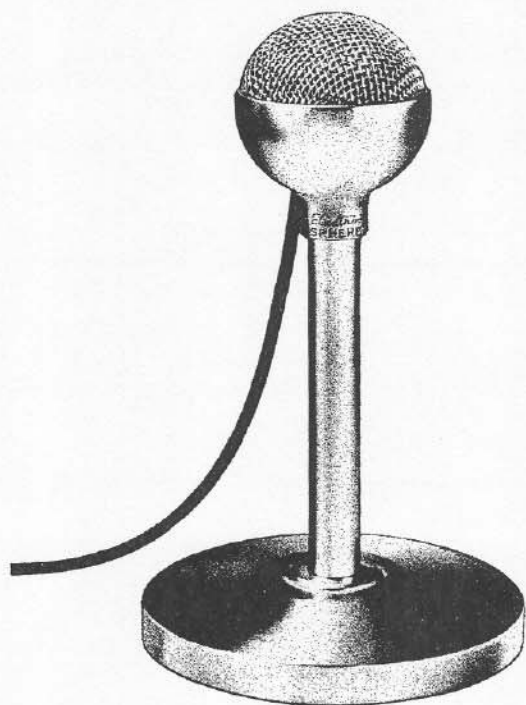




### FEATURES

- Smooth response - high output level
- AC-DC insulated for safety - no shock hazard
- Longer service life - moisture barrier protects crystal element

### DESCRIPTION AND APPLICATIONS

The Electro-Voice model 920 Spherex is an omnidirectional, crystal type microphone designed for conference or group pickup. It is useful in public address, recording, amateur and general communication service where economical, wide angle pickup is required.

Designed to minimize shock sensitivity, the internal mounting structure is an integral part of the case-mechanical shock cannot cause shifting of the parts. A carefully designed moisture barrier protects the crystal element for extended service life. The 15-foot shielded cable is securely fastened to the inside of the case for strain relief. The microphone case is isolated from cable shield to eliminate the danger of electrical shock when the model 920 is used with amplifiers or recorders using the AC-DC configuration. Response is 60 to 7,000 Hz, slightly rising.

The model 920 should be connected for operation into a load whose value is not less than 500,000 ohms. An even higher resistance value will further enhance low-frequency response. The microphone lead is connected to the grid of the input tube and the cable shield is connected to chassis ground. The crystal may be seriously damaged if connected to a loudspeaker or power supply unit carrying a high voltage.

Crystal and ceramic microphone elements function as voltage generators. Use of extremely long cables results in relatively severe attenuation of the signals generated by these devices. Generally, cables

longer than 20 feet should not be used. Attenuation resulting from the use of longer cables is illustrated below:

| Cable Length <u>in Feet</u> | DB Loss <u>in Level</u> |
|-----------------------------|-------------------------|
| 20                          | 0.8                     |
| 40                          | 1.4                     |
| 60                          | 2.0                     |
| 100                         | 3.2                     |
| 150                         | 4.4                     |
| 200                         | 5.6                     |

### SPECIFICATIONS

|                       |                                                                |
|-----------------------|----------------------------------------------------------------|
| Element:              | Crystal                                                        |
| Frequency response:   | 60 - 7,000 Hz                                                  |
| Polar Pattern:        | Omnidirectional                                                |
| Impedance:            | Hi Z                                                           |
| Output Level:         | -50 db<br>0 db = 1 volt/dyne/cm <sup>2</sup>                   |
| EIA Sensitivity:      | -150 db                                                        |
| Diaphragm:            | Duralumin<br>(treated for corrosion resistance)                |
| Crystal:              | High capacity, special moisture barrier                        |
| Case:                 | Pressure-cast zinc                                             |
| Dimensions:           | 2-5/16" x 2-13/16"                                             |
| Finish:               | Satin chrome                                                   |
| Net weight:           | 8 ounces                                                       |
| Cable:                | 15-foot, single conductor, shielded, synthetic rubber jacketed |
| Stand coupler:        | 5/8 in. -27 thread                                             |
| Optional accessories: | E-V 423A desk stand                                            |

### CAUTION NOTE

Temperature precautions: Crystal microphones should not be exposed to temperatures higher than 112° F. Avoid direct sunlight, closed automobiles or show windows in hot weather for extended periods of time.

### WARRANTY

The Electro-Voice model 920 microphone is guaranteed against defects in workmanship and material for one year.

### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a crystal type with uniform frequency response from 60 to 7,000 Hz; The diaphragm shall be Duralumin and shall be treated to resist corrosion. Output shall be high impedance and output level shall be -50 db (0 db = 1 volt/dyne/cm<sup>2</sup>). EIA sensitivity rating shall be -150 db. A suitable barrier shall be provided to isolate the crystal from moisture.

The case shall be pressure-cast zinc. The microphone shall have a diameter of 2-5/16 inches, and a length of 2-13/16 inches. Net weight shall be 8 ounces. Finish shall be satin chrome. A 15-foot, single conductor, shielded, synthetic rubber-jacketed cable shall be furnished. 5/8"-27 threads for stand mounting shall be provided in bottom of microphone case. The Electro-Voice model 920 is specified.

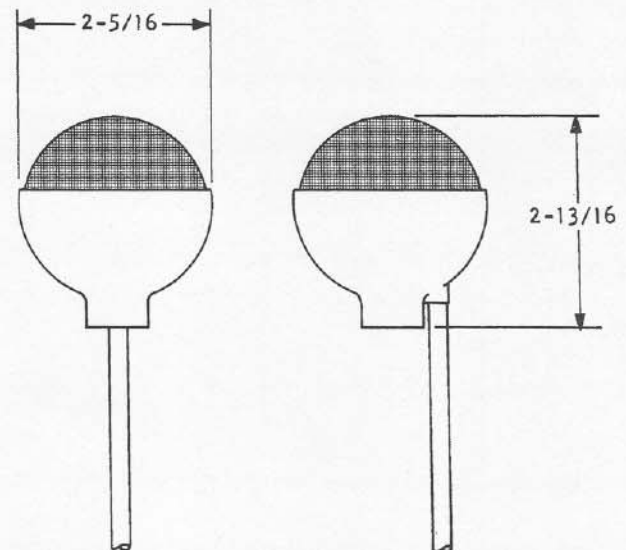


Figure 1 - Dimensions

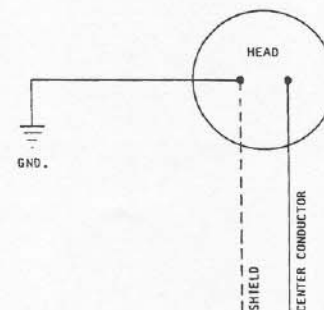


Figure 2 - Wiring Diagram

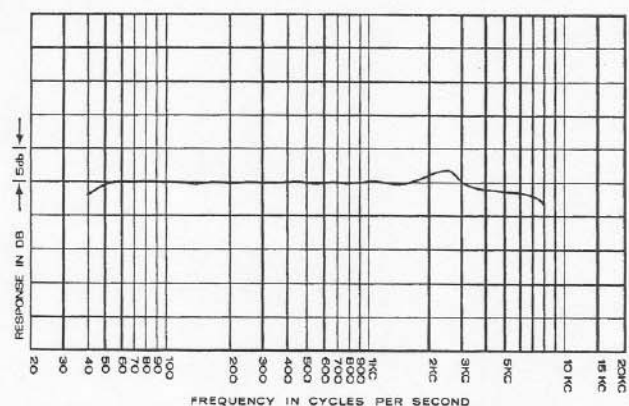


Figure 3 - Frequency Response