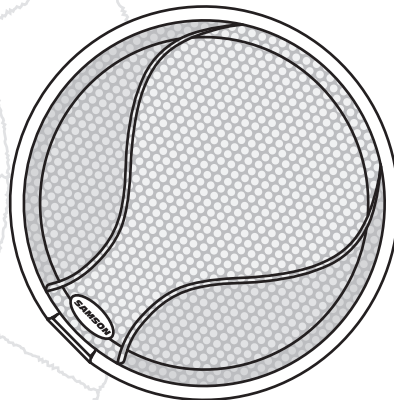


CM10B

SURFACE-MOUNT UNI-DIRECTIONAL
BOUNDARY MICROPHONE

Owners Manual



SAMSON[®]
A U D I O



Table Of Contents

Introduction	2
CM10B Features	3
Using the CM10B	4-5
Powering the CM10B	4
Microphone Placement and Positioning	4-5
CM10B Polar Pattern	6
CM10B Installation	7
CM10B Frequency Response	8
CM10B Specifications	9

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Samson Technologies Corp.
575 Underhill Blvd.
P.O. Box 9031
Syosset, NY 11791-9031
Phone: 1-800-3-SAMSON (1-800-372-6766)
Fax: 516-364-3888
www.samsontech.com

Introduction

Thank you for purchasing the CM10B boundary microphone from Samson Audio! The CM10B is a low profile, surface-mount boundary microphone ideal for flat surfaces like conference room tables, alters or hanging on walls. The minimally intrusive design allows the microphone to be used in applications where low visibility is desired. The CM10B features a permanently charged condenser element with a half-cardioid, or uni-directional, pickup pattern. The microphone exhibits excellent rear rejection, providing maximum gain before feedback. Although the CM10B is very small in size, all the electronics are contained within the body, eliminating the need for any external electronics pack. The CM10B is fitted with a standard 3-pin miniature male XLR connector, and a 30-foot mini XLR to standard XLR cable is included. The CM10B operates on standard 9 through 52 Volt phantom power. A heavy Neoprene rubber pad is added to the bottom of the unit to decouple the microphone from the surface helping reduce unwanted pickup noise. The CM10B is built using heavy-duty die cast construction with reinforced steel grill screen. Convenient mounting holes and hardware for hanging on walls or ceilings is included. A low reflectance, matte black finish enhances the stylish minimalist look.

Should your CM10B Boundary Microphone ever require servicing, a Return Authorization number (RA) must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for a Return Authorization number prior to shipping your unit. Please retain the original packing material and, if possible, return the CM10B in its original carton and packing materials.

CM10B Features

The Samson CM10B utilizes state-of-the-art microphone technology and is engineered to the finest detail. Here are some of its main features:

- Half Cardioid – Condenser
- Low-profile with onboard electronics and no external power supply
- Mini XLR connector
- Includes 30-foot cable with mini to standard XLR connectors
- Standard 9 – 52 Volt Phantom Power Operation

Using the CM10B

Powering the CM10B

The CM10B is a condenser microphone and therefore it needs to be operated by connecting a phantom power supply. The CM10B operates on any phantom supply which provides 9 through 52 volts. Phantom power is standard on most quality mixers. If necessary, an external phantom supply, *like the Samson S phantom*, can also be used. The CM10B receives the phantom power directly from a mic connector or cable when connected to a mixer that includes a phantom supply. The power is sent OUT of the microphone INPUT, riding silently along with the audio signal. Most mixers have a switch to engage the phantom power, so be sure to check that the phantom power is on.

Microphone Placement and Positioning

The CM10B was designed primarily for use on a flat surface like a conference table, hanging on a wall, or on an altar in a house of worship. In order to maximize the sound quality, you must pay careful attention to the placement of your CM10B and how it is positioned for the instrument or vocalist that you are miking. Since the CM10B is a uni-direction pick-up pattern, be sure to position the microphone towards the sound you want to pick up, and away from sound you do not want to pick up. All microphones, especially uni-directional or

Using the CM10B

Microphone Placement and Positioning - continued

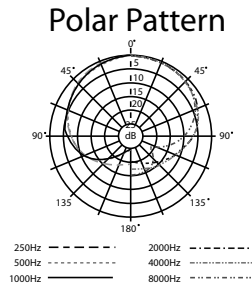
cardioid microphones, exhibit a phenomenon known as “proximity effect.” Very simply put, proximity effect is a resulting change in the frequency response of a microphone based on the position of the mic capsule relative to the sound source. Generally, you will get a bass boost when miking in close. When you point a cardioid mic directly at the sound source (on axis) you will get the best frequency response, however when you start pointing the microphone slightly away (off axis) you will notice the low frequency response dropping off and the microphone will start to sound thinner. This may a little difficult to hear at first, but after some experimentation and experience, you’ll find that a slight adjustment can actually make a big difference in sound.

