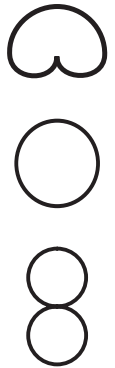
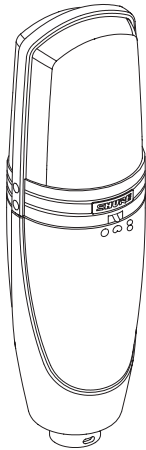


User Guide  
Le Guide de l'Utilisateur  
Bedienungsanleitung  
Guía del Usuario  
Guida dell'Utente  
ユーザーガイド  
Руководство  
пользователя  
取扱説明書  
사용자 안내서  
用戶指南

# KSM44A



SHURE INCORPORATED

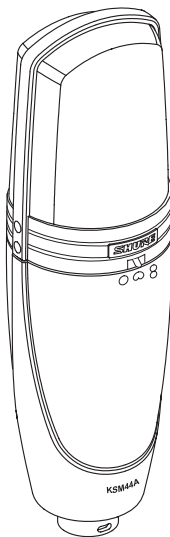


# KSM44A

## Multiple Polar Pattern Condenser Microphone

Thank you for selecting the KSM44A.

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 49-7131-72140. Our web address is [www.shure.com](http://www.shure.com).



## General Description

The Shure® KSM44A is a premium, large-diaphragm, side-address condenser microphone with multiple polar pattern options (cardioid, omnidirectional, bidirectional). The refined and sophisticated design of the KSM44A features an externally biased, dual 1-inch diaphragms, extensive internal pop filtering and Prethos™ Advanced Preamplifier Technology for a ground-breaking threshold minimum of self-noise. The KSM44A is the premier choice for the highest level of professional studio and stage performance.

## Features

- Multiple polar patterns—cardioid, omnidirectional and bidirectional—for maximum flexibility in a wide variety of recording applications
- Dual 1 inch, externally biased, ultra-thin, 2.5  $\mu\text{m}$ , 24 Karat gold-layered, low mass, Mylar® diaphragms provide superior frequency response
- Prethos™ Advanced Preamplifier Technology exhibits extremely low self-noise with superior dynamic range, transient response and ultra-low distortion for transparent recording
- 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

The KSM44A provides superior results in any application requiring a high quality microphone. Some typical applications are listed below.

- Voice-solo, background, voice-over or broadcasting
- Acoustic instruments such as piano, guitar, drums, percussion, strings
- Wind instruments-brass and woodwind
- Low-frequency instruments such as double bass, electric bass, kick drum
- Overhead miking-drums or percussion
- Ensembles-choral or orchestral
- Room ambience pick-up-guitar amplifier or drums

Acoustic environments and microphone placements strongly affect the sound obtained from miking a source, especially with a high-resolution microphone like the KSM44A. You may need to experiment with placement, room treatments and polar pattern to achieve the best overall sound for each application.

# Operation

## Suspension Mount

Use the supplied ShureLock® suspension mount to secure the microphone to a floor or boom stand.

**Important:** Thread the knurled locking ring securely to the base of the microphone. Do not overtighten.

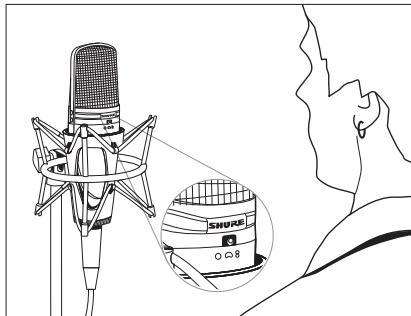
## Power Requirements

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.




## Positioning

Position the front of the microphone, with **SHURE**, towards the desired sound source.



## Selecting a Polar Pattern

The three position switch on the front of the microphone sets the polar response pattern. This changes the microphone's sensitivity to sounds coming from different angles.

-  **Cardioid.** Picks up sounds directly in front of the microphone and is least sensitive to those in back. This is most commonly used in studio recording and live-sound applications.
-  **Omnidirectional.** Picks up sounds from all directions. Best for picking up room ambience and for miking several sources simultaneously, such as an ensemble or multiple singers. The omnidirectional polar pattern exhibits no proximity effect.
-  **Bidirectional.** Picks up equally from the front and back of the microphone while rejecting sounds from the sides. Often used for stereo recording (such as mid-side and Blumlein techniques).

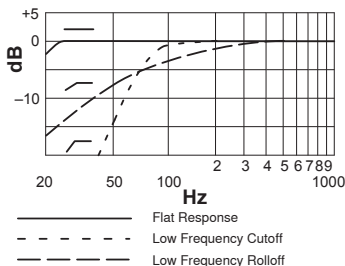
**Note:** As with all bidirectional microphones, sounds picked up from the back will be out of polarity with the source. Those from the front are in polarity with the source.

**CAUTION:** The switch produces mechanical noise which, when amplified, may damage the loudspeakers. Turn down any loudspeakers or mute the microphone at the mixing console before using the switch.

## 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.

## Load Impedance

Maximum SPL capability, output clipping level, and dynamic range vary with the input load impedance of the preamplifier 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.

