

# Electro-Voice

## MICROPHONES

ELECTRO-VOICE, INC.

Buchanan, Michigan

TECHNICAL DATA SHEET No. 34

MODEL — 655

TYPE — DYNAMIC

The ELECTRO-VOICE Model 655 (See Fig. 1) is a dynamic type, non-directional microphone designed and engineered to the highest standards of high fidelity FM, AM and TV broadcast service. The exterior dimensions of the microphone make it particularly useful in solving the problems of TV staging. Yet, its slim, trim design is made possible without the necessity for closely associated auxiliary equipment. The traditional concept of bulk in dynamic microphones has been abandoned in the Model 655. Microphone diameter is only one inch and its length is less than 10 inches. The capacity of the magnetic circuit is equivalent to that of microphones having heads four times as large. The baton design of the 655 makes it handy for "pass around" use in audience participation and man-in-the-street shows. The microphone can be worked from any or all directions without audible frequency discrimination.

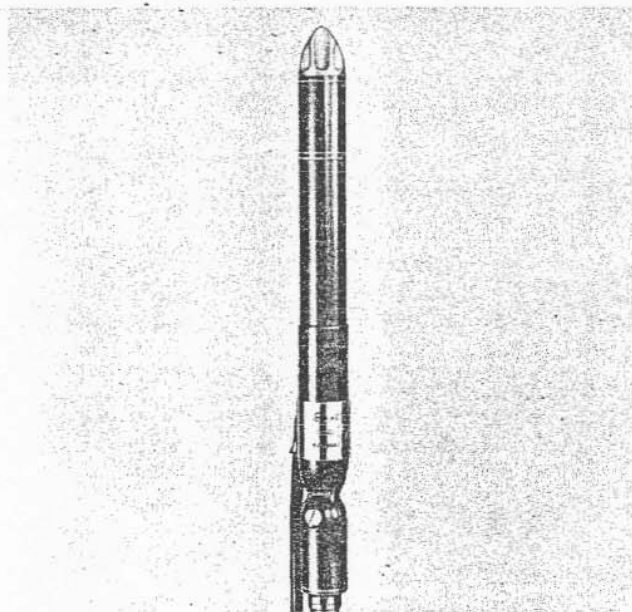


FIG. 1 — MODEL 655 MICROPHONE

### PHYSICAL:

Microphone case is high tensile, lathe-turned aluminum, finished in handsome Alumilite. Black Alumilite finish with satin chrome trim is optional. The microphone is available with two grille styles. Model 655 has an attractive streamlined, fluted aluminum grille. Model 655-A (see Fig. 2) is equipped with a "pop-proof" acoustically treated wire mesh grille which stops wind and breath blasts. The microphone may be mounted directly on an upright stand or on a swivel which permits directing the microphone toward the sound source. The swivel is easily removed from the stand when the microphone is to

be carried by hand. Both microphone and swivel are provided with  $\frac{1}{2}$ " pipe thread. A  $\frac{1}{2}$ " to  $\frac{5}{8}$ " — 27 thread adaptor is supplied.

### ACOUSTICAL:

The Model 655 microphone is non-directional at low frequencies, becoming slightly directional at extremely high frequencies. This characteristic is a function of the diameter of the microphone case and does not classify the 655 as a directional microphone. However, this feature, combined with the ability of the microphone to be tilted  $180^\circ$ , provides a method of minimizing high frequency feedback in public address applications.

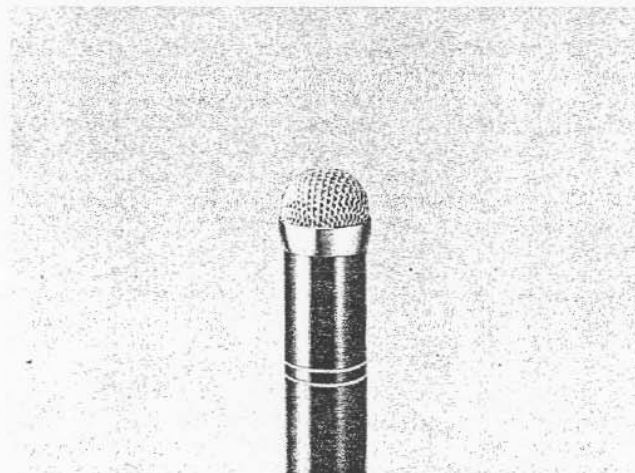


FIG. 2 — MODEL 655-A MICROPHONE

Microphone diaphragm is E-V's exclusive Acoustalloy, modified for optimum modulus of elasticity. Diaphragm diameter is only  $\frac{7}{8}$ ". Because case cavity size is directly proportional to diaphragm area, the reduced case dimensions are possible with no loss of efficiency. Acoustalloy permits smoother response over a wider frequency range and is practically indestructible under normal use, resisting high humidity, temperature extremes, corrosive effects of salt air and severe mechanical shocks.

The grille is calculated to give polar curve characteristics most desired in studio broadcast service. No frequency discrimination is audible when the microphone is worked from any position within  $90^\circ$  of its vertical axis. The "pop-proof" grille of the 655-A is acoustically treated to stop wind and breath blasts.

