University Sound™

a MARK IV company

SPECIFICATIONS

Generating Element:
Dynamic

Frequency Response:
80-13,000 Hz (see Figure 1)

Polar Pattern:
Omnidirectional (see Figure 2)

Impedance:
150 ohm

Output Level:
– 56 dB (0 dB = 1 mW/10 dynes/cm²)

Diaphragm:
Acoustalloy®

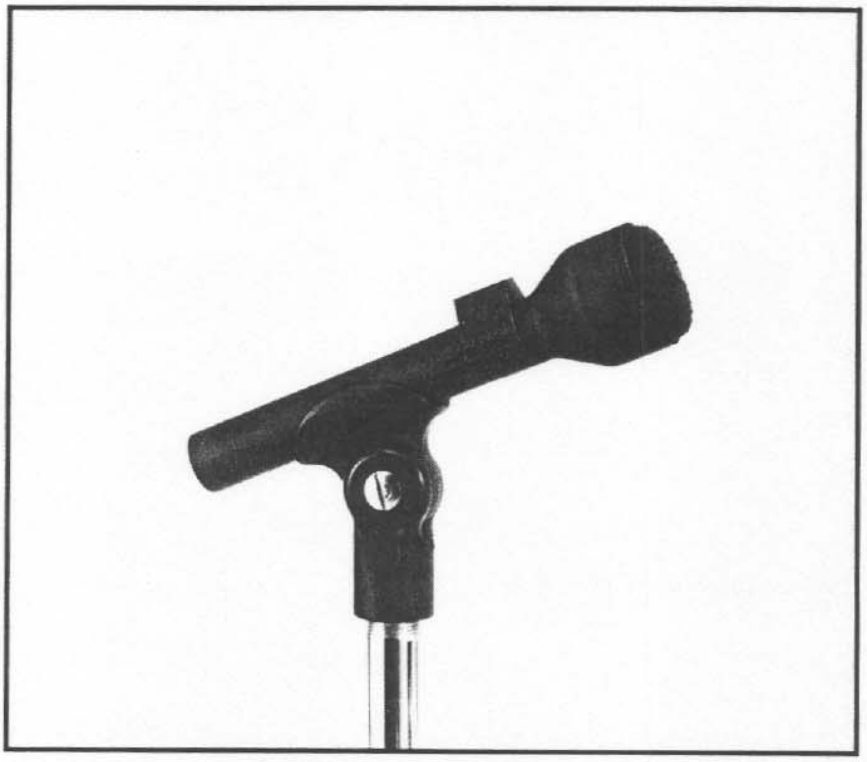
Switch:
Magnetic on/off (removable)

Case:
Zinc die cast

Finish:
Non-reflecting blue-black

Dimensions,
Length:
153.2 mm (6.03 in.)
Major Diameter:
35.3 mm (1.39 in.)
Shank Diameter:
19.1 mm (0.75 in.)

Net Weight:
170.1 g (6 ounces), less cable



US631B Omnidirectional Dynamic Microphone

DESCRIPTION

The University Sound Model US631B is a dynamic omnidirectional microphone designed to yield outstanding performance in demanding public address and semi-professional recording applications. Created particularly for close working, hand-held situations, it is equally effective for musical pickup on a table or floor stand. A unique concept utilizes a sealed magnetic "on/off" switch inside the microphone case. A magnetic actuator outside the case is easily removable without tools — leaving the microphone connected for the "on" mode of operation.

The Model US631B features the exclusive non-metallic Acoustalloy® diaphragm which permits very smooth response over a wide frequency range and withstands extremes of humidity, temperature, and corrosive effects of salt air making it nearly environmentally indestructible with normal use. The microphone utilizes the mechanical nesting principle whereby internal parts are nested one within another, resulting in an assembly that is nearly mechanically indestructible.

A specially designed internal shock absorber dramatically reduces pickup of cable and other mechanical noise generated by external contact. The integral four-stage pop and dust filter ensures unusual freedom from noise generated by the movement of air over the microphone surfaces. A professional-type 3-pin A3M connector is built into the microphone allowing easy connect and disconnect.

MICROPHONE SELECTION AND APPLICATION GUIDE

HOW DO MICROPHONES GENERATE THEIR ELECTRICL VOLTAGE?

