SHURE®

LEGENDARY
PERFORMANCE™

SM27

CARDIOID CONDENSER MICROPHONE

MICROPHONE ÉLECTROSTATIQUE CARDIOÏDE

NIEREN-KONDENSATORMIKROFON

MICROFONO DE CONDENSADOR DE CARDIOIDE

MICROFONO CARDIOIDE A CONDENSATORE

カーディオイド コンデンサー型マイクロホン



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27A12628 (Rev. 1)

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GENERAL DESCRIPTION

The Shure® SM27 is a rugged and versatile large-diaphragm, side-address cardioid microphone. Low self-noise and extended frequency response picks up vocal and instrument nuances with clarity. Durable Shure construction features three separate mesh layers that reduce wind and breath noise. Equally comfortable on the stage or in the studio.

FEATURES

- Cardioid polar pattern—the most commonly used pattern for both studio and live applications
- 1 inch, externally biased, ultra-thin, 2.5 µm, 24 Karat gold-layered, low mass, Mylar® diaphragm provides superior transient response
- Class A, discrete, transformerless preamplifier for transparency, extremely fast transient response and no crossover distortion, while minimizing harmonic and intermodulation distortions
- Premium electronic components and gold-plated internal and external connectors
- Subsonic filter eliminates rumble from mechanical vibration below 17 Hz
- Switchable 15 dB pad for handling extremely high sound pressure levels (SPLs)
- 3-position switchable low-frequency filter helps reduce unwanted background noise or counteract proximity effect
- Integrated three-stage “pop” protection grille reduces plosives and other breath noise
- Internal shock mount reduces handling and stand noise

PERFORMANCE CHARACTERISTICS

- Extended frequency response
- Low self-noise
- Exceptional low-frequency reproduction
- Can withstand high sound pressure levels (SPLs)
- High output level
- No crossover distortion
- Uniform polar response
- Superior common mode rejection and suppression of radio frequency interference (RFI)

APPLICATIONS

- Voice and vocals
- Electric guitar amplifiers
- 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
- Room ambience pick-up (guitar amplifier or drums)

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

Thread the supplied stand adapter onto a floor or boom stand, then thread the microphone onto the adapter.

NOTE: Since this microphone reproduces ultra-low frequencies, use an isolating shock mount (available at www.shure.com) to reduce low-frequency mechanical vibrations transmitted through the stand.

Positioning the Microphone

The front of the microphone is marked by the Shure logo. Position this side toward the sound source.

Selecting Low-Frequency Response

A three-position switch on the back of the microphone lets you adjust the low-frequency response. Use the low-frequency filter to reduce wind noise, room noise, or proximity effect.

— **Flat response.** Provides the most natural sound in most applications.

⌐ **Low frequency cutoff.** Provides an 18 dB-per-octave cutoff at 80 Hz. Helps eliminate floor rumble and low-frequency room noise from heating and air conditioning systems. This setting may also be used to compensate for proximity effect or to reduce low frequencies that make an instrument sound dull or muddy.

⌐ **Low frequency rolloff.** Provides a 6 dB-per-octave rolloff filter at 115 Hz. Use this to compensate for proximity effect or to reduce low frequencies that could make an instrument sound dull or muddy.

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 varies with the input load impedance of the preamplifier to which you connect the microphone. Shure recommends a minimum input load impedance of 1000 Ω, and 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-268-15/DIN 45 596). However, it will operate with slightly decreased headroom and sensitivity with supplies as low as 11 Vdc. Most modern mixers provide phantom power. Phantom power can only be transmitted through a cable terminated with XLR connectors at each end.

SPECIFICATIONS

Type	Condenser (externally biased)
Frequency Response	20 to 20,000 Hz
Polar Pattern	Cardioid
Output Impedance	150 Ω (140 Ω actual)
Sensitivity (at 1 kHz, open circuit voltage)	–37 dBV/Pa 1 Pascal=94 dB SPL
Maximum SPL (1 kHz at 1% THD)	1000 Ω load: 133 dB (147 dB, Pad on) 2500 Ω load: 138 dB (152 dB, Pad on)
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	84.5 dB S/N ratio is difference between 94 dB SPL and equivalent SPL of self noise, A-weighted
Dynamic Range (at 1 kHz)	1000 Ω load: 123 dB 2500 Ω load: 128 dB
Common Mode Rejection (20 Hz to 20 kHz)	> 50 dB
Clipping Level (20Hz-20 kHz at 1% THD)	1000 Ω load: 1 dBV 2500 Ω load: 7 dBV THD of microphone preamplifier when applied input signal is equivalent to cartridge output at specified SPL
Self Noise (typical, equivalent SPL, A-weighted)	9.5 dB
Polarity	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
Weight	Net: 642 g (22.6 oz.)
Switch	Attenuator: -15 dB Low Frequency Response: flat;-6 dB/octave below 115 Hz;-18 dB/octave below 80 Hz
Connector	Three-pin professional audio (XLR), male
Power Requirements	48 Vdc phantom, 5.4 mA

CERTIFICATION

Eligible to bear CE Marking. Conforms to European EMC Directive 2004/108/EC. Meets Harmonized Standards EN55103-1:1996 and EN55103-2:1996, for residential (E1) and light industrial (E2) environments.

The Declaration of Conformity can be obtained from:

Authorized European representative:

Shure Europe GmbH
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ACCESSORIES AND PARTS

Furnished Accessories

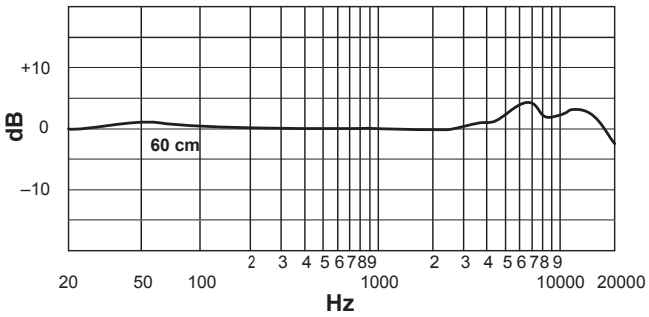
ShureLock™ Black Swivel Adapter	A32M
Padded, Zippered Carrying Bag	A32ZB

Optional Accessories

ShureLock™ Rubber Isolated Shock Mount	A27SM
Aluminum Carrying Case	A32SC
Windscreen	A32WS
Popper Stopper™	PS-6

Replacement Parts

Rubber Rings for Shock Mount (contains four)	RPM642

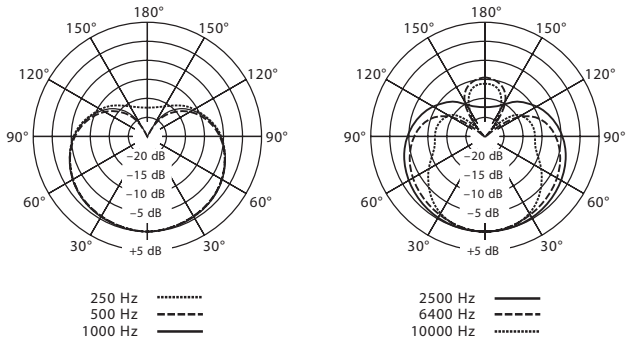


TYPICAL FREQUENCY RESPONSE

COURBE DE REPONSE TYPIQUE - TYPISCHES FREQUENZVERHALTEN

RESPUESTA DE FRECUENCIA TIPICA - TIPICA RISPOSTA IN FREQUENZA

周波数特性

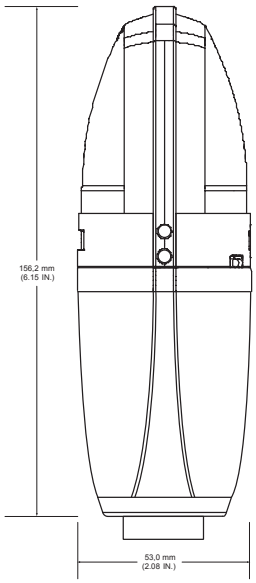


TYPICAL POLAR PATTERNS

COURBE DE DIRECTIVITE TYPIQUES - TYPISCHE POLARCHARAKTERISTIK

PATRONES DE CAPTACION POLAR TIPICOS - TIPICI DIAGRAMMI POLARI

指向特性



OVERALL DIMENSIONS – DIMENSIONS HORS TOUT

GESAMTABMESSUNGEN – DIMENSIONES TOTALES – DIMENSIONI TOTALI – 寸法

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