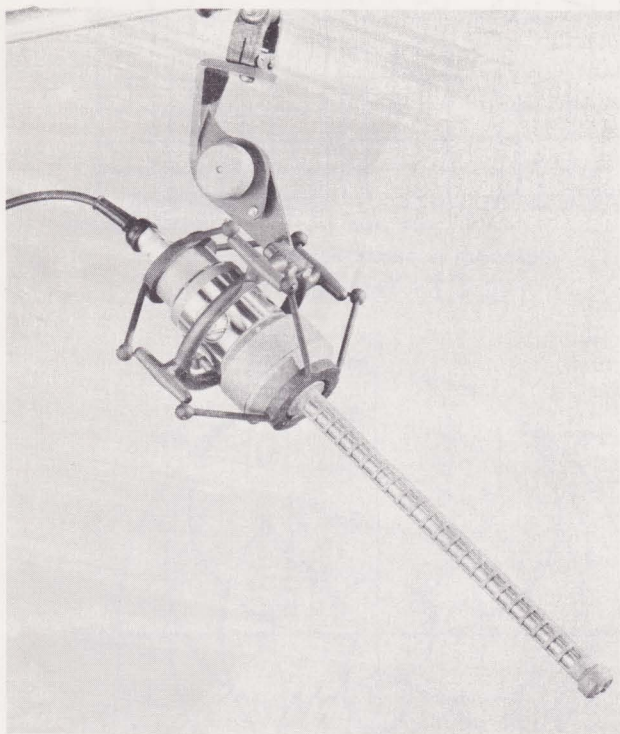




The Cardiline* Model 642 is a highly directional dynamic microphone utilizing a combination of the characteristics of cardioid and distributed front opening designs. The cardioid action gives the microphone essentially unidirectional characteristics at frequencies up to 500 cps. At this point the distributed front opening takes over for the balance of the range to which it responds providing directional characteristics illustrated in the polar diagram, Figure 3.

Benefits derived from this design include wider range response, higher level and greater directivity than has ever before been incorporated in one microphone of this type. These features make possible a working distance which is two or three times that of conventional directional microphones.

Greatly reduced susceptibility to mechanical shock transfer is inherent in the design of this unit and problems of wind noise are greatly reduced.

Combined, these features make the Model 642 an ideal choice for boom use, or for other applications where added working distance is required.

For wide-range response and comparatively small size, plus greatly increased directivity and working distance, the Model 642 has no equal.

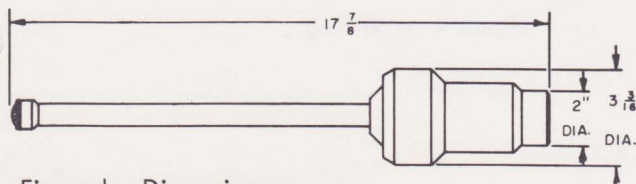


Figure 1 - Dimensions

* U.S. Patent No. 3,095,484

SPECIFICATIONS

Element: Dynamic

Frequency Response: 30 to 10,000 cps or choice of 5 or 10 db low frequency reduction steps with external screwdriver slot adjustment. Positions — F = Flat 1 = First position rolloff, 2 = Second position rolloff. (See Figure 2)

Polar Pattern: Cardiline Unidirectional (Figure 3)

Impedance: 50, 150, and 250 ohms. Impedance changed by means of external screwdriver slot adjustment.

Output Level: -48 db re 1 mw/10 dynes/cm²

EIA Sensitivity Rating: -142 db — 150 ohm

Hum Pick-up Level: -120 db m. Re .001 gauss

Diaphragm: E-V Acoustalloy®

Magnetic Circuit: Ceramic Indox V and Armco magnetic iron in non-welded circuit.

Case Material: Cast Aluminum

Dimensions: Length, 17-7/8 inches

Maximum diameter, 3-3/16 inches

Finish: High abrasion-proof, non-reflecting gray

Net Weight: 3 lbs., 4 oz.

Cable: 20 feet, three-conductor, shielded, broadcast type. Equipped with UA-3-11 Cannon conductor, which mates with UA-3-14 supplied on the microphone.

Microphone Connector: Microphone supplied with Cannon UA-3-14. Can be easily changed to a Cannon XL-3-14.

Available Accessories: Model 322 stand clamp

Model 327 combination shock mount and windscreen.

Warranty: Two year unconditional warranty with a life-time warranty against defects in workmanship and materials.

Figure 1 is a line graph showing the frequency response of three channels (F, I, and 2) of a 1000-cycles-per-second band-pass filter. The vertical axis is labeled 'RESPONSE IN DB' and ranges from -80 to -45 in increments of 5. The horizontal axis is labeled 'FREQUENCY IN CYCLES PER SECOND' and is a logarithmic scale with major ticks at 20, 30, 40, 60, 100, 200, 300, 600, 1,000, 2,000, 4,000, 6,000, 10,000, and 20,000. The three curves are labeled F, I, and 2. Curve F (solid line) starts at approximately -53 dB at 20 cps, rises to -50 dB at 60 cps, and remains relatively flat with minor fluctuations between -49 and -51 dB up to 10,000 cps, then drops sharply. Curve I (dashed line) starts at approximately -60 dB at 20 cps, rises to -55 dB at 100 cps, and remains flat at -55 dB until 1,000 cps, then rises slightly to -52 dB at 10,000 cps before dropping. Curve 2 (dotted line) starts at approximately -65 dB at 20 cps, rises to -58 dB at 100 cps, and remains flat at -58 dB until 1,000 cps, then rises to -54 dB at 10,000 cps before dropping.

Frequency (cps)	Channel F (dB)	Channel I (dB)	Channel 2 (dB)
20	-53	-60	-65
60	-50	-55	-58
100	-50	-55	-58
300	-50	-55	-58
600	-50	-55	-58
1,000	-50	-55	-58
2,000	-51	-54	-57
4,000	-50	-53	-56
10,000	-51	-52	-54
20,000	-55	-58	-60

Figure 2 - Response

A-10,000 cps C-1,000 cps
B- 2,500 cps D- 100 cps

Figure 3 - Polar Pattern

The diagram shows a vacuum tube socket with pins labeled 1 through 9. The wiring is as follows:

- PIN 1:** Connected to a yellow cable lead.
- PIN 2:** Connected to a black cable lead.
- PIN 3:** Connected to a black cable lead.
- PIN 4:** Connected to a red cable lead.
- PIN 5:** Connected to a green cable lead.
- PIN 6:** Connected to a white cable lead.
- PIN 7:** Connected to a green cable lead.
- PIN 8:** Connected to a black cable lead.
- PIN 9:** Connected to ground.

A transformer is connected between pins 1, 2, and 3. Its secondary has three taps labeled 250, 150, and 50. A variable capacitor (indicated by two arcs) is connected across the 250V tap and pin 4. A fixed capacitor labeled 'F' is connected between the 150V tap and pin 5. A resistor labeled '68' is connected between the 50V tap and pin 6. A blue cable lead is shown near the 68 ohm resistor.

Labels at the bottom indicate connections for "TO HUM BUCK COIL AND VOICE COIL" and "HEAD GND.". A note states: "CONNECT SHIELD TO GROUND AT CABLE TERMINATION." Below this, three vertical lines represent shielded cables labeled GREEN, RED, and BLACK, with dashed lines indicating their shields are grounded.

NOTE: POSITIVE VOLTAGE WITH
POSITIVE PRESSURE ON RED CABLE LEAD

Figure 4 - Wiring