DYNAMIC TRANSDUCER:

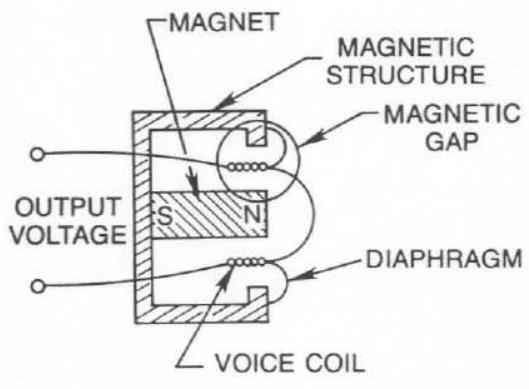


FIGURE A

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.

OMNIDIRECTIONAL MICROPHONE ADVANTAGES

In many systems where loudspeakers are located 20 to 40 feet away from the microphone—as at the top of a proscenium arch—a directional microphone is likely to show only negligible advantages with respect to feedback over an omnidirectional microphone. This is especially true where extremely close working distances are employed, say one-eighth to six inches.

The omnidirectional microphone, where it can be used, has several advantages in its favor:

1. For a given price, an omnidirectional microphone generally has a smoother frequency response than its unidirectional counterpart. Such smoothness of response is important because any roughness invites feedback.
2. An omnidirectional microphone is significantly less susceptible to breath pop than its unidirectional counterpart.
3. An omnidirectional microphone is significantly less sensitive to mechanical shock than its unidirectional counterpart.
4. An omnidirectional microphone is often more rugged than its unidirectional counterpart.

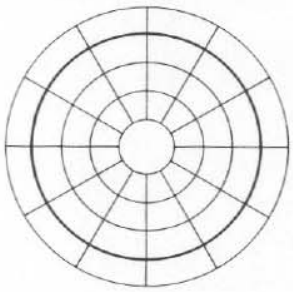


FIGURE B
Polar Pattern

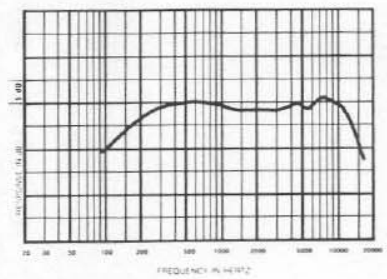


FIGURE 1
Frequency Response

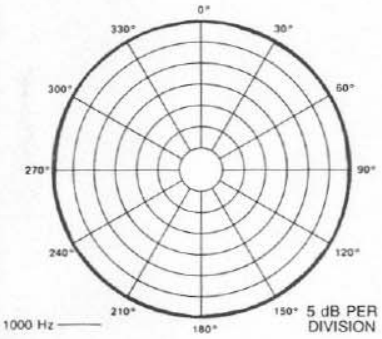


FIGURE 2
Polar Response

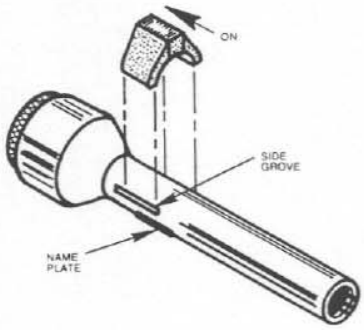


FIGURE 3
Switch Removal

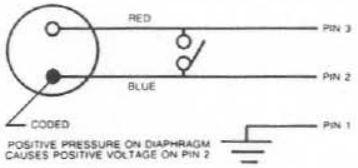


FIGURE 4
Wiring Diagram

REMOVAL OF SWITCH ACTUATOR
The switch actuator can be removed where a "no switch" operation is desired. (See Figure 3.) Simply slip fingernail under edge at side of actuator and pry off. This leaves the microphone locked in an "on" condition. To replace the switch actuator press into position with the arrow pointing to the front of the microphone.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS
The microphone shall be an omnidirectional dynamic type with wide range frequency response from 80 to 13,000 Hz. It shall have a non-metallic Acoustalloy® diaphragm and magnetic shield to prevent dust and magnetic particles from reaching the diaphragm. A four-stage pop filter shall be provided for maximum reduction of effects of wind and breath blasts.

The microphone shall be 150-ohm balanced. Output level for low impedance shall be −56 dB, (0 dB = 1 mW/10 dynes/cm²). A magnetic type on/off switch shall be provided, so designed that the external actuator may be removed without tools leaving the microphone in the "on" mode. The entire switch assembly shall be contained within the microphone case.

The case shall be diecast zinc. Dimensions shall be 153.2 mm (6.03 in.) long and diameter (major) shall be 35.3 mm (1.39 in.) with 19.1 mm (0.75 in.) shank diameter. Weight shall be 170.1 g (6 ounces). Finish shall be blue/black.

The University Sound Model US631B 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 address for this product:
University Sound, 600 Cecil Street,
Buchanan, Michigan 49107.
(AC/616-695-6831)

Specifications subject to change without notice.