

Electro-Voice®

ELECTRO-VOICE, INC.
BUCHANAN, MICHIGAN



Model 650 Microphone

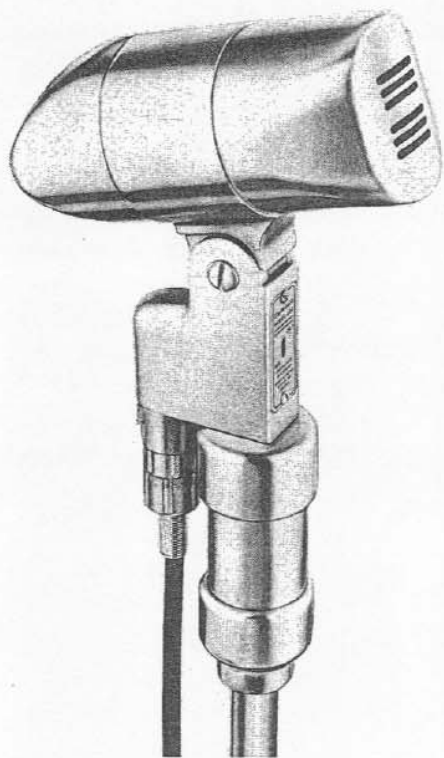


Fig. 1 — Model 650 Microphone

The Electro-Voice Model 650 Microphone is a dynamic, omnidirectional type providing an extremely smooth, wide range response and the highest output available in this type of commercial microphone. It is designed for all broadcast applications — studio, remote, recording, and especially for those applications where highest signal-to-system noise ratio is desirable. Microphone can be tilted through a 90° arc toward sound source. It can be mounted on a floor or desk stand.

The Model 650 features the exclusive Electro-Voice Acoustalloy diaphragm. This nonmetallic diaphragm permits smooth response over an ultra-wide frequency range and withstands high humidity, temperature extremes, corrosive effects of salt air, and severe mechanical shocks. It is practically indestructible with normal use.

SPECIFICATIONS

Type: Dynamic

Frequency Response: Uniform from 40 to 15,000 cps. See fig. 2.

Impedance: Recessed switch in microphone stud permits quick selection of 50 or 250 ohms. Line balanced to ground and phased.

Output Level:

50-ohms impedance: -48 db*; RETMA sensitivity rating, -141 db

250-ohms impedance: -48 db*; RETMA sensitivity rating, -140 db

*0 db = 1 mw/10 dynes/cm²

Polar Pattern: Essentially omnidirectional, becoming directional with rise in frequency. See fig. 3.

Diaphragm: Electro-Voice Acoustalloy. A magnetic shield prevents iron particles from reaching diaphragm.

Magnetic Circuit: Employs Alnico V and Armco magnetic iron in a nonwelded circuit

Case: Pressure cast zinc

Finish: Satin chrome

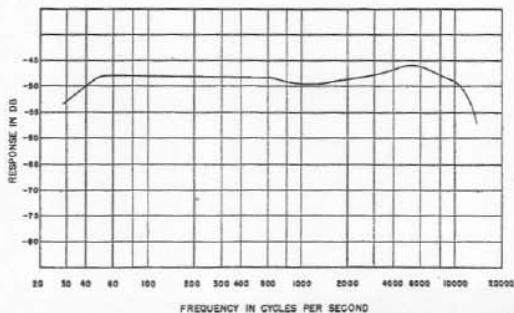
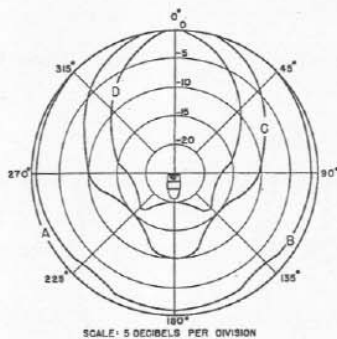


Fig. 2 — Response



Electro-Voice Specifications / Model 650 Microphone



A — 500 cps C — 4,000 cps
B — 1,400 cps D — 8,000 cps

Fig. 3 — Polar Pattern

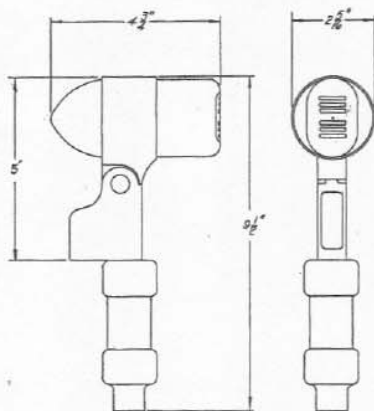


Fig. 4 — Dimensions

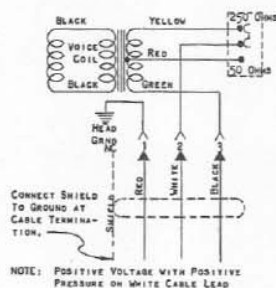


Fig. 5 — Wiring Diagram

Dimensions:

Diameter: $2\frac{5}{16}$ in.

