KSM9

User Guide
Le Guide de l’Utilisateur
Bedienungsanleitung
Guia del Usuario
Guida dell’Utente
Manual do Usuário
Руководство пользователя
取扱説明書
사용자 안내서
用户指南
Thank you for selecting the KSM series from Shure.

Over 85 years of audio experience has contributed to making this one of the finest microphones available.

If you have any questions not answered in this guide, please contact Shure Applications Engineering at 847-600-8440, Monday through Friday, from 8:00 am to 4:30 pm, CST. In Europe, call 49-7262-92490. In Asia, call 852-2893-4290. Our web address is www.shure.com.
General Description
Consistent with legendary Shure microphone innovation, the KSM9 is the first handheld condenser with dual diaphragms and variable polar patterns. As a premium vocal microphone, the KSM9 captures vocal subtlety with extraordinary detail to deliver clear articulation, functional flexibility and precise vocal reproduction for live performance. Transformerless, Class A preamplifier circuitry and dual, gold-layered diaphragms capture a transparent sound, revealing every nuance and subtlety in a vocal performance. The KSM9 uses an advanced suspension shock mount to virtually eliminate handling noise even in the most demanding live environments.

Features
- Dual 3/4” gold layered, low-mass Mylar® diaphragms provide superior frequency response and proximity control
- Dual polar patterns (cardioid and supercardioid) for maximum flexibility in a wide variety of performance applications
- Class A, discrete, transformerless preamplifier for transparency, extremely fast transient response and no crossover distortion, while minimizing harmonic and inter-modulation distortions
- Advanced suspension shock mount system that isolates cartridge from handling and stand noise
- Subsonic filter eliminates rumble from mechanical vibration below 17 Hz
- Premium electronic components, including gold-plated internal and external connectors
- Integrated three-stage "pop" protection grille reduces plosives, wind, and other breath noise

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)

Model Variations
The KSM9 series consists of two models featuring unique, switchable polar patterns and a variety of finishes.

KSM9HS: Features hypercardioid and subcardioid polar patterns with a black finish.

KSM9: Features cardioid and supercardioid polar patterns with a charcoal-gray or champagne finish.

Applications
The KSM9 is designed to capture and control the detailed sonic nuances of critical studio performance, while withstanding the punishment of professional live sound reinforcement. The frequency response of the two patterns are nearly identical, allowing performers to easily adapt to any venue.

The cardioid pick-up pattern is ideal in live performances for musicians with in-ear monitors, providing a warm, full sound. This setting provides excellent gain before feedback, with minimal off-axis coloration.

The supercardioid pick-up pattern provides maximum sound isolation and is ideal for applications in which there are high levels of ambient noise, or where multiple instruments or vocalists are close together.
Operation

Proximity Effect
Directional microphones progressively boost bass frequencies as the microphone is placed closer to the source. This phenomenon, known as proximity effect, can be used to create a warmer, more powerful sound. However, it usually requires the vocalist to maintain a consistent distance from the microphone in order to avoid changing the low-frequency response.

The dual-diaphragm design of the KSM9 helps to control and minimize proximity effect, resulting in a more uniform low-frequency response. This allows the performer to move closer or further from the microphone with minimal changes in sound quality.

Selecting a Polar Pattern

Cardioid: Captures sound directly in front of the microphone and has the greatest rejection 180 degrees toward the rear. A cardioid pattern has a wider coverage angle, resulting in increased off-axis pickup. This is the most common pattern in studio recording and live-sound applications.

Supercardioid: Captures sound directly in front of the microphone and has the greatest sound rejection at points 120 degrees toward the rear of the microphone. A supercardioid pattern has a narrower coverage angle of 115 degrees, resulting in increased off-axis rejection. This pattern is ideal for loud environments or applications when sound sources are very close together.

Power Requirements
This microphone requires phantom power and performs best with a 48 V DC supply (IEC-61938), but it can operate with supplies as low as 11 V DC. Most modern mixers provide phantom power and require the use of a balanced microphone cable: XLR-to-XLR or XLR-to-TRS.

Load Impedance
Maximum SPL capability, output clipping level, and dynamic range vary with the input load impedance of the preamplifier to which the microphone is connected. Shure recommends a minimum input load impedance of 1000 Ohms. Most modern microphone preamplifiers meet this requirement. Higher impedance results in better performance for these specifications.

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 windscreens may be necessary when close-miking vocalists.
### Accessories and Parts

#### Furnished Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Case</td>
<td>AK9C</td>
</tr>
<tr>
<td>Microphone Clip</td>
<td>A25E</td>
</tr>
</tbody>
</table>

#### Optional Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Windscreen</td>
<td>A85WS</td>
</tr>
</tbody>
</table>

#### Replacement Parts

<table>
<thead>
<tr>
<th>Part</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grille, Champagne</td>
<td>RPM260</td>
</tr>
<tr>
<td>Grille, Charcoal</td>
<td>RPM262</td>
</tr>
<tr>
<td>KSM9 Cartridge</td>
<td>RPM160</td>
</tr>
<tr>
<td>Switch Circuit Board Assembly</td>
<td>RPM462</td>
</tr>
<tr>
<td>Preamp Circuit Board Assembly</td>
<td>RPM460</td>
</tr>
</tbody>
</table>

### Certifications


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: EMEAsupport@shure.de
## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cartridge Type</strong></td>
<td>Electret Condenser</td>
</tr>
<tr>
<td><strong>Polar Pattern</strong></td>
<td>Cardioid, Supercardioid (selectable)</td>
</tr>
<tr>
<td><strong>Frequency Response</strong></td>
<td>50 to 20,000 Hz</td>
</tr>
<tr>
<td><strong>Output Impedance</strong></td>
<td>150 Ω</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>open circuit voltage, @ 1 kHz, typical –51 dBV/Pa (2.8 mV)</td>
</tr>
<tr>
<td><strong>Maximum SPL</strong></td>
<td>1 kHz at 1% THD: 2500 Ω load: 152 dB, 1000 Ω load: 152 dB</td>
</tr>
<tr>
<td><strong>Signal-to-Noise Ratio</strong></td>
<td>72 dB</td>
</tr>
<tr>
<td><strong>Dynamic Range</strong></td>
<td>2500 Ω load: 130 dB, 1000 Ω load: 130 dB</td>
</tr>
<tr>
<td><strong>Clipping Level</strong></td>
<td>2500 Ω load: 6.7 dBV, 1000 Ω load: 6 dBV</td>
</tr>
<tr>
<td><strong>Self Noise</strong></td>
<td>22 dB SPL-A</td>
</tr>
<tr>
<td><strong>Common Mode Rejection</strong></td>
<td>≥60 dB</td>
</tr>
<tr>
<td><strong>Connector</strong></td>
<td>Three-pin professional audio (XLR), male, balanced</td>
</tr>
<tr>
<td><strong>Polarity</strong></td>
<td>Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>11–52 V DC (phantom power) (IEC-61938) 5.2 mA, maximum</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>300 g (10.6 oz.)</td>
</tr>
</tbody>
</table>

---

[1] 1 Pa = 94 dB SPL  
[2] THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL  
[3] S/N ratio is the difference between 94 dB SPL and equivalent SPL of self noise, A-weighted  
[4] All specifications measured with a 48 Vdc phantom power supply. The microphone operates at lower voltages, but with slightly decreased headroom and sensitivity.