



KSM40C

Large Diaphragm Cardioid Condenser Microphone

Manual for the Shure KSM40C cardioid condenser microphone. Learn how to set up the microphone, find specifications, and more about applications and placement.

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KSM40C

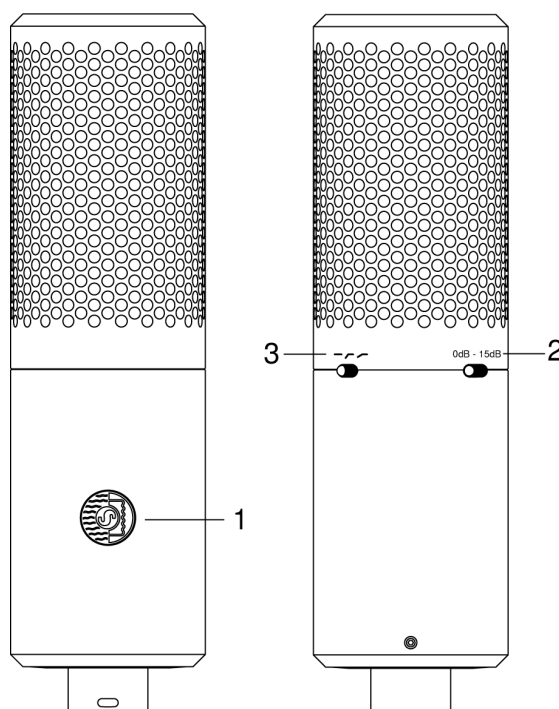
Large Diaphragm Cardioid Condenser Microphone

What is the Shure KSM40C?

The Shure KSM40C is a side-address condenser microphone built with a premium 1" single-diaphragm cardioid capsule. The KSM40C has a mix-ready frequency response with both a subtle, smooth high-frequency boost for airy, detailed vocals and robust low end for full sound on acoustic instruments such as guitars, woodwinds, and strings.




The sophisticated design sits lightly atop boom stands, while the durable, compact shock mount isolates the mic from external vibrations. With a 15 dB attenuation switch, a 3-position low cut filter, minimal self-noise, and a quick transient response, the KSM40C is an elegant choice for capturing critical performance in precisely controlled environments.

KSM40C Parts



1. Shure logo indicates the front of the microphone
2. Attenuation/padding switch. **Options:** 0 dB, -15 dB
3. Frequency response switch

Frequency Response Switch Options

Icon	Meaning
	Flat response
	Low frequency cutoff: An 18 dB-per-octave cutoff at 80 Hz.
	Low frequency rolloff: A 6 dB-per-octave rolloff filter at 115 Hz.

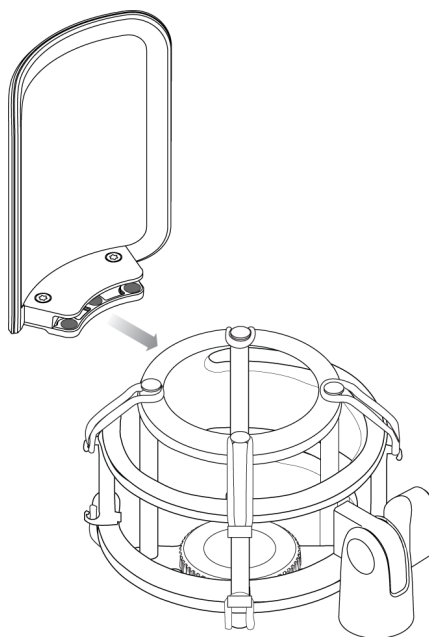
Power Requirements

Important: For best performance, this microphone needs a +48 V DC phantom power supply. Most mixers or interfaces have a switch or button to activate phantom power.

Microphone can operate with voltages down to 12VDC but will not meet all specifications.

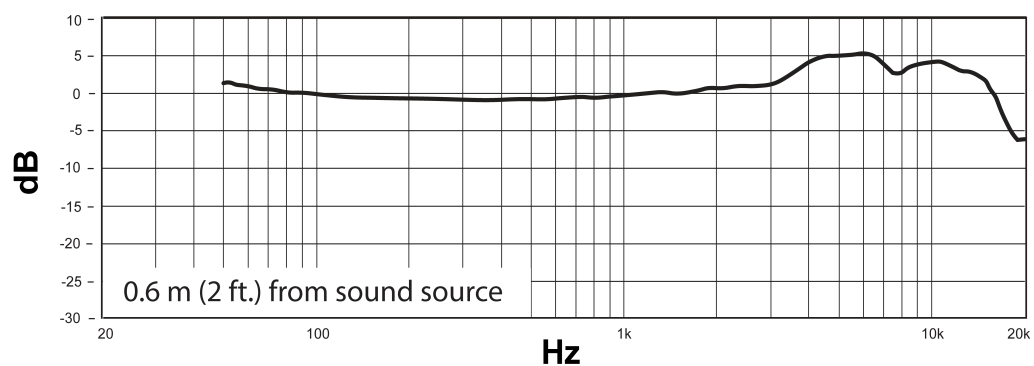
Attach the Pop Filter

Use the magnets to attach the pop filter to the shock mount.

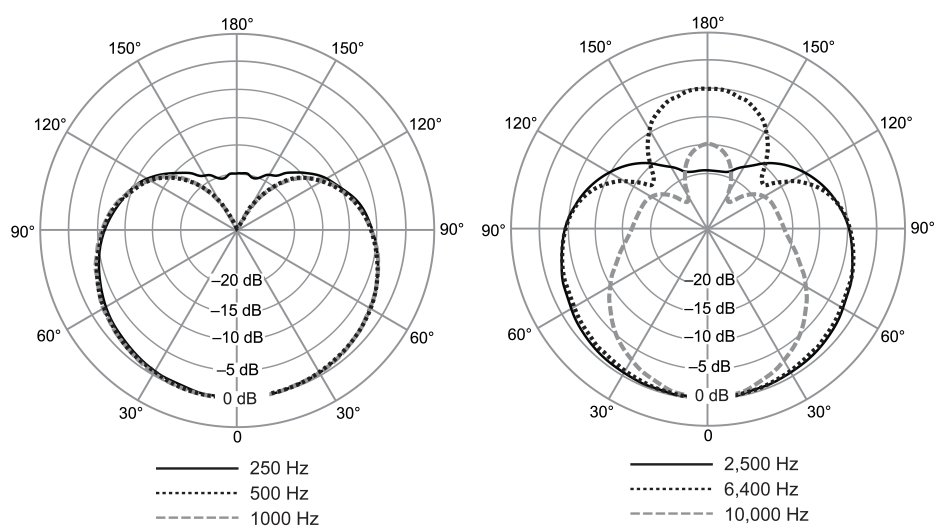


KSM40C Specifications

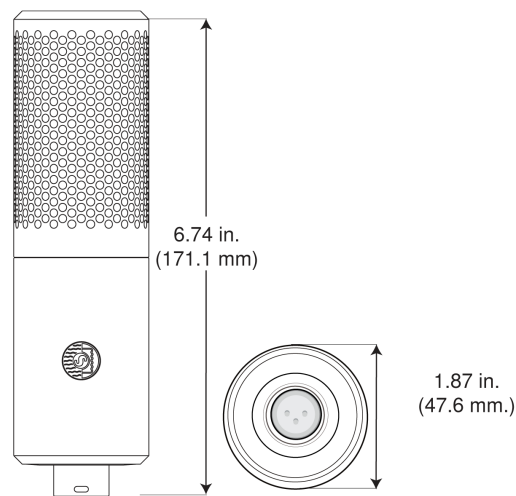
Frequency Response



Polar Pattern



Dimensions



Type
Condenser (externally biased)

Polar Pattern
Cardioid

Frequency Response
20 to 20,000 Hz

Output Impedance
70 Ω +/- 5

Sensitivity
open circuit voltage, @ 1 kHz, typical
-33.5 dBV/Pa [1] (21 mV)

Signal-to-Noise Ratio
86.5 dB

Maximum SPL
1 kHz at 1% THD

No pad	1000 Ω load	134 dB SPL
	2500 Ω load	138 dB SPL
	5000 Ω load	138 dB SPL
With 15 dB pad	1000 Ω load	149 dB SPL
	2500 Ω load	153 dB SPL
	5000 Ω load	153 dB SPL