Length: $4\frac{3}{4}$ in.

Height: $9\frac{1}{2}$ in. including shock mount

See fig. 4.

Net Weight: 2 lb, 2 oz not including shock mount
2 lb, 12 oz including shock mount

Cable: 18-ft, three-conductor, shielded, neoprene jacketed, broadcast type.

Cable Connector: XL-3-11 Cannon, locking, three-contact wiping type built into microphone stud. Microphone can be tilted toward sound source without strain on connector or cable.

Stand Coupler: $\frac{5}{8}$ in.—27 thread

Shock Mount: Equipped with Electro-Voice Model 345 External Shock Mount. Dual mounting reduces side sway of microphone without reducing efficiency of the shock isolation unit.

Warranty: The Electro-Voice Model 650 Microphone is guaranteed against defects in workmanship and material.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be an Electro-Voice Model 650 or equivalent. The microphone shall be an omnidirectional, dynamic type with a uniform frequency response from 40 to 15,000 cps. The diaphragm shall be nonmetallic Acoustalloy and shall have a magnetic shield to prevent dust and iron particles from reaching the diaphragm. The available impedances shall be 50 or 250 impedances. It shall be possible to select either impedance by means of a recessed switch in microphone stud. Line shall be balanced to ground and phased.

The output level shall be -48 db with 0 db equalling 1 mw/10 dynes/cm². RETMA sensitivity rating shall be -141 db for 50-ohm impedance and -140 db for 250-ohm impedance. The magnetic circuit shall be a nonwelded circuit and employ Alnico V and Armco magnetic iron.

The case shall be made of pressure-cast zinc. The microphone shall have a diameter of $2\frac{5}{16}$ in., a length of $4\frac{3}{4}$ in., and a height of 5 in. or height including shock mount of $9\frac{1}{2}$ in. The microphone shall have a weight of 2 lb 2 oz without shock mount or 2 lb 12 oz including shock mount. Finish of microphone shall be satin chrome.* An 18-ft three-conductor, shielded, synthetic rubber jacketed, broadcast-type cable shall be provided. The microphone shall have a built-in, three-contact, wiping-type, cable connector. It shall be possible to tilt the microphone through a 90-degree arc.