## 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.

# SPECIFICATIONS

<b>Cartridge Type</b>	Dual-Diaphragm, Externally-Biased Condenser
<b>Polar Pattern</b>	Cardioid, Omnidirectional, Bidirectional
<b>Frequency Response</b>	20 to 20,000 Hz
<b>Output Impedance</b>	50 $\Omega$
<b>Attenuator Switch</b>	15 dB
<b>Low-Frequency Filter Switch</b>	Flat, -6 dB/octave below 115 Hz, or -18 dB/octave below 80 Hz
<b>Power Requirements</b>	11-52 V DC phantom power (IEC 61938) 5.8 mA, maximum
<b>Common Mode Rejection (10 to 100,000 Hz)</b>	>50 dB
<b>Polarity</b>	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
<b>Net Weight</b>	492 g (17.4 oz.)
<b>Connector</b>	Three-pin professional audio (XLR), male, balanced

		<b>Cardioid</b>	<b>Omnidirectional</b>	<b>Bidirectional</b>			
<b>Sensitivity (open circuit voltage, @ 1 kHz, typical)</b>		-31 dBV/Pa† (29.8 mV)	-37 dBV/Pa† (14.8 mV)	-36 dBV/Pa† (16.8 mV)			
<b>Self Noise (equivalent SPL, A-weighted, typical)</b>		4 dB SPL-A	6 dB SPL-A	7.5 dB SPL-A			
<b>Preamplifier Distortion (at 1 kHz, 94 dB SPL)</b>		<0.001%*					
<b>Signal-to-Noise Ratio**</b>		90 dB	88 dB	86.5 dB			
<b>Clipping Level (20 Hz to 20 kHz, 1% THD)</b>	2500 $\Omega$ load	9 dBV					
	1000 $\Omega$ load	6 dBV					
<b>Dynamic Range (@ 1 kHz)</b>	2500 $\Omega$ load	130 dB	134 dB	131 dB			
	1000 $\Omega$ load	127 dB	131 dB	128 dB			
<b>Maximum SPL (1 kHz at 1% THD)*</b>		<b>PAD OFF</b>	<b>PAD ON</b>	<b>PAD OFF</b>	<b>PAD ON</b>	<b>PAD OFF</b>	<b>PAD ON</b>
	2500 $\Omega$ load	134 dB SPL	150 dB SPL	140 dB SPL	152 dB SPL	139 dB SPL	151 dB SPL
	1000 $\Omega$ load	131 dB SPL	147 dB SPL	137 dB SPL	149 dB SPL	136 dB SPL	148 dB SPL

\*THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL

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

† 1 Pa=94 dB SPL

# ACCESSORIES AND PARTS

## Furnished Accessories

ShureLock® Cristal Elastic Shock Mount	A44ASM
ShureLock® Cristal Swivel Adapter	A44AM
Aluminum Carrying Case	A44ASC
Protective Velveteen Pouch	A44AVB
Suspension Shock Mount Elastic Cord, Cristal (contains two)	RK383

## Optional Accessories

Windscreen	A32WS
Padded, Zippered Carrying Bag	A32ZB
Popper Stopper™	PS-6
Popper Stopper™ Magnetic Pop Filter & ShureLock® Rubber Suspension Shock Mount	A42PF A42SM

## Replacement Parts

Suspension Shock Mount Elastic Cord, Cristal (contains two)	RK383
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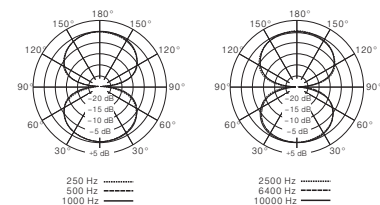
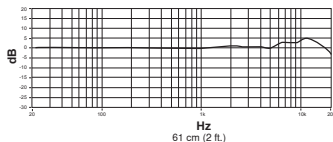
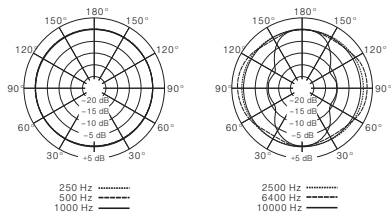
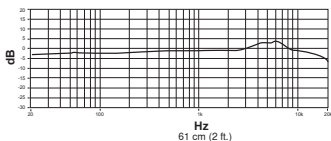
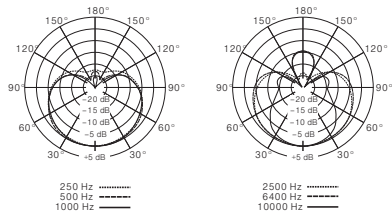
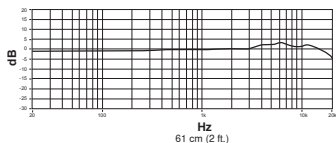
## CERTIFICATION

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:  
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Headquarters Europe, Middle East & Africa  
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D-74078 Heilbronn, Germany  
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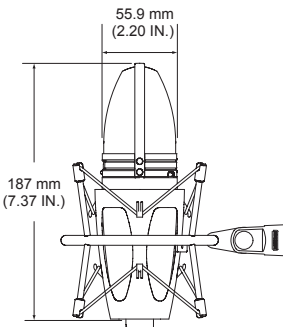
TYPICAL FREQUENCY RESPONSE  
 COURBE DE REONSE TYPIQUE  
 TYPISCHES FREQUENZVERHALTEN  
 RESPUESTA DE FRECUENCIA TIPICA  
 TIPICA RISPOSTA IN FREQUENZA

周波数特性

TYPICAL POLAR PATTERNS  
 COURBE DE DIRECTIVITE TYPIQUES  
 TYPISCHE POLARCHARAKTERISTIK  
 PATRONES DE CAPTACION POLAR TIPOCOS  
 TIPICI DIAGRAMMI POLARI

指向特性

OVERALL DIMENSIONS - DIMENSIONS  
 HORS TOUT  
 GESAMTABMESSUNGEN - DIMENSIONES  
 TOTALES - DIMENSIONI TOTALI - 寸法



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Patent Notice: Pat. D447,131

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