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## SM137 -- Instrument Microphone

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### General Description

The Shure® SM137 is a versatile, flat-response cardioid probe microphone with an ultra-thin diaphragm. Its frequency response combines smooth high-end and tight, controlled low-end. A 15 dB pad provides natural, consistent sound reproduction in both acoustic and high-volume performance applications.

### Features

### Performance Characteristics

- Extremely uniform polar response
- Extended frequency response
- Minimal self-noise
- Exceptional low-frequency reproduction
- Able to withstand high SPLs
- High output level
- No crossover distortion
- Superior common-mode rejection and suppression of radio frequency interference (RFI)

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### Applications

- Brass and woodwind instruments
- Orchestras, choirs, and wind ensembles
- Overhead miking of drums and percussion instruments
- Close-miking of acoustic instruments such as piano, guitar, violins, drums, and percussion
- Low-frequency instruments such as double bass and kick drum
- Electric guitar and bass amplifiers
- Vocals and speech
- Room ambience

**Note:** Sound quality is strongly affected by microphone location and room acoustics. To achieve the best overall sound for a particular application, it may be necessary to experiment with microphone placement and room treatments.

## Mounting the Microphone

Use the supplied microphone mount with floor or boom stands. Visit [www.shure.com](http://www.shure.com) for more mounting options:

- To reduce the pickup of unwanted low-frequency mechanical vibrations, use an isolating shock mount.
- For stereo applications, use the optional Shure A27M Stereo Microphone Adapter.

## Setting Attenuation

The attenuation switch lets you reduce the signal level without altering the frequency response. This can prevent extremely loud sounds from overloading the microphone.

0 dB	For “quiet” to “normal” sound levels.
-15 dB	For use with extremely loud sound sources such as drums, horns, or loud guitar cabinets.

## Integral Pop Filter

The microphone grille consists of 3 separate mesh layers that act as an integral pop filter. This helps reduce wind and breath noise. Depending on the performer, an external pop-protection screen or windscreen may be necessary when close-miking vocalists.

## Load Impedance

Maximum SPL capability, output clipping level, and dynamic range vary with the input load impedance of the pre-amplifier to which you connect the microphone. Shure recommends a minimum input load impedance of 1000  $\Omega$ . Most modern microphone preamplifiers meet this requirement. Higher impedance results in better performance for these specifications.

## Power Requirements

This microphone requires phantom power and performs best with a 48 Vdc supply (IEC-61938). However, it will operate with slightly decreased headroom and sensitivity with supplies as low as 11 Vdc.

Most modern mixers provide phantom power. You must use a **balanced** microphone cable: XLR-to-XLR or XLR-to-TRS.

## Specifications

### Type

Electret Condenser

### Frequency Response

20 to 20,000 Hz

**Polar Pattern**

Cardioid

**Output Impedance**150  $\Omega$  (actual)**Sensitivity**

(at 1 kHz, open circuit voltage)

-41 dBV/Pa <sup>[1]</sup>**Maximum SPL**

(1 kHz at 1% THD)

1000 $\Omega$ load	139 dB (154 dB, PAD ON)
2500 $\Omega$ load	144 dB (159 dB, PAD ON)

**Signal-To-Noise Ratio**

(Ref. 94 dB SPL at 1 kHz)

75 dB <sup>[2]</sup>**Dynamic Range**

(at 1 kHz)

1000 $\Omega$ load	120 dB
2500 $\Omega$ load	125 dB

**Common Mode Rejection**

(10 Hz to 100 kHz)

&gt;50 dB

**Clipping Level**(20 Hz to 20 kHz, at 1% THD <sup>[3]</sup>)

1000 $\Omega$ load	3 dBV
2500 $\Omega$ load	9 dBV

**Self Noise**

(typical, equivalent SPL, A-weighted)

19 dB

## Attenuator Switch

-15 dB

## Polarity

Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3

## Net Weight

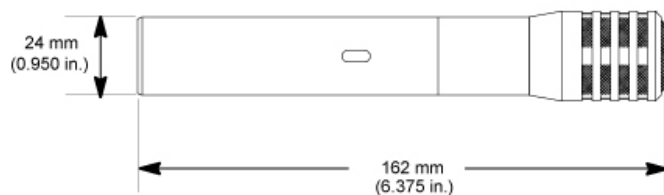
195 g (6.9oz.)

