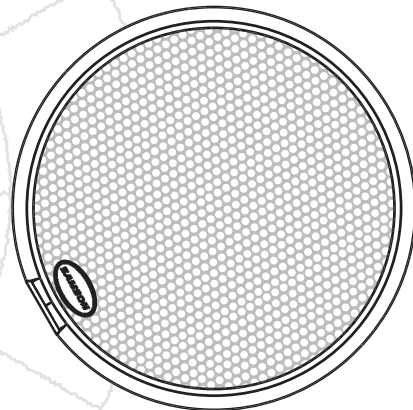




CM11B

SURFACE MOUNT OMNIDIRECTIONAL
BOUNDARY MICROPHONE

Owners Manual



SAMSON[®]
A U D I O





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Introduction



Thank you for purchasing the CM11B boundary microphone from Samson Audio! The CM11B 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 that microphone to be used in applications where low visibility is desired. The CM11B features a permanently charged condenser element with a half-omnidirectional pickup pattern. Because the CM11B is omni-directional, it provides linear pick-up in a 360-degree pattern, allowing the unit to be placed on the center of a conference table to pick-up everyone seated. Although the CM11B is very small in size, all the electronics are contained within the body, eliminating the need for any external electronics pack. The CM11B is fitted with a standard 3-pin miniature male XLR connector, and a 30-foot mini XLR to standard XLR cable is included. The CM11B 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 pick-up noise. The CM11B 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 CM11B Boundry 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 CM11B in its original carton and packing materials.



CM11B Features

The Samson CM11B utilizes state-of-the-art microphone technology and is engineered to the finest detail. Here are some of its main features:

- Half-omnidirectional - 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 CM11B

Powering the CM11B

The CM11B is a condenser microphone and therefore it needs to be operated by connecting a phantom power supply. The CM11B 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 CM11B 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 CM11B was designed primarily for use on a flat surface like a conference table, hanging on a wall, or in a house of worship, on the alter. In order to maximize the sound quality, you must pay careful attention to the placement of your CM11B and how it is positioned for the instrument or vocalist that you are miking. Since the CM11B is a omnidirectional the microphone will pick-up the sound in a 360 degree pattern, essentially picking up in every direction. This is often a good solution in a conference situation since the CM11B will pick up all

Using the CM11B

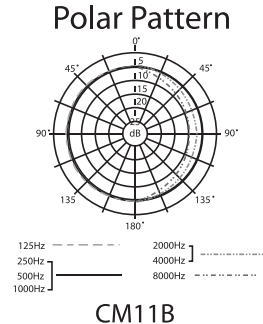
Microphone Placