

# Product Specifications

## SM81 Cardioid Condenser Microphone

### Overview

The legendary SM81 is an industry-standard, flat-response cardioid condenser microphone, featuring a wide frequency response and low self-noise. Highly versatile, the SM81's renowned sonic accuracy is a constant choice around the world for acoustic stage and studio performance, including guitar, piano and drum overhead applications.

### Features

- 20 Hz to 20 kHz frequency response
- Flat response curve for accurate reproduction of sound sources
- Low noise and high output clipping level
- Low distortion over a wide range of load impedances
- Cardioid polar pattern, uniform with frequency and symmetric about axis, providing maximum rejection and minimum coloration of off-axis sounds
- Low RF susceptibility
- Selectable low-frequency response: flat, 6 or 18 dB/octave rolloff
- 0 dB/10 dB lockable attenuator switch
- Phantom powering (DIN 45 596 voltages of 12 to 48 Vdc)
- Rugged steel construction for durability
- Field-usable over wide range of temperature and humidity conditions

### Available Models

<b>SM81-LC</b>	Includes Stand Adapter and Zippered Pouch
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### Specifications

Type	Condenser
Frequency Response	20 to 20,000 Hz
Polar Pattern	Cardioid
Sensitivity (at 1,000 Hz)	Open Circuit Voltage: -45 dBV/Pascal (5.6 mV) (1 Pa = 94 dB SPL)
Impedance	Rated at 150 ohms (85 ohms actual) Recommended minimum load impedance: 800 ohms
Output Clipping Level	800 ohm Load: -4 dBV (0.63 V) 150 ohm Load: -15 dBV (0.18 V)
Maximum SPL (at 1,000 Hz)	800 ohm load: 136 dB (attenuator at 0) 146 dB (attenuator at -10) 150 ohm load: 128 dB (attenuator at 0) 138 dB (attenuator at -10)
Self-Noise	16 dB typical, A-weighted 19 dB typical, weighted per DIN 45 405
Hum Pickup	-3 dB equivalent SPL in a 1 mOe field (60 Hz)
Signal-to-Noise Ratio	78 dB (IEC 651)* at 94 dB SPL <i>S/N ratio is difference between 94 dB SPL and equivalent SPL of self-noise A-weighted</i>
Overvoltage and Reverse Polarity Protection	Max. external voltage applied to pins 2 and 3 with respect to pin 1: +52 Vdc Reverse polarity protection: 200 mA max. (diode-clamped)
Polarity	Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3
Power	11 to 52 vdc, 1.2 mA
Case	Steel construction with vinyl metallic paint finish and stainless steel screens
Connector	Three-pin professional audio connector (male XLR type)
Net Weight	230 grams (8 oz)
Dimensions	212 mm (7-9/16 in.) L x 23.5 mm (2 in.) W at the widest point

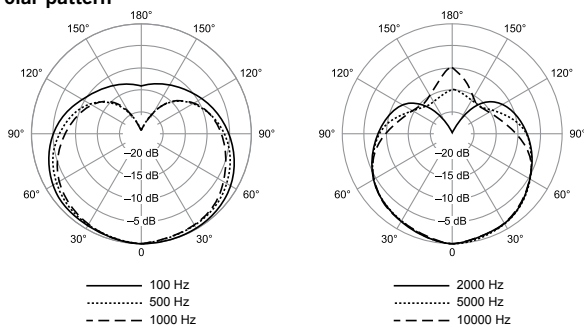


SM81

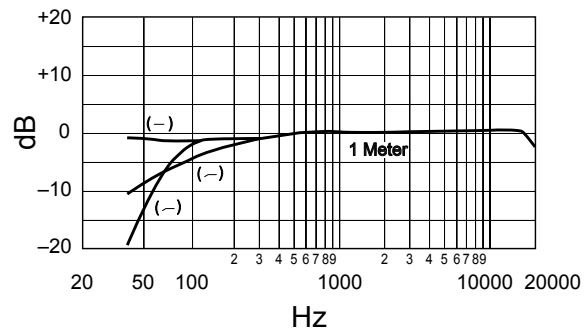
### Optional Accessories and Replacement Parts

<b>A57F</b>	Microphone Clip	<b>A81G</b>	Grille and Windscreen	<b>A81WS</b>	Large Foam Windscreen
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#### Polar pattern



#### Frequency response



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