Dynamic Range

@ 1 kHz

1000 Ω load	127 dB
2500 Ω load	130 dB
5000 Ω load	130 dB

Clipping Level

20 Hz to 20 kHz, 1% THD

1000 Ω load	5.3 dBV
2500 Ω load	9.2 dBV
5000 Ω load	9.4 dBV

Self-Noise

equivalent SPL, A-weighted, typical

7.5 dBA

Common Mode Rejection

20 Hz to 20 kHz

>60 dB

Attenuator Switch

0, -15 dB

Low Frequency Filter Switch

Flat, -6 dB/octave below 115 Hz, or -18 dB/octave below 80 Hz

Polarity

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

Connector

Three-pin professional audio (XLR), male, balanced

Weight

285 g (10.1 oz.)

Dimensions

47.6 x 171.1 mm (1.87 x 6.74 in.)

Housing

Machined, anodized aluminum alloy

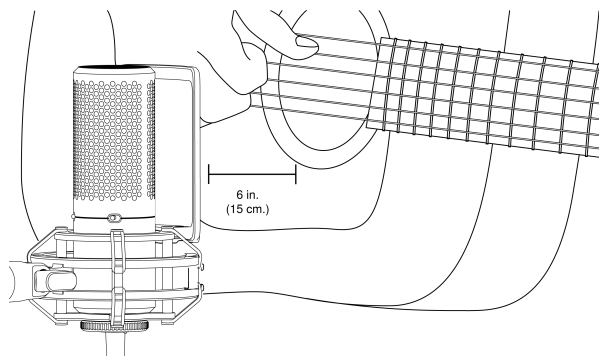
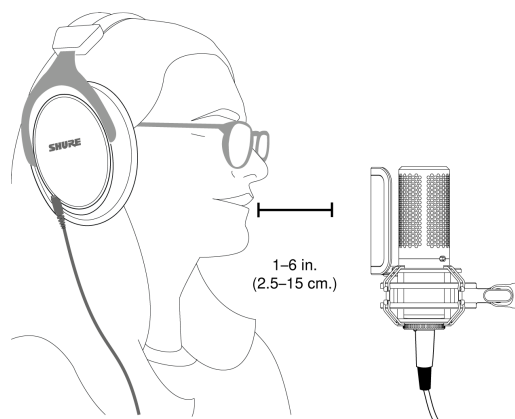
Power Requirements

48 V DC phantom power (5.6 mA), IEC standard 61938, P48

[1] 1 Pa=94 dB SPL

Where to Place the KSM40C

Place the mic a few inches away from your sound source. Listen and experiment with the angle and placement of the mic until you find the sound you want.



Applications and Placement

Large Diaphragm Condenser Applications and Placement

Application	Distance from source	Tips
Vocals and speech	1-6 inches (2-15 cm)	Use a pop filter to prevent plosives.
Acoustic guitar	6-12 inches (15-30 cm)	Place near the sound hole or the twelfth fret for a balanced, natural sound.
Drums	3-6 feet (1-2 m)	Place in front of the drum kit to capture more of the kick drum, or as an overhead (above the kit, facing down) to capture more cymbals. Consider using additional Shure microphones on indi-


Application	Distance from source	Tips
		vidual drums for more mixing flexibility and a thicker sound.
Strings or horns	1–6 feet (30 cm–2 m)	For a single instrument, place the microphone close to the source. For a horn or string section, arrange players at an equal distance from the microphone.
Woodwinds	2–6 inches (5–15 cm)	Experiment with placement near the sound holes and bells of woodwind instruments.
Amplifiers	1–6 inches (2–15 cm)	Aim towards the center of the speaker for a clear, aggressive sound, or towards the edge of the speaker for a mellow sound. Watch for distortion.


Visit www.shure.com for more on microphone placement and recording techniques.

Select a Low Frequency Response

A 3-position switch on the microphone adjusts the low frequency response. You can use these filters 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. This setting can help eliminate low frequency room noise.

 **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.

Set Attenuation

The attenuation/pad switch reduces the signal level without altering the frequency response. This can prevent extremely loud sounds from overloading the microphone circuitry.

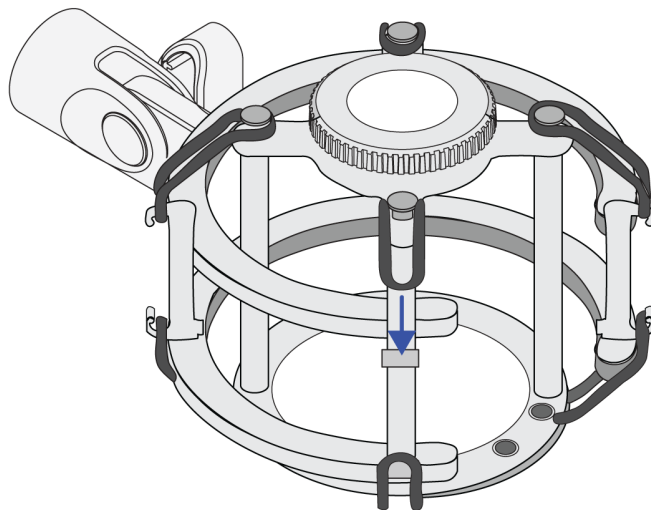
0 dB: For quieter or standard sound sources.

–15 dB: For extremely loud sound sources such as drums, horns, or loud guitar cabinets.

Replace Bands on the Shock Mount

To replace the rubber bands on the shock mount:

1. Remove the old rubber bands.
2. Position the inner mount with magnets facing the open side of the outer mount.
3. Pull the 8 new bands from the screws on the inner mount to the hooks on the outer mount .



Load Impedance

For the microphone's signal to transfer well, the load/input impedance of your preamplifier should be at least 1000 Ω . Most modern microphone preamplifiers meet this requirement.

Furnished Accessories

- AKSM40/44-CASE carrying case for KSM40C and KSM44MP
- AKSM40/44-SM shock mount for KSM40C and KSM44MP
- A4PF magnetic pop filter
- A4M swivel hard mount
- AKSMEB elastic bands for KSM shock mounts
- 31B1856 brass adapter

Additional Resources



- [Shure Knowledge Base FAQs](#)
- [Microphone Techniques for Recording](#)
- [Shure Performance & Production YouTube channel](#)
- [Shure Creators YouTube channel](#)

How to Avoid Plosives When Recording

Important Safety Instructions for Passive Microphones

SAFETY PRECAUTIONS

Before using this product, please read and save the enclosed warnings and safety instructions.

	<p>WARNING: Ignoring these warnings may cause severe injury or death as a result of incorrect operation.</p> <p>If water or other foreign objects enter the inside of the device, fire or electric shock may result. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.</p>
	<p>CAUTION: Ignoring these cautions may cause moderate injury or property damage as a result of incorrect operation.</p> <p>Never disassemble or modify the device, as failures may result. Do not subject to extreme force and do not pull on the cable or failures may result. Keep the microphone dry and avoid exposure to extreme temperatures and humidity.</p>

Environmental Regulatory Information

Waste Electrical and Electronic Equipment (WEEE) Directive



In the European Union and the United Kingdom, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Registration, Evaluation, Authorization of Chemicals (REACH) Directive

REACH (Registration, Evaluation, Authorization of Chemicals) is the European Union (EU) and the United Kingdom (UK) chemical substances regulatory framework. Information on substances of very high concern contained in Shure products in a concentration above 0.1% weight over weight (w/w) is available upon request.

Recycling Information

Please consider the environment, electric products and packaging are part of regional recycling schemes and do not belong to regular household waste.

Certifications

CE Notice

Hereby, Shure Incorporated declares that this product with CE Marking has been determined to be in compliance with European Union requirements.

The full text of the EU declaration of conformity is available at the following site: <https://www.shure.com/en-EU/support/declarations-of-conformity>.

UKCA Notice

Hereby, Shure Incorporated declares that this product with UKCA Marking has been determined to be in compliance with UK-CA requirements.

The full text of the UK declaration of conformity is available at the following site: <https://www.shure.com/en-GB/support/declarations-of-conformity>.

