University Sound™

a MARK IV company

SPECIFICATIONS

Element:
Dynamic

Frequency Response:
60-13,000 Hz (see Figure 1)

Polar Pattern:
Cardioid (see Figure 2)

Impedance:
150 ohms

Output Level:
−58 dB (0 dB = 1 mW/10 dynes/cm²)

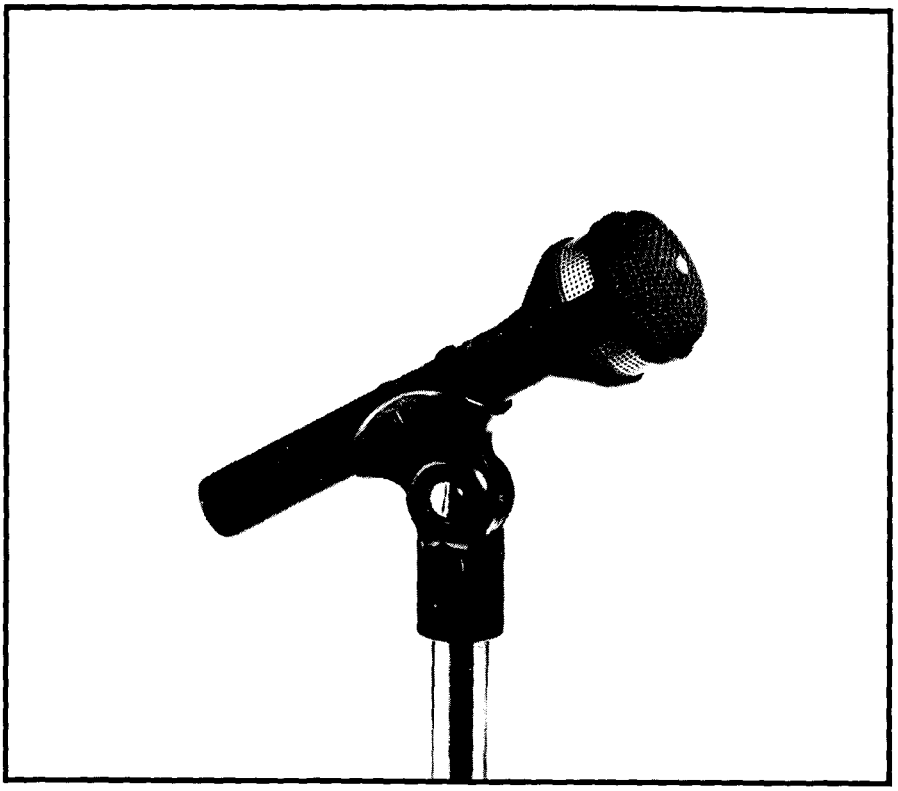
Switch Type:
On/off

Case Material:
Diecast zinc

Finish:
Non-reflecting blue/black

Dimensions,
Diameter:
40.4 mm (1.59 in.)
Shank Diameter:
19.0 mm (0.75 in.)
Length:
152.4 mm (6.0 in.)

Weight:
212.6 grams (7.5 oz)



US627C Dynamic Cardioid Microphone

DESCRIPTION

The University Sound Model US627C is a "Single-D" dynamic cardioid microphone that emphasizes low frequencies when used "close up." The US627C was created specially for those public address and recording applications where this specialized low-frequency characteristic is desired.

The transducer assembly utilizes a mechanical nesting design. The internal parts are nested, one within another, resulting in a nearly "solid" mechanical structure that is highly resistant to damage from mechanical shock. As part of this assembly, an integral shock absorber isolates the transducer assembly from mechanical noises to reduce transmission of these noises to the microphone signal. An internal Acoustifoam™ filter allows close talking without excessive "breath popping" and prevents dirt and magnetic particles from accumulating on the diaphragm.

The case is finished in blue-black and is constructed of high-strength, pressure-cast zinc. A professional type 3-pin A3M connector is built into the microphone allowing easy connect and disconnect.

