



## MODEL SM78

UNIDIRECTIONAL DYNAMIC MICROPHONE

### GENERAL

The Shure Model SM78 STARMAKER™ microphone is a small, lightweight, unidirectional dynamic unit. It is extremely rugged, and has a highly effective built-in wind and "pop" filter for use outdoors or close to the mouth. The microphone's performance characteristics and very compact size makes it especially well suited for use by entertainers in sound reinforcement applications, and in a variety of broadcast uses.

Because of the feedback rejection of the SM78 cardioid pickup pattern, the microphone is suitable for sound reinforcement applications or other uses where room acoustics or ambient noise is a problem as well as for handheld or stand-mounted use in broadcast and recording studios. The microphone can be used for voice or instrument pickup, and for closeup vocals with the pop protection of the built-in pop and wind filter.

The SM78 is available as Model SM78EB-LC, ebony vinyl enamel finish, without a cable. The unit is supplied with a Model A25B Swivel Adapter. Colored accessory windscreens for extremely adverse conditions are available as Model A58WS Series. Also recommended is the Shure C25E, a 7.6m (25 ft) TRIPLE-FLEX® two-conductor shielded cable with 3-pin XLR audio connectors; the microphone connector is finished in black to complement the SM78.

### Microphone Features:

- Built-in spherical grille controls explosive breath sounds ("pop") and wind noise in outdoor locations
- Small and lightweight, yet extremely rugged for long life and hard use
- Highly effective cardioid pickup pattern minimizes background noise and undesirable effects of location acoustics. Rear and side rejection is uniform to very low frequencies and symmetrical about microphone axis
- Attractive vinyl enamel finish is extremely durable
- Smooth, clear response with tailored low-frequency rolloff
- Shock-mounted cartridge gives protection and quiet operation
- Wind and "pop" filter easily removed for cleaning or replacement
- Versatile! Use it in the field or in the studio- handheld or stand-mounted



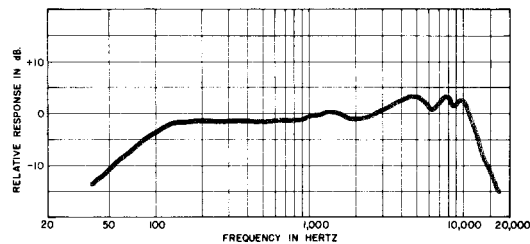
### SPECIFICATIONS

#### Type

Dynamic

#### Frequency Response

50 to 15,000 Hz (see Figure 1)

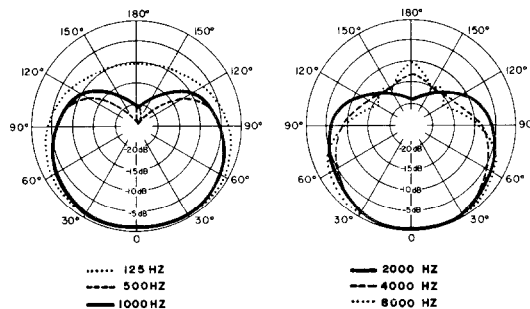


TYPICAL FREQUENCY RESPONSE

FIGURE 1

#### Polar Pattern

Cardioid - rotationally symmetrical about microphone axis, uniform with frequency (see Figure 2)



TYPICAL POLAR PATTERNS

FIGURE 2

#### Impedance

Microphone rating impedance is 150 ohms (250 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms

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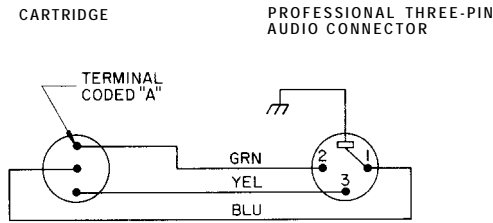
**Output Level** (at 1,000 Hz)

Open Circuit Voltage\* . . . . . -77.5 dB (0.13 mV)  
Power Level\*\* . . . . . -57.5 dB

\*0 dB = 1 volt per microbar  
\*\*0 dB = 1 milliwatt per 10 microbars

**Phasing**

Positive pressure produces positive voltage on pin 2 with respect to pin 3 (see Figure 3)



INTERNAL CONNECTIONS  
**FIGURE 3**

**Connector**

Professional three-pin audio connector\* in microphone

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series or equivalent connector.

**Case**

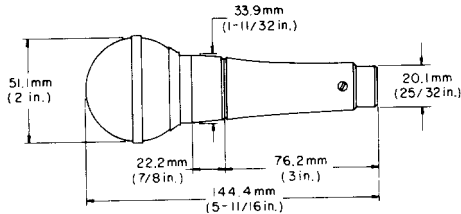
Aluminum with steel mesh grille

**Case Finish**

Ebony vinyl enamel, black finish grille

**Dimensions**

See Figure 4



OVERALL DIMENSIONS  
**FIGURE 4**

**Swivel Adapter**

Slip-in positive-action, adjustable from 0° to 90°, with 5/8"-27 stand thread

**Net Weight**

204 grams (7.2 oz)

**Packaged Weight**

913 grams (2 lb)

**ARCHITECTS SPECIFICATIONS**

The microphone shall be a moving-coil (dynamic) type with a frequency response of 50 to 15,000 Hz. The unit shall have a cardioid polar characteristic. The cancellation at the sides shall be approximately 6 dB, and the cancellation at the rear shall be greater than 15 dB at 1 kHz. The microphone shall have a rated impedance of 150 ohms for connection to microphone inputs rated at 19 to 300 ohms. The microphone output shall be -57.5 dB where 0 dB equals 1 milliwatt per 10 microbars.

The microphone shall be provided with a swivel adapter adjustable through 90° from vertical to horizontal. The microphone swivel adapter shall mount on a stand having a 5/8"-27 thread. The overall dimensions of the microphone shall be 144 mm (5-11/16 in.) in length and 51 mm (2 in.) in diameter.

The microphone shall be the Model SM78 or equivalent.

**FURNISHED ACCESSORY**

Swivel Adapter . . . . . A25B

**OPTIONAL ACCESSORIES**

Windscreen . . . . . A58WS Series  
Desk Stand . . . . . S33B, S39A  
Isolation Mount . . . . . A55M, A55HM  
Dual Mount . . . . . A26M  
Cable: 7.6m (25 ft) . . . . . C25E

**REPLACEMENT PARTS**

Cartridge . . . . . R141  
Plug Element . . . . . 90A1984  
Screen and Grille . . . . . RK210G