### ELECTRICAL:

Frequency response is uniform from 40 to 15,000 cps.  $\pm 2.5$  db (see Fig. 3). Individual laboratory control is exercised to maintain conformity to modern

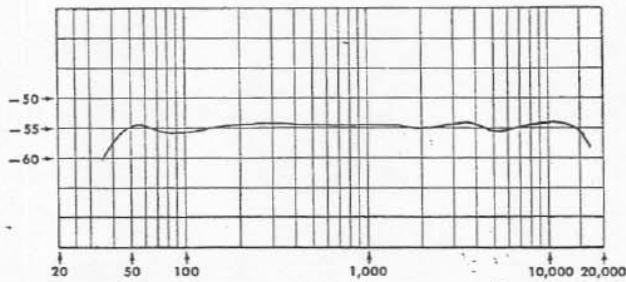


FIG. 3 — RESPONSE, 655 AND 655-A

fidelity standards and to anticipate respectable receiver audio systems of the future. Power rating, (0 db = 6 mw/10 dynes/cm<sup>2</sup>) is -53 db, providing excellent signal-to-thermal noise ratio.

Alnico V and Arnico magnetic iron are combined in a non-welded magnetic circuit to develop 15,000 gauss, comparable to that available in microphone heads four times the size of that of the 655. The moving coil type generating element is free from proximity effect.

**APPLICATION:**

The Model 655 is specifically designed for high fidelity FM, AM and TV pickups. Its small size makes it inconspicuous; easy to disguise in TV program staging. Wide frequency response, high fidelity characteristics, wide pickup range and light weight make it particularly useful in audience participation shows and group work. In addition, it is recommended for all types of better quality public address, recording, paging and dispatching systems and radio communication.

**MECHANICAL:**

**IMPEDANCE ADJUSTMENT:** Adjustment, made at the internal terminal strip, permits change from 250 ohms impedance normally supplied to an alternate 50 ohms.

**STAND COUPLER:** 1/2" pipe thread provided on microphone and swivel. 1/2" to 5/8" — 27 thread pipe thread adaptor provided with each microphone.

**MOUNTING:** Swivel permits 180° tilt and is removable for upright stand mounting and hand held applications.

**CABLE CONNECTOR:** Cannon XL-3. Inserted in cable 6 inches from the microphone.

**CABLE:** The Model 655 is supplied with 20 feet of the best quality two conductor, shielded, synthetic jacketed broadcast type cable.

**CASE:** Lathe-turned, high tensile aluminum, finished in Alumilite. Black Alumilite with satin chrome trim optional. Case is easily disassembled for cable repair.

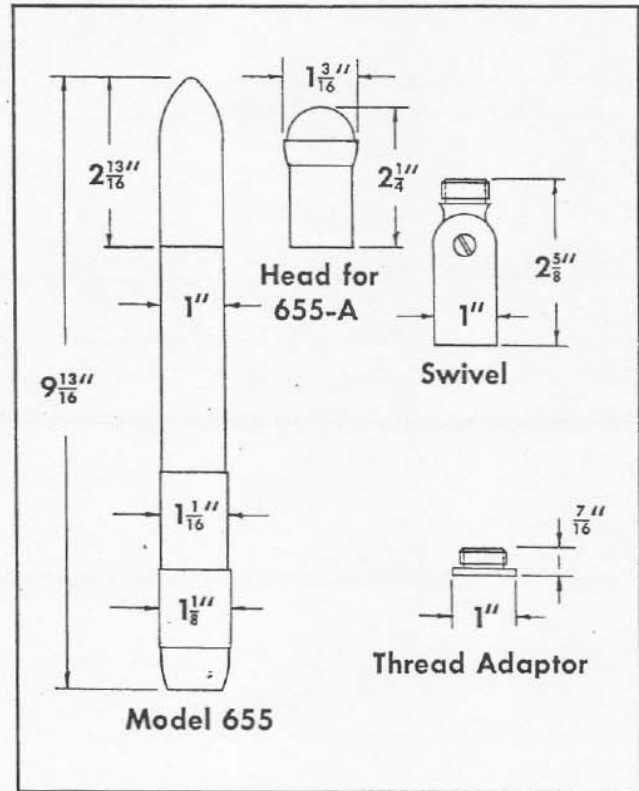


FIG. 4 — DIMENSIONS, MODELS 655 AND 655-A

**NET WEIGHT:** Case, including built-in transformer, 11 oz.

**DIMENSIONS:** See Fig. 4).

**SPECIFICATIONS:**

**OUTPUT LEVEL:** Power rating: (0 db = 6 mw/10 dynes/cm<sup>2</sup>) -53 db.

**FREQUENCY RESPONSE:** 40 to 15,000 cps. ±2.5 db. Hole in lower section of case permits easy control of bass response.

**POLAR PATTERN:** Non-directional, becoming slightly directional at extremely high frequencies.

**GRILLE:** Choice of smart, aluminum fluted grille (on 655) or "pop-proof" wire mesh grille (on 655-A).

**DIAPHRAGM:** Exclusive Acoustalloy, modified for optimum modulus of elasticity. Diaphragm diameter, 7/8".

**ELEMENT:** Moving coil dynamic. Uses Alnico V in magnetic circuit. All parts precision ground to very close tolerances.

**WARRANTY:** The E-V Model 655 is guaranteed against defects in workmanship or material.