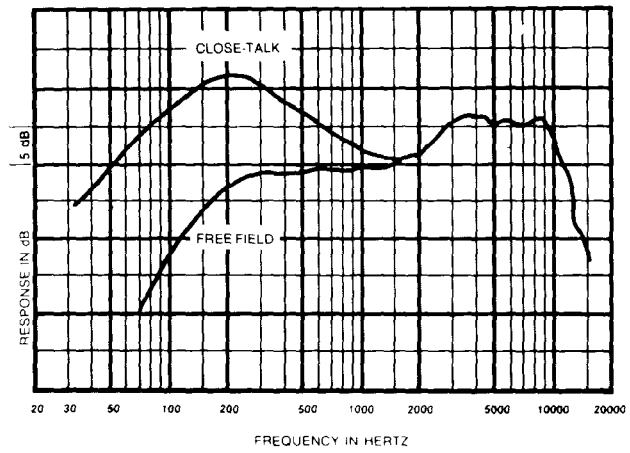


FIGURE 1
Frequency Response

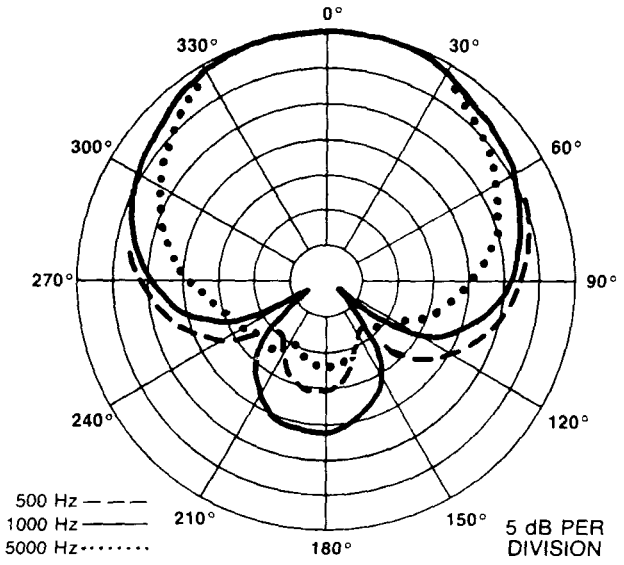


FIGURE 2
Polar Response

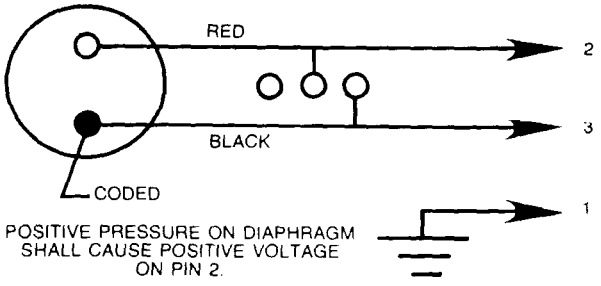


FIGURE 3
Wiring Diagram

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a cardioid dynamic type with uniform frequency response from 60 to 13,000 Hz. The microphone output shall be balanced with 150 ohms. The output level shall be −58 dB (0 dB = 1 mW/10 dynes/cm²).

The case shall be pressure-cast zinc. Dimensions shall be 40.4 mm (1.59 in.) major diameter, 152.4 mm (6.0 in.) long. The finish shall be non-reflecting blue/black.

The University Sound Model US627C is specified.

WARRANTY (Limited) — University Sound Commercial Microphones are guaranteed for two years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to University Sound. Unit will be returned prepaid. Warranty does not extend to finish, appearance items, cables, cable connectors, switches, or malfunction due to abuse or operation under other than specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than University Sound will void this guarantee. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service and repair information for this product. University Sound, Inc., Phone 818/362-9516, FAX 818/367-5292.

Applications and technical information for University Sound products: University Sound, Inc., Technical Coordinator, Phone 818/362-9516, FAX 818/367-5292.

Specifications subject to change without notice.

MICROPHONE SELECTION AND APPLICATION GUIDE

HOW DO MICROPHONES GENERATE THEIR ELECTRICAL VOLTAGE?

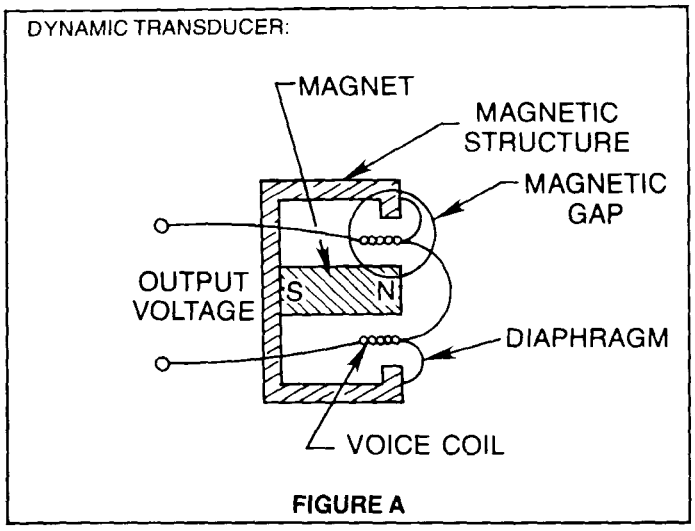


FIGURE A

The diaphragm of a dynamic microphone is a thin formed-plastic membrane. Attached to the diaphragm is a coil of wire, known as the "voice coil." As sound pressure moves the diaphragm/voice coil assembly within the magnetic gap, a very small voltage is generated. This small, induced voltage is the output of the microphone.

Dynamic microphones are used in a wide range of applications from public address to professional recording. The dynamic microphone provides excellent fidelity, extremely stable performance characteristics and ruggedness—all at a reasonable price to make the dynamic an excellent choice for any application.

POLAR PATTERN

A microphone's polar pattern is three dimensional in character. Omnidirectional microphones pick up sound from all directions. Unidirectional microphones reject or reduce sound from their sides and rear.

OMNIDIRECTIONAL POLAR PATTERN

The polar pattern of an omnidirectional microphone may be visualized as an inflated balloon with the microphone at the center.

Usually the polar pattern is represented on polar graph paper, as illustrated in Figure B. The polar pattern shows the loss in output level (in dB) experienced as the microphone is rotated 360° with a constant-output sound source at a fixed distance and frequency.

UNIDIRECTIONAL POLAR PATTERN

The most common unidirectional microphone is called a cardioid, with a "heart-shaped" polar pattern. The output of the microphone is moderately reduced (about 6 dB) for sources coming from the side and dramatically reduced for sources to the rear. The polar pattern of a cardioid microphone is shown in Figure C.

Directional microphones are widely used for live sound applications where gain-before-feedback is a problem. Depending on the applications, different null angles other than 180° may be advantageous (see Figure D).

USING THE VARIABLE LOW-FREQUENCY RESPONSE OF DIRECTIONAL MICROPHONES

The low-frequency response of unidirectional Single-D microphones varies with distance from sound to the microphone (see Figure E). Maximum bass boost occurs in close-up use of the microphone. Minimum bass response is experienced at distances greater than 24 inches.

Useful special effects can be created by imaginative application of the variable low-frequency response. By working closer to the microphone than might otherwise be natural, the human voice will sound more robust.

Feedback in a public address system is sustained by reflection of sound back into the microphone. For all microphones, as the artist moves closer, the level of his voice (at the microphone) increases and the microphone's signal to the amplifier is increased. For a constant volume of sound from the system, the amplifier gain setting must be proportionately reduced. This results in a reduction of the sytsem's sensitivity to reflected sound, hence a reduction of the tendency to feedback.

The low-frequency response is enhanced when working the microphone close while response to distant sound (as from sound system loudspeakers) is unaffected. The result is a reduced tendency to feedback, over and above that provided by the unidirectional characteristic alone.

In short, system sensitivity reduction, because of close-working, added to the advantage resulting from the bass-boosting low-frequency characteristic of unidirectional microphones is an effective tool for public address or stage use.

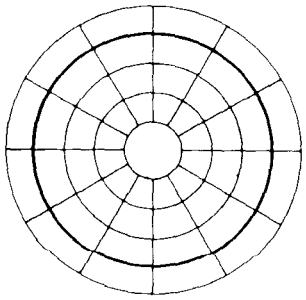


FIGURE B
Polar Pattern

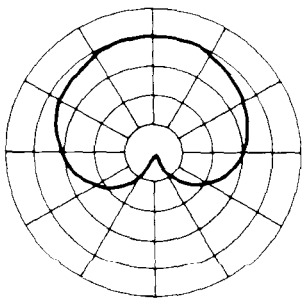


FIGURE C
Polar Pattern

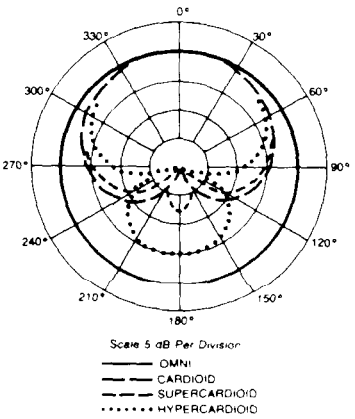


FIGURE D
Polar Pattern

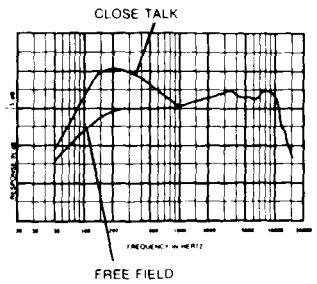


FIGURE E
Vocal Frequency Response

Part Number 531258 923

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