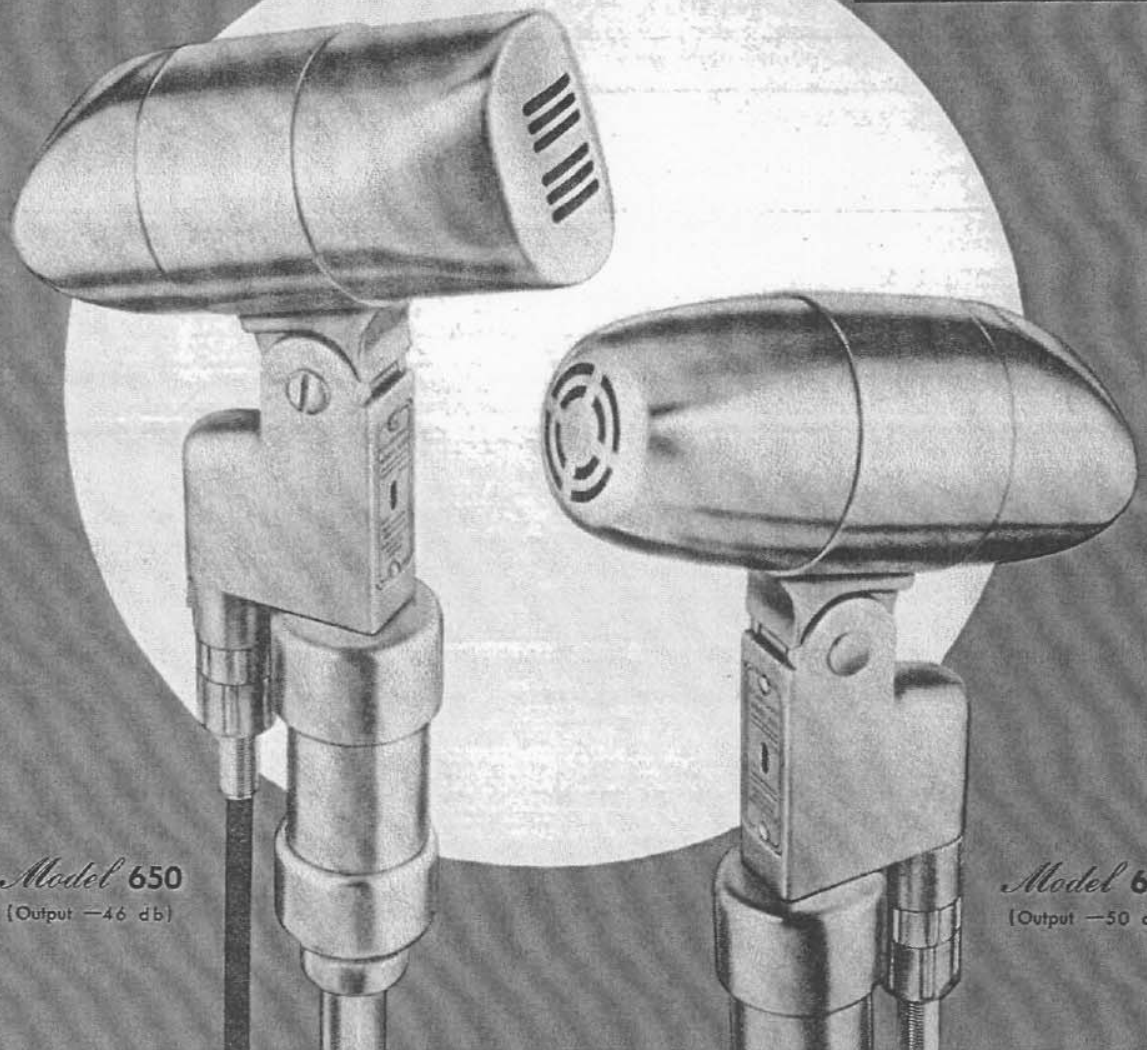
The microphone shall include a stand coupler with a $\frac{5}{8}$ in. -27 thread to permit use with a shock mount such as the Electro-Voice Model 345, a floor or desk stand.

*Nonreflecting gray finish may be specified instead of satin chrome, if desired.

Electro-Voice

High Fidelity
BROADCAST DYNAMIC

Model 650
Model 645



Model 650
(Output -46 db)

Model 645
(Output -50 db)

ENGINEERED TO THE HIGHEST FM and AM BROADCAST STANDARDS

**Response 40 cps to 15 kc, ± 2.5 db! Extremely High Output!
Impedance Selector! Dual-Type Shock Mount! Remarkably Rugged!
Individually Laboratory Calibrated! Proved in Studio and Remote Use!**

Actual performance *on the air* has won top rating for the "650" and "645." Developed in cooperation with station and network engineers . . . they meet the most exacting requirements of modern high fidelity FM, AM, and TV broadcast service.

Consistently accurate wide-range, flat response and rugged shock-resistant construction make them ideal for studio and remote pick-up. Extremely high output level gives excellent signal to noise ratio. Such outstanding *performance* is achieved through the use of a specially-designed non-metallic Acoustalloy diaphragm and a newly developed magnetic structure. Close toler-

ances, quality control and individual laboratory calibration *guarantee* uniformity.

Compact, functional in design, these new microphones are visually as well as technically impressive . . . and easy to use. Comparison tests and network operation have proved their superiority.

You need only try the "650" or "645" to convince yourself that they are today's finest broadcast microphones from every standpoint.

Model 650. List Price \$150
Model 645. List Price \$100

ELECTRO-VOICE, INC. • BUCHANAN, MICHIGAN

FEATURES and SPECIFICATIONS of *EV* Broadcast Models "650" and "645"

APPLICATIONS

Their rugged quality and proved performance recommend these high fidelity dynamic microphones for individual or group pick-up and reproduction of speech and music, in the studio or on remotes, indoors and outdoors . . . for all types of AM, FM and TV broadcasting . . . for high quality recording . . . for the finest sound amplification systems . . . and for sound measurement. Now in daily use on important network programs. Can be used in the hand or on a stand.

ULTRA WIDE RANGE RESPONSE

High fidelity frequency response conforms to modern FM as well as AM standards. Assures accurate, faithful reproduction of speech and music.

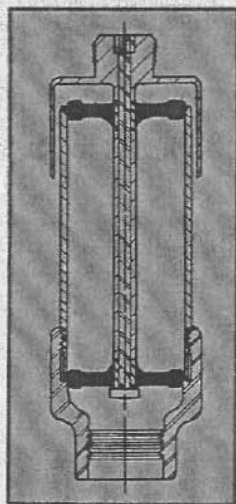
Model 650: Response ± 2.5 db, 40-15,000 c.p.s.