CM10B Polar Pattern

Every microphone has a characteristic polar pattern that determines how well it accepts or rejects signal coming from various areas around the microphone. For example, omnidirectional mics accept all signals regardless of where those signals originate (in front of the mic, behind it, to the side, etc.).

In contrast, directional cardioid mics are specifically designed to accept mostly signal coming from directly in front, and to reject signal coming from behind or from the side. The half-cardioid pattern is utilized by the CM10B (as shown in the illustration below). For this reason, the CM10B excels in environments where there is a good deal of unwanted ambient sound—it delivers those signals originating directly in front of the mic capsule itself while rejecting those that originate from behind.

The polar pattern also determines how prone a particular mic is to inducing feedback. Feedback is that characteristic nasty howling sound that occurs when a mic is placed too close to a loudspeaker—the signal from the loudspeaker is fed into the mic, then into the loudspeaker, then into the mic, over and over again until an oscillating tone is generated. Because the half-cardioid pattern utilized by the CM10B is so good at rejecting signal coming from in rear of the mic, you'll find that use of the CM10B greatly minimizes feedback problems.



CM10B

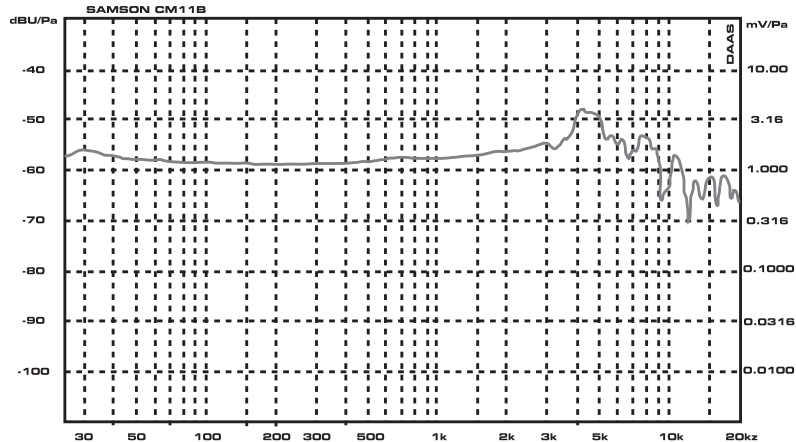
CM10B Installation

The CM10B can be installed on just about any flat surface. Simply place the unit on a conference table, alter or sound stage. For mounting flush to a wall or ceiling, you can use the mounting holes provided on the rear of the microphone. Take care not to cover the any part of the mic element with your hand or any other object. Also, be aware of a phenomenon called the proximity effect, as explained on page 4, which causes a noticeable change in the frequencies response of the microphone.

CM10B Frequency Response

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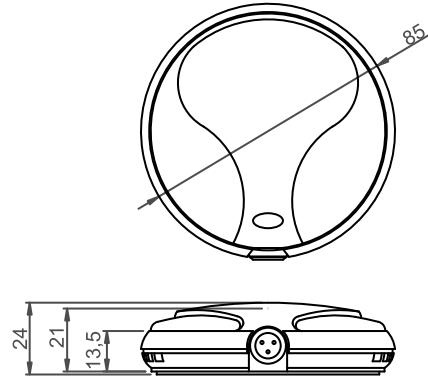
CM11B FREQUENCY RESPONSE



CM10B Specifications

Specifications

Element Type	Fixed-charge condenser
Polar Pattern	Cardioid (Uni-directional)
Frequency response	30 - 18000Hz
Sensitivity	-39dB/Pa
Rated impedance	600 ohms
SPL	127dB
Dynamic range	103dB
S/N ratio	70dB
Power Supply	9~52V phantom supply
Power consumption	4mA



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