

**Electro-Voice®**  
a gulton company

# Model DL42

## Dynamic Unidirectional Microphone

### SPECIFICATIONS

**Element:**

Dynamic

**Frequency Response:**

50 to 12,000 Hz

**Polar Pattern:**

Hyper-cardioid-line  
(see Figure 3)

**Impedance:**

150 ohms

**Output Level:**

-50 dB  
(0 dB = 1 mW/10 dynes/cm<sup>2</sup>)

**EIA Sensitivity Rating:**

-144 dB

**Hum Pickup Level:**

-125 dBm  
(Reference: .001 gauss field)

**Diaphragm:**

Electro-Voice Acoustalloy®

**Magnetic Circuit:**

Alnico V magnet  
in nonwelded circuit

**Case Material:**

Aluminum and steel

**Dimensions:**

426 mm (16.75 in.) long  
97 mm (3.75 in.) largest diameter  
(with windscreen) See Figure 2

**Finish:**

Nonreflecting fawn beige micomatte

**Net Weight:**

369 g (13 oz)

**Gross Weight (includes bail, shock mount and cable assembly):**

.8 kg (1 lb, 11 oz)

**Microphone Connector:**

Switchcraft A3M

**Special Accessories:**

Coil cord extending from  
microphone connector to shock  
mount bail  
Screw-on handle  
Carrying case  
Windscreen

### DESCRIPTION AND APPLICATIONS

The Cardiline® Model DL42 represents the newest state-of-the-art generation in highly directional microphones, utilizing a combination of characteristics of hyper-cardioid and distributed front opening designs. The hyper-cardioid action gives the microphone essentially uniform characteristics at frequencies up to 500 Hz. At this point, the distributed front opening takes over for the balance of the range to which it responds, providing directional characteristics illustrated in the polar pattern, Figure 3.

Benefits derived from this new design include wider range response, better control of polar response, plus high level and greater directivity. These features make possible a working distance which is two, three, or four times that of conventional directional microphones.

In deriving the polar pattern (off axis response) of the microphone, specific considerations were made to achieve the lowest possible directivity index at all frequencies (highest possible directionality). Indeed, the directivity index even down to 100 Hz approaches the theoretical. Maximum attenuation of off-axis energy occurs to the sides of the microphone where such rejection is often most useful.

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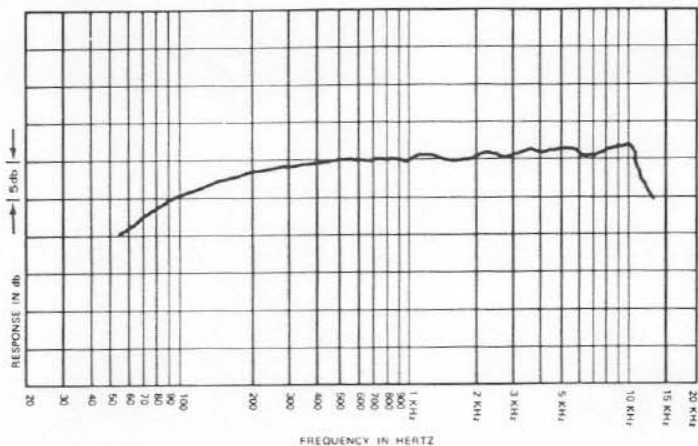