Model 645: Response ± 2.5 db, 40-15,000 c.p.s.

EXTREMELY HIGH OUTPUT LEVEL

Model 650: Output 46 db below 6 milliwatts for 10 dynes/cm² pressure.

Model 645: Output 50 db below 6 milliwatts for 10 dynes/cm² pressure.

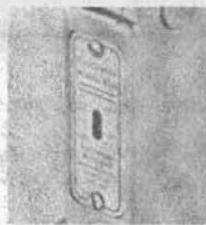


NEW DUAL-TYPE EXTERNAL SHOCK MOUNT

Newly developed Model 345 vibration isolation shock mount utilizes dual Lord shear type mountings which provides double shock-absorber action. Prevents reproduction of external shocks and undesirable stand vibrations. Reduces side sway of microphone without effecting the efficiency of the isolation unit. The microphone head may be tilted through an angle of 60 degrees, yet it retains its center of gravity with respect to the shock mount. Attractively finished in matching satin chromium. Easily attached or removed. Net wt. of shock mount is 10 oz.

OMNI-DIRECTIONAL

Compact size and small grille diameter make the microphone non-directional at low frequencies becoming directive at high frequencies.



NEW IMPEDANCE SELECTOR

Recessed switch in microphone stud gives instant selection of either 50 or 250 ohms impedance, balanced to ground. This convenient selector is easily actuated with a pencil point or small screw driver; yet being recessed, it cannot be moved accidentally.

BUILT-IN CANNON XL-3 CONNECTOR

Permits tilting of microphone without strain on the cable or connector. Reduces cable breakage. Quick disconnect permits separate handling of microphone and cable for remotes. Allows quick change of cable at any time.

EXCLUSIVE ACOUSTALLOY DIAPHRAGM

Developed through years of research, the non-metallic Acoustalloy diaphragm makes possible higher output level and smoother, wider range frequency response. Besides—it is practically indestructible. Withstands high humidity, extreme temperature, corrosive effects of salt air, and severe mechanical shocks.



MAGNETIC CIRCUIT

Employs Alnico V and Armco iron in a highly efficient non-welded magnetic circuit. Model 650 has all internal surfaces ground to tolerance of .0005".

LABORATORY QUALITY CONTROL

Every microphone is held to close tolerances and is individually laboratory calibrated and approved for performance. Fully guaranteed by *Electro-Voice*.

SHOCK-PROOF DESK STAND

Model 426. Provides balanced, stable support. Dual Lord shear type shock mount is built into sturdy cast base. Rich gray hammerloid finish. Non-skid rubber shoe over bottom. Fits all standard $\frac{5}{8}$ "-27 thread microphones. Size $6\frac{1}{4}$ " long, $4\frac{3}{4}$ " wide, 4-5/16" high including shock mount. Net wt., $1\frac{3}{4}$ lbs. List Price.....\$20.00



TILTABLE HEAD • Large bearing surface permits easy smooth, firm tilt through 60° angle. Prevents unexpected tilting of microphone. Wear take-up provided by screw on side of stud.

STAND MOUNTING STUD • Wide stud provides ample clearance for connect or disconnect of cable. Also permits use of all types of floor stands with or without external shock absorber.

STAND COUPLER • Standard $\frac{5}{8}$ "-27 thread.

MICROPHONE CASE • Highest purity (99.99%) pressure cast metal.

FINISH • Rich, durable Satin Chromium. Statuary bronze or telephone black, optional.

CABLE • Equipped with 20 feet of Whitney-Blake highest quality two-conductor shielded broadcast-type cable.

DIMENSIONS • Microphone case is $2\frac{1}{4}$ " x $4\frac{3}{4}$ ". Height, including mounting stud.

less shock mount, is $5\frac{1}{4}$ ". Shock mount is $1\frac{1}{2}$ " x $3\frac{3}{4}$ ".

WEIGHT • Net, including shock mount, *Model 650*, 2 $\frac{3}{4}$ lbs. *Model 645*, 2 $\frac{1}{4}$ lbs. Net, without shock mount, *Model 650*, 2 $\frac{1}{8}$ lbs. *Model 645*, 1 $\frac{3}{8}$ lbs.

ELECTRO-VOICE, INC. BUCHANAN, MICHIGAN

Export: 13 East 40th St., New York 16, U.S.A.
Cables: Arlab

Printed in U.S.A.

NO FINER CHOICE THAN

Electro-Voice