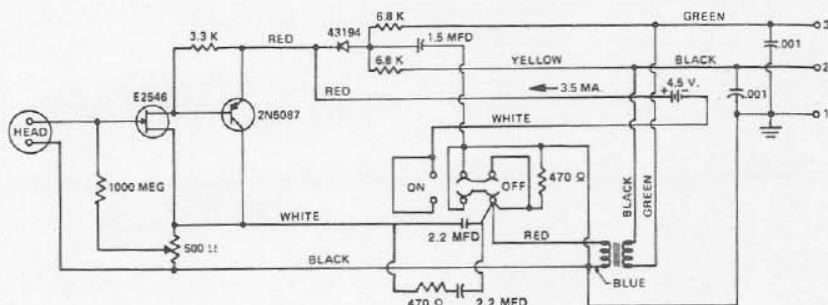


FIGURE 4 — Schematic

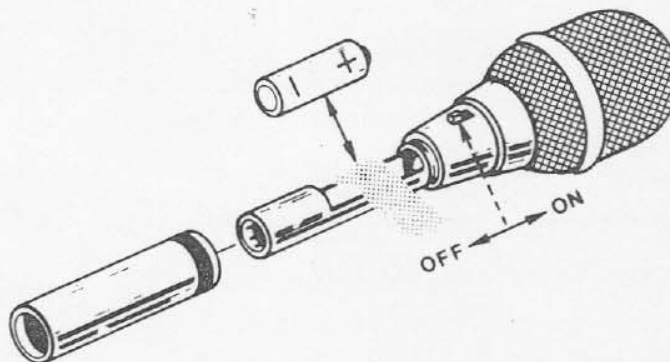


FIGURE 5 — Battery Replacement

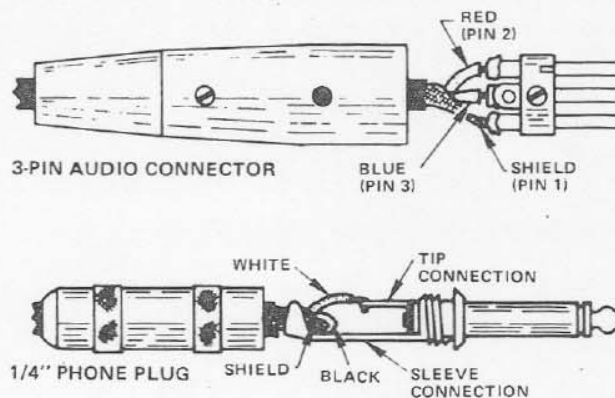


FIGURE 6 — 3-Pin Connector & 1/4" Phone Plug Wiring Connections