FIGURE 1 – Frequency Response

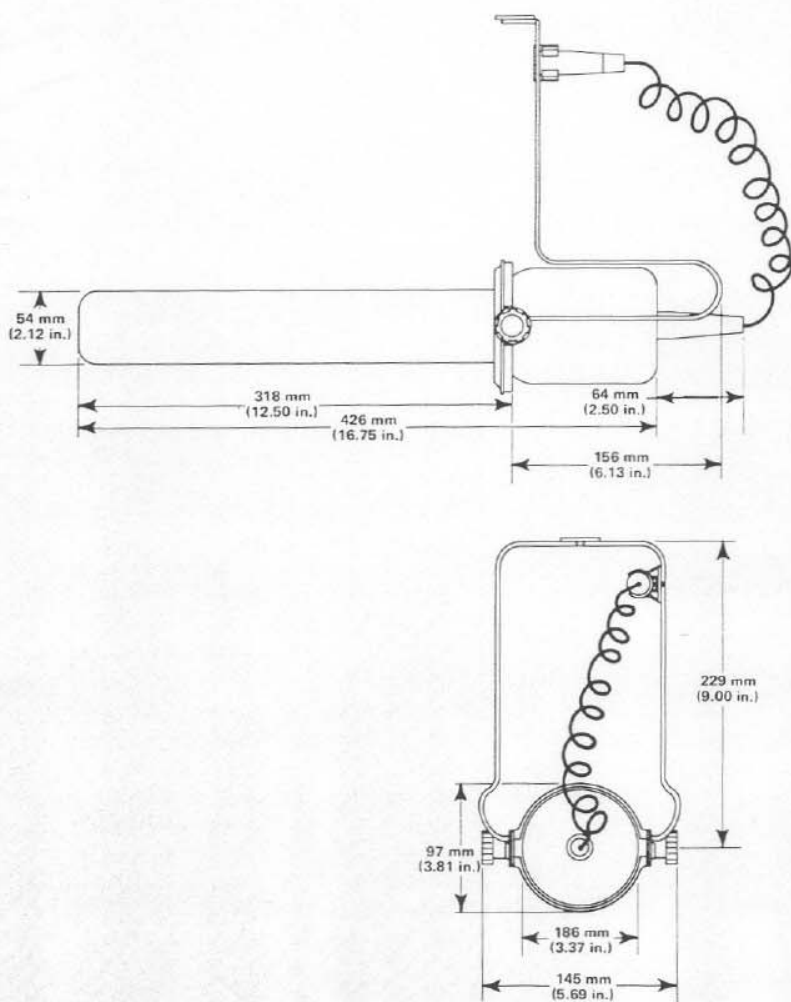


FIGURE 2 – Dimensions

An entirely new shock-mount design greatly reduces susceptibility to mechanical shock transference. Also, tailored low-frequency response allows accurate reproduction of input material, while greatly reducing wind noise problems in the low-frequency area. See Figure 1 for frequency response.

Ideal for boom use, fish pole use, or handheld applications where added working distance is required, the DL42 offers wide-range response in a comparatively small size, plus greatly increased directivity and working distance.

#### APPLICATION NOTES

The Model DL42 is shipped assembled in its own shock mount. The carrying case is designed to house the microphone with the shock mount attached.

**Note:** In order for maximum shock isolation, the special coil cord supplied must be used. The coil cord is designed to reduce shock transference from the shock mount bail to the microphone through the cable. One end plugs into the rear of the DL42 and the other attaches to the clip on the microphone shock mount bail. Regular microphone cable may be run from that point.

The DL42 may also be used, with the shock mount, attached to a fishpole. Shock mount design has taken into consideration the necessity for rapid panning, and balance in the shock mount is optimum.

The Model DL42 may also be used handheld. For this purpose a handle is supplied in the accessory compartment of the carrying case. The special coil cord and shock mount bail are removed from the microphone by unplugging the coil cord and unscrewing the two positioning nuts on the bail. The handle is then screwed into one of the holes formerly used to attach the shock mount bail.

#### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a highly directional dynamic type with a combination hyper-cardioid and distributed front opening principles and with a frequency response of from 50 to 12,000 Hz. From the sides, above 1000 Hz, the microphone shall exceed cancellation of 25 dB.

The diaphragm shall be nonmetallic Acoustalloy and shall have a magnetic

shield to prevent dust and iron particles from reaching the diaphragm. Impedance shall be 150 ohms. Line shall be balanced to ground and phased.

The output level shall be -50 dB with 0 dB = 1 mW/10 dynes/cm<sup>2</sup>. The magnetic circuit shall be a nonwelded circuit and employ Alnico V magnet.

Case parts shall be made of aluminum and steel. The microphone shall have a maximum length of 426 mm (16.75 in.) with a maximum diameter of 97 mm (3.75 in.), including the windscreen and without cable. Finish shall be fawn beige micomatte. The microphone shall have a built-in cable connector similar or equivalent to the Model A3M, which will mate with the connector similar or equivalent to the Switchcraft A3F. The Electro-Voice Model DL42 is specified.