## Connector

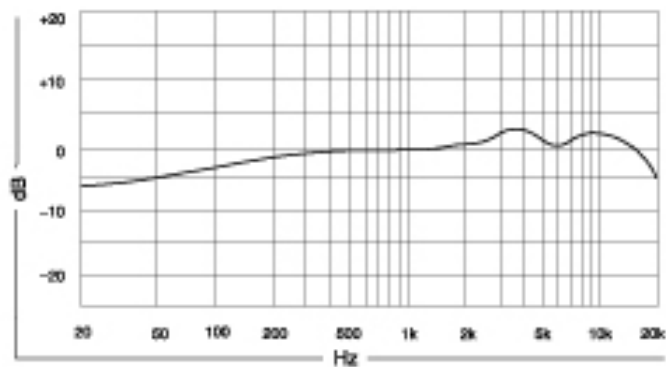
Three-pin professional audio (XLR), male

## Power Requirements

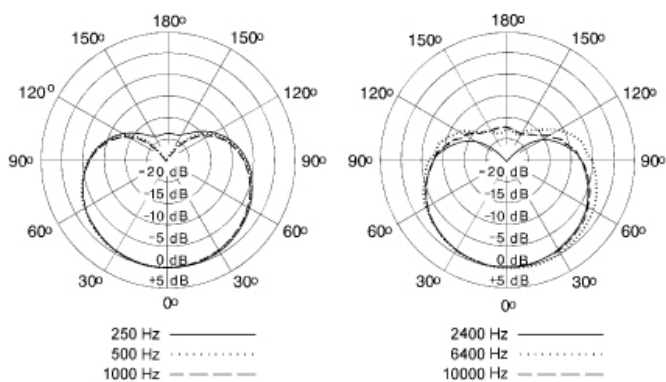
48 V DC phantom power, 5.2 mA



## Overall Dimensions

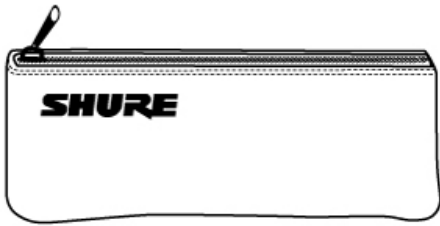


## Typical Frequency Response

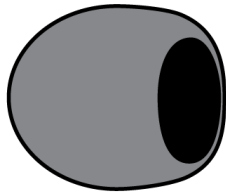


## Typical Polar Patterns

## Accessories

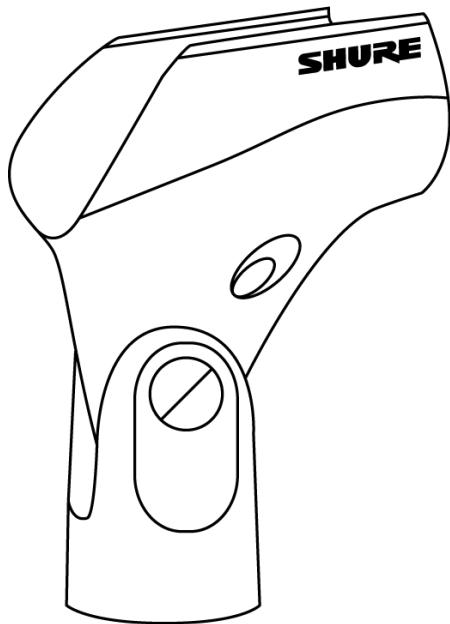


Storage Case



BCAWS1

Windscreen



Microphone Clip

## Furnished Accessories

Storage Bag	95C2313
Black Foam Windscreen for PGA81, SM94 and SM137	A3WS
Microphone Clip for SM58, SM57, SM87A, BETA87A, BETA87C, PGA57, PGA58, PGA48, PGA81	A25D

## Optional Accessories

Shock Stopper® Isolation Mount	A55M
Shock Stopper Isolation Mount	A55HM
Popper Stopper® Pop Filter with Metal Gooseneck and Microphone Stand Clamp	PS-6

## Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

The CE Declaration of Conformity can be obtained from: [www.shure.com/europe/compliance](http://www.shure.com/europe/compliance)

Authorized European representative:

Shure Europe GmbH

Headquarters Europe, Middle East & Africa

Department: EMEA Approval

Jakob-Dieffenbacher-Str. 12

75031 Eppingen, Germany

Phone: +49-7262-92 49 0

Fax: +49-7262-92 49 11 4

Email: [info@shure.de](mailto:info@shure.de)