

Figure 1—Dimensions

**DESCRIPTION AND APPLICATIONS**

The Electro-Voice Model 651 microphone represents an innovation in design which is centered around convenience for the user and sturdy, reliable operation under the most adverse conditions. The microphone always remains a constant distance from the talker's mouth, providing an extremely constant level. The close proximity to the talker's mouth provides for a very high relative level over background ambient noise such as crowd noise, vehicle noise, etc.

The 651 is a miniature dynamic microphone designed for use in broadcasting, performing, P.A., lecturing, etc., where hands-free operation is a major consideration. The extremely light microphone assembly mounts to eyeglass frames or to the lightweight headband which is supplied. A small tube, which conducts sound from the talker's mouth to the microphone element, extends down to the side of the mouth completely out of the field of vision. A supple lightweight cable connects the microphone to a small and versatile preamplifier box which may easily be concealed on the user by means of an integral belt-clip.

The preamplifier box combines many important functions into a small easily accessible area. Since the output of the microphone element itself is lower in level than would be compatible with normal 150-ohm or Hi-Z facilities, a small preamplifier is provided in the preamp box which not only strengthens the signal, but adds certain equalization which causes the final output signal of the microphone to be of excellent quality. In addition, the box houses an easily accessible muting button (cough button) which momentarily turns the microphone off without any noise on the audio line.

The box also houses the standard "XLR" broadcast type connector, two size AA cells (not supplied) necessary for

powering the amplifier, and an on-off-test switch with its associated battery condition indicator light.

**SPECIFICATIONS**

|                                  |  |
|----------------------------------|--|
| Type:                            | Dynamic  |
| Frequency Response:              | 60-10,000 Hz   |
| Impedance:                       | Switchable, Hi-Z or Lo-Z<br>(Hi-Z output impedance being approx. 1,000 ohms at a relatively high level, it is possible to run longer than normal lines without appreciable frequency response deterioration) |
| Polar Pattern:                   | Omnidirectional (pressure mic)   |
| Output Level,                    |  |
| Microphone Cartridge:            | -76 dB<br>(0 dB = 1 mv/dyne/cm <sup>2</sup> )  |
| Total Output: (including preamp) | Lo-Z, -54 dB<br>(0 dB = 1 mw/10 dynes/cm <sup>2</sup> )<br>Hi-Z, -53 dB<br>(0 dB = 1 v/dyne/cm <sup>2</sup> )  |
| Case Material,                   |  |
| Microphone Element:              | High impact Delrin   |
| Preamp Box:                      | Steel  |
| Finish,                          |  |
| Microphone Element:              | Non-reflecting black   |
| Preamp Box:                      | Fawn beige micomatte   |
| Transistor Amplifier,            |  |
| Voltage Gain:                    | 14 dB at 1,000 Hz  |
| Rated Supply Voltage:            | 3 v (2 Size AA)  |
| Maximum Undistorted Output:      | 135 dB   |
| Current Drain:                   | 2.5 ma   |
| Dimensions,                      |  |
| Transducer Assembly:             | ½" dia., 1" long   |
| Microphone Tube:                 | 3/16" dia., 3½" long   |
| Preamp Box:                      | 3-7/32" l., 2-19/32" d., 1-7/32" w.  |

**MODEL 651 MINIATURE DYNAMIC**

## OPERATING INSTRUCTIONS

**Battery Access:** After unpacking the unit, two size AA batteries should be inserted in the battery compartment. Access to the battery compartment is by removing the battery plate found directly adjacent to the connector at the base of the preamp box. A dime or other thin coin should be sufficient to loosen the fastening screw at the center of the battery plate. (See Figure 2). The battery plate is then pulled away and the two size AA batteries are inserted, taking care to follow the polarity instructions inside the case. Replace the battery cover plate making sure that the lead wires are not pinched in doing so. Secure the fastening screw, and the unit is ready for operation. Changing of batteries may be handled in the same way.

## FUNCTION SWITCH

The on-off-test function switch allows the preamplifier to be turned off when not in use. The normal position for storage when not in use is in the "off" position. (See Figure 2).

Just prior to actual use, the switch may be pushed through the "on" position over to "test." In the test position the battery condition indicator light should go on. If the condition indicator light comes on, it may be assumed that there is a minimum of four hours battery life remaining. (Note: The test position should be for momentary battery checking only.) After testing the battery, the switch should then be returned to the "on" position for normal use.

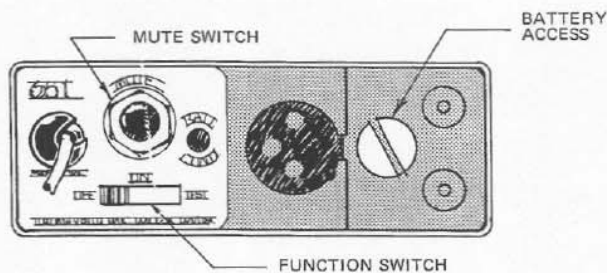


Figure 2—Preamp Box

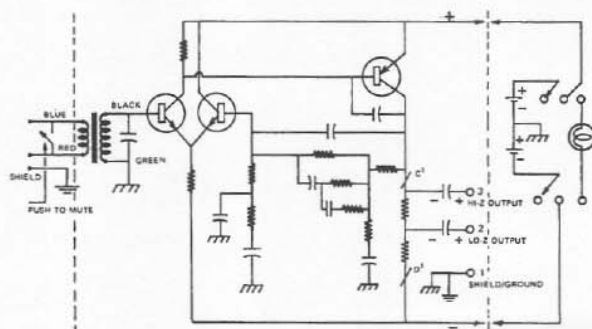


Figure 3—Wiring Diagram

## MUTING SWITCH

A small button labeled "mute" is located on the bottom of the preamplifier box which, when depressed, shorts the microphone leads. This momentarily turns the microphone off without any "thump" or transient noise on the line.

## MICROPHONE PLACEMENT

The microphone may be attached either to the light-weight headband supplied, or the temple bars of regular eyeglasses. It may be operated conveniently from either side of the face. The Model 651 should be positioned so that the end of the thin black tube is in the vicinity of the corner of the mouth, ¼-inch or so away from the face.

## MICROPHONE TERMINATION

The microphone is designed to work into a standard Lo-Z unbalanced input or a Hi-Z input. Access to the 651 microphone is through the professional-type A3M connector at the bottom of the preamplifier box. The 651 is a dual impedance device, and output impedance can be easily changed from low impedance to high impedance or vice versa. (See Figure 4) The ground pin always remains Pin 1. By attaching the "hot" lead of the microphone cable to Pin 2, a Lo-Z unbalanced situation is achieved. For Hi-Z operation, Pins 1 and 3 should be connected to ground and positive, respectively. Normally, impedance will be set up and further adjustments may not be necessary.

## WARRANTY

Electro-Voice microphones are guaranteed for the life of the microphone against malfunction due to defects in workmanship and materials. If such malfunction occurs, 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. Unit will be returned prepaid. Warranty does not cover finish, appearance items, cables, cable connectors, or switches and does not cover 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 correct shipping address and instructions on return of Electro-Voice products for repair and locations of authorized service agencies, please write: Service Department, Electro-Voice, Incorporated, 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831).

Electro-Voice also maintains complete facilities for non-warranty service.

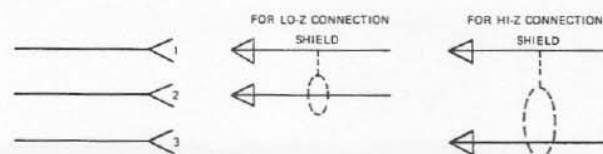


Figure 4—Cable Connections