**WARRANTY (Limited) –**  
Electro-Voice Professional Broadcast, Recording, and Sound Reinforcement Microphones are guaranteed unconditionally against malfunction from any cause for a period of two years from date of original purchase. Also, these microphones are guaranteed without time limit against malfunction in the acoustic system due to defects in workmanship and materials. (Any active electronics incorporated in a microphone is guaranteed for three years from date of original purchase against such malfunction.) 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. Defect guarantee 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 repair information and service locations, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone 616/695-6831) or 8234 Doe Avenue, Visalia, CA 93277 (209/625-1330,-1).

Electro-Voice also maintains complete facilities for non-warranty service of E-V products.

Specifications subject to change without notice.

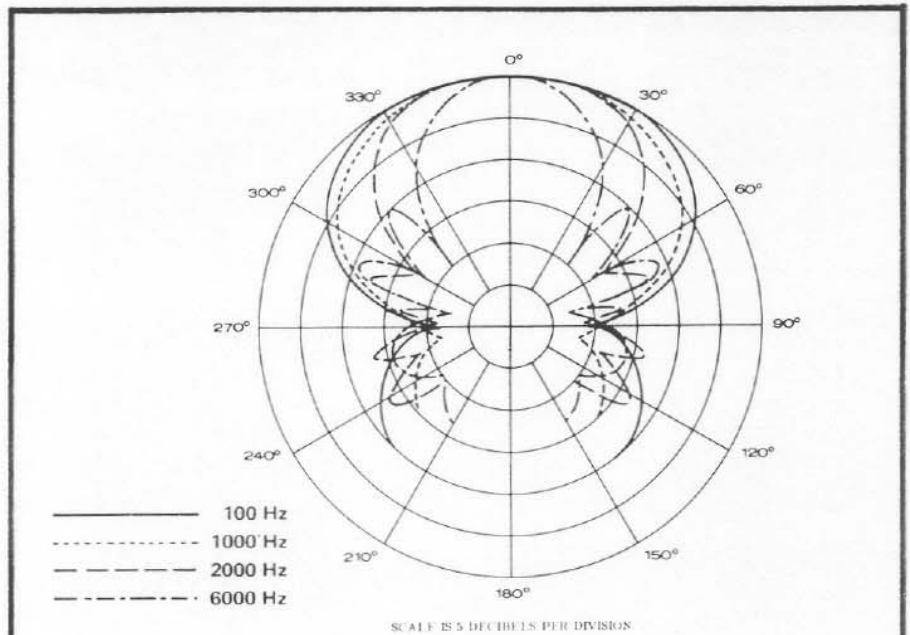


FIGURE 3 – Polar Response

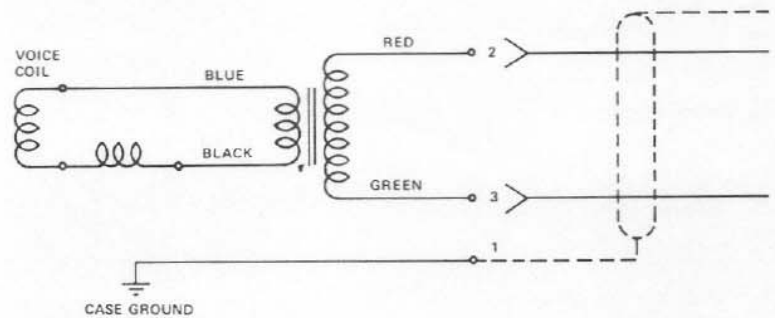
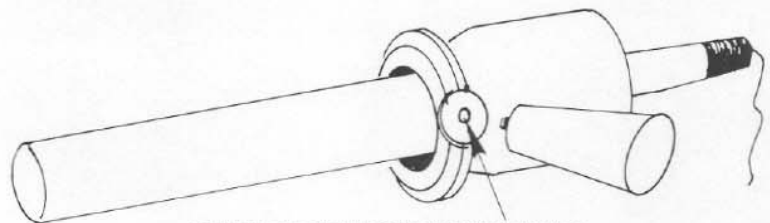


FIGURE 4 – Wiring Diagram



AFTER BAIL IS REMOVED FROM MIKE, HANDLE MAY BE SCREWED INTO HOLE VACATED BY FASTENING KNOB.

FIGURE 5 – Handle Application