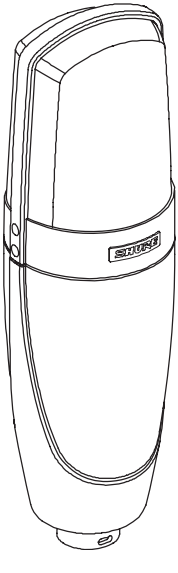
User Guide
Le Guide de l'Utilisateur
Bedienungsanleitung
Guía del Usuario
Guida dell'Utente
ユーザーガイド

KSM32



©2009 Shure Incorporated
27C3044 (Rev. 6)

Printed in U.S.A.

SHURE INCORPORATED

KSM32 CARDIOID CONDENSER MICROPHONE



Thank you for selecting the KSM32.

Over 75 years of audio experience has contributed to making the KSM32 one of the finest microphones available.

If you have any questions that are not answered in this booklet, please contact Shure Applications Engineering at 847-600-8440, Monday through Friday, from 8:00 am to 4:30 pm, CST. In Europe, call 49-7131-7214-0. Our web address is www.shure.com.

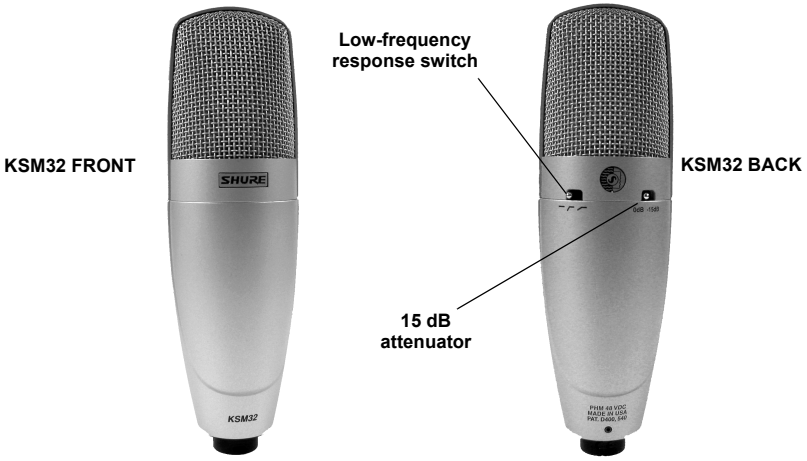


FIGURE 1. KSM32 Front and Back

GENERAL DESCRIPTION

The Shure® KSM32 is a side-address condenser microphone with a cardioid polar pattern. Designed for studio use but rugged enough for live applications, the KSM32 has a permanently-biased 3/4-inch diaphragm, extremely low self-noise, and an extended frequency response specially tailored for vocal tracking and instrument recording.

FEATURES

- *Class A, transformerless preamplifier circuitry eliminates cross-over distortion for improved linearity across the full frequency range*
- *Embossed, high-compliance diaphragm provides extended low frequency response*
- *Ultra-thin, 2.5 µm, gold-layered, low mass, Mylar® diaphragm for excellent transient response*
- *15 dB attenuation switch for handling extremely high sound pressure levels (SPL)*
- *Switchable low-frequency filter provides greater flexibility to reduce background noise or to counteract proximity effect*
- *Integrated three-stage pop protection grille reduces "pop" and other breath noise*
- *Internal shock mount reduces transmission of handling noise*

PERFORMANCE CHARACTERISTICS

- *Extended frequency response*
- *Very low self noise*
- *Exceptional low-frequency reproduction*
- *High output level*
- *High input SPL capability*
- *No crossover distortion*
- *Extremely uniform polar response*
- *Superior common mode rejection and suppression of radio frequency interference*

MODEL VARIATIONS

The **KSM32/SL** has a champagne-colored finish and comes with the following accessories:

- *Locking aluminum carrying case*
- *ShureLock™ elastic-suspension shock mount*
- *ShureLock™ swivel mount*
- *Protective velveteen pouch*

The **KSM32/CG** has a non-reflective, charcoal-gray finish for situations where less microphone visibility is preferred, such as live sound and stage production. It comes with the following accessories:

- *ShureLock™ Swivel mount*
- *Padded, zippered carrying bag*

APPLICATIONS

Some typical applications for the KSM32 are listed below. Microphone use, however, is largely a matter of personal taste. The KSM32 may be used for a variety of applications other than those listed.

