Electro-Voice
MICROPHONES
ELECTRO-VOICE, INC.
Buchanan, Michigan

TECHNICAL DATA SHEET No. 65
MODEL — 208
TYPE — CARBON DIFFERENTIAL

The ELECTRO-VOICE Model 208, a single button, hand-held, carbon Differential* microphone is designed for maximum intelligibility under extreme noise. Ambient noise is fed into dual apertures in correct phase relationship to provide almost complete cancellation. Speech which originates close to one of the apertures is fully reproduced. Articulation is 97% under quiet conditions and 88% under 115 db of ambient noise.

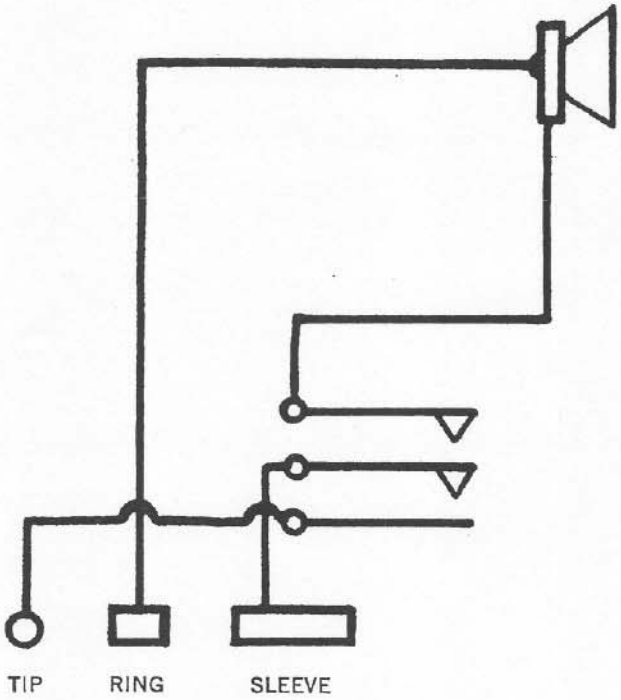

FIG. 1 — CONNECTIONS, MODEL 208

PHYSICAL:

The Model 208 is of sturdy construction to withstand hard usage. The unit is enclosed in a black polystryene case. The Model 208 is equipped with 4 feet of two-conductor shielded, cotton braid-jacketed cable.

ELECTRICAL:

Normal operating current is 40 milliamperes. Normal carbon resistance is from 80 to 100 ohms.

*Patent No. 2,350,010

After the microphone has been in use for several years, it should be returned to the factory for repacking. The Model 208 can be operated into either a resistance coupled input, Figure 2, or transformer coupled input, Figure 3. The advantages of a resistance coupled input are:

No hum pickup.
No transformer distortion.
Longer microphone life.

The disadvantages of a resistance coupled input are:

25 db lower level.
At least one additional stage of amplification required.

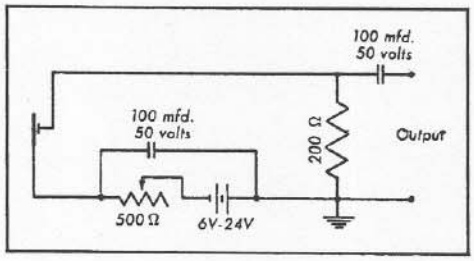

FIG. 2 — RESISTANCE COUPLED INPUT

The advantages of a transformer coupled input are:

25 db higher level.
Less voltage amplification required.

The disadvantages of a transformer coupled input are:

Transformer must be carefully located for elimination of inductive pick-up.
Shorter microphone life because of inductive surge when breaking switch contacts.

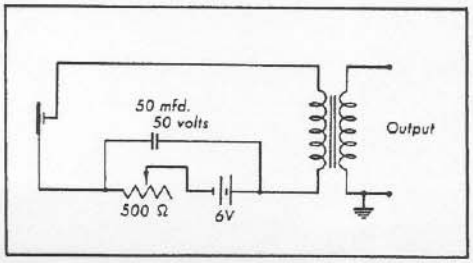

FIG. 3 — TRANSFORMER COUPLED INPUT

NOTE:

When used into a transformer input, a condenser having a value from .01 to .2 mfg. across the second and third terminals will prevent undue burning of the carbon granules. The microphone circuit utilizes only three microphone leads, one of which is worked against ground to actuate the relay. The closing of the relay contacts applies both microphone and transmitter power.

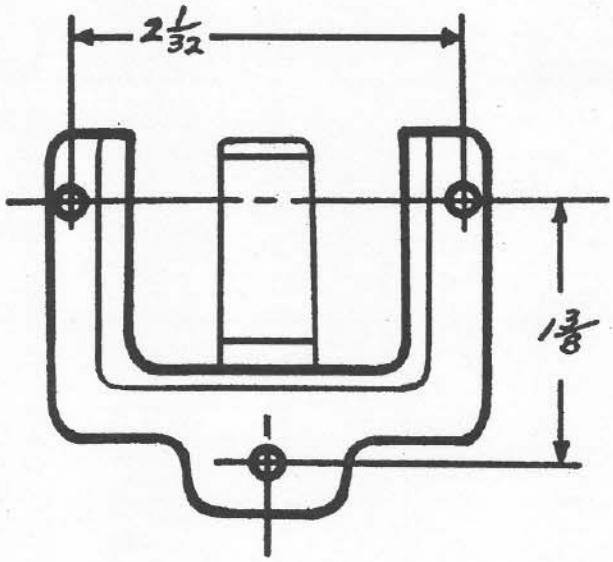

FIG. 4 — FULL SIZE TEMPLATE FOR MOUNTING FRAME

APPLICATION:

The Model 208 can be used indoors or outdoors, for railroads, marine, aircraft, police, and industrial call or paging systems . . . in any location where high ambient noise conditions prevail.

For best noise-cancelling speech transmission, the microphone must be held lightly against the upper lip. This brings the mouth in the correct relation to the grille for proper transmission of speech. If the microphone is not held close to the lips, speech as well as ambient noise will be cancelled.

Dual apertures provide the correct phase relationship which cancels ambient noise which enters. When the microphone is held in the proper position, the speaker talks directly into only one aperture which weighs the acoustic balance of the microphone in favor of the speech originating close to the aperture and this speech is transmitted without cancellation.

SPECIFICATIONS:

OUTPUT LEVEL: Voltage:
(10 db below 1 volt/100 dynes/cm^2) across 200 ohm load, with 50 ma button current.
Voltage developed by normal speech: .031 volt (100 ohms).

FREQUENCY RESPONSE: To sounds of close origin, substantially flat from 100-4000 cps.

TEMPERATURE RANGE:
From —40° F. to +185° F.

PRESS-TO-TALK SWITCH: Actuates button and relay simultaneously.

INPUT: Standard single-button input required.

CURRENT: 10-60 ma button current.

CABLE: Eqiupped with 4 feet of two conductor shielded, cotton braid-jacketed cable.

DIMENSIONS: 2¼″ x 1½″ x 1⅛″.

NET WEIGHT: Less than 2¼ oz.