- *Voice and vocals*
- *Close-miking of acoustic instruments such as piano, guitar, violins, drums, and percussion*
- *Brass and woodwind instruments*
- *Low-frequency instruments such as double bass and kick drum*
- *Overhead miking for drums or percussion*
- *Orchestras, choirs, wind ensembles*
- *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 various room treatments.

OPERATION

Mounting

The ShureLock swivel mount and elastic shock mount provide a secure means of fastening the microphone to a floor or boom stand. When using the swivel mount, the internal shock mount provides good isolation. For greater reduction of noise from external vibrations, use the elastic shock mount.

It is important when mounting the microphone that the threaded, knurled locking grip on the shock mount or swivel mount is screwed securely onto the threads at the base of the microphone. Do not overtighten.

Power

The KSM32 requires phantom power and performs optimally 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 to the KSM32 through a cable terminated with XLR connectors at each end.

Positioning the Microphone

The front of the KSM32 is marked by the SHURE logo. See Figure 1. Position this side of the microphone toward the sound source. The rear of the microphone is marked by the logo, the low-frequency filter switch, and the 15 dB attenuation switch.

Selecting Low-Frequency Response

A three-position switch on the back of the KSM32 allows you to adjust the low-frequency response of the microphone. The low-frequency filter settings can be used to reduce wind noise, room noise or proximity effect. See Figure 2.

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

Low-frequency cutoff. Provides a 15 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.

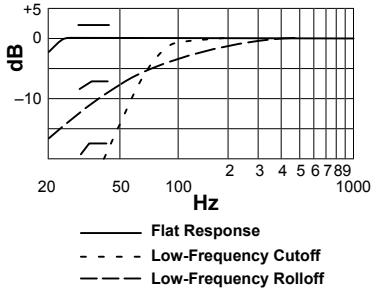


FIGURE 2

LOW FREQUENCY RESPONSES

Setting Attenuation

The attenuation switch on the back of the KSM32 reduces the signal level from the cartridge by 15 dB without altering the frequency response. This can prevent extremely high SPLs (ie. close miked drums and guitar cabinets) from overloading the microphone. To activate attenuation, move the switch to the "-15 dB" position.

0 dB - Use this switch for "quiet" to "normal" sound levels.

-**15 dB** - Use this switch position when in close proximity with extremely loud sound sources such as kick drum, snare drum, or loud guitar cabinets.

In situations where the high output capability of the KSM32 might overload the microphone preamplifier of a console or mixer, use an attenuation switch (pad) in the mixer or an external inline attenuator such as the Shure A15AS.

Integral Pop Filter

The KSM32 grille consists of 3 separate mesh layers that act as an integral pop filter which helps reduce wind and breath noise. Depending on the performer, an external pop-protection screen or windscreen (See Figure 3) may be necessary when close-miking vocalists.



FIGURE 3. PS-6 POPPER STOPPER™ POP FILTER

Load Impedance

Shure recommends a load impedance of at least 1000 Ω. When used with modern microphone preamplifiers (rated at 2500 Ω), the KSM32 provides higher maximum SPL capability and output clipping level. When the attenuation switch is set to the -15 dB position, the KSM32 can handle sound pressure levels of up to 160 dB and output +15 dBV into a load of 5500 Ω or greater, with microphone attenuation.

SPECIFICATIONS

Cartridge Type	Permanently-biased Condenser
Frequency Response	20 to 20,000 Hz (see Figure 4)
Directional Polar Pattern	Cardioid (see Figure 5)
Output Impedance	150 Ω (actual)
Attenuation Switch	0 or -15 dB attenuation
Low Frequency response switch	flat; -6 db/octave below 115 Hz; -18 dB/octave below 80 Hz
Phantom Power	48 Vdc ±4 Vdc (IEC-268-15/DIN 45 596), positive pins 2 and 3
Current Drain	4.65 mA typical at 48 Vdc
Common Mode Rejection	≥ 50 dB, 20 Hz to 20 kHz
Polarity	Positive pressure on diaphragm produces positive voltage on output pin 2 relative to pin 3
Dimensions and Weight	55.9 mm (2.20 in.) maximum body diameter, 187 mm (7.37 in.) long (see Figure 6) 490 grams (17.3 oz.)
Sensitivity (typical, at 1000 Hz; 1 Pa = 94 dB SPL)	-36 dBV/Pa (16 mV)
Self-noise (typical, equivalent SPL; A-weighted, IEC 651)	13 dB
Maximum SPL at 1000 Hz **2500 Ω load (Attenuator on)** **1000 Ω load (Attenuator on)**	139 (154) dB 133 (148) dB
Output Clipping Level* **2500 Ω load** **1000 Ω load**	+9 dBV +3 dBV
Dynamic Range **2500 Ω load** **1000 Ω load**	126 dB 119 dB
Signal to Noise ratio**	81 dB
Total Harmonic Distortion (THD), 2500 Ω load	<0.08% for a 120 dB equivalent SPL input.

*20 Hz to 20 kHz; THD < 1%. THD of microphone preamplifier when applied input signal is equivalent to cartridge output at specified SPL.

**S/N ratio is difference between 94 dB SPL and equivalent SPL of self-noise, A-weighted.

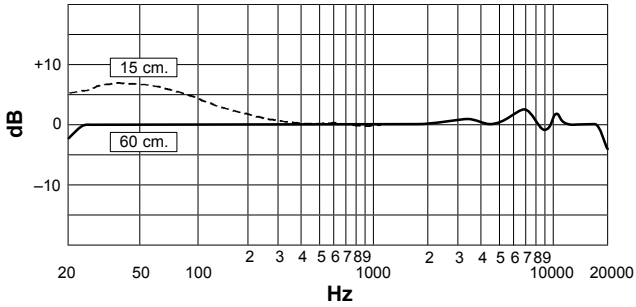


FIGURE 4. TYPICAL FREQUENCY RESPONSE

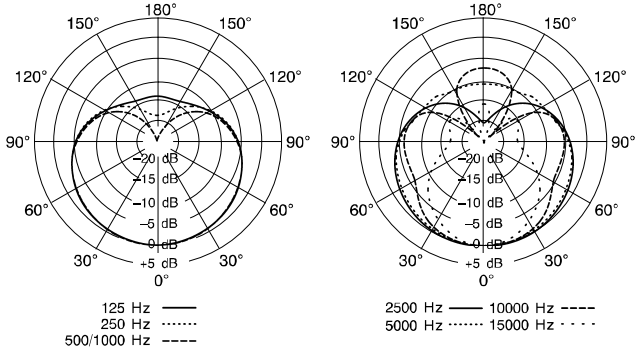


FIGURE 5. TYPICAL POLAR PATTERNS

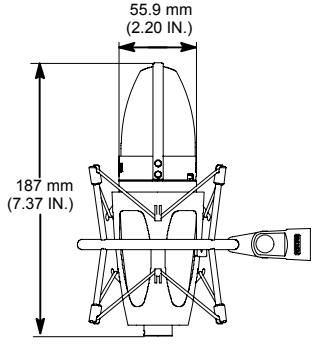
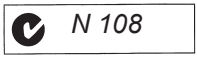


FIGURE 6. DIMENSIONS

CERTIFICATION

Eligible to bear CE Marking; Conforms to European EMC directive 89/336/EEC. Meets applicable tests and performance criteria found in European Professional Audio Products EMC Standard EN 55103 (1996); Part 1 (Emissions) and Part 2 (Immunity). The KSM32 is intended for use in environments E1 (residential) and E2 (Light Industrial) as defined in European standard EN 55103. EMC conformance is based on the use of shielded interconnecting cable.



FURNISHED ACCESSORIES

ShureLock™ Rubber Isolated Shock Mount (SL Model only) A32SM
Protective Velveteen Pouch A32VB

OPTIONAL ACCESSORIES

Popper Stopper™ Pop Screen PS-6
ShureLock™ Black Swivel Adapter A32M
Aluminum Carrying Case (SL Model only) A32SC
Padded, Zippered Carrying Bag A32ZB

REPLACEMENT PARTS

Suspension Shock Mount Elastic Cords (set of two). RK373
Replacement Foam for Carrying Case 29A2284

SERVICE

For additional microphone service or parts information, please contact the Shure Service department at 1-800-516-2525. Outside the United States, please contact your Authorized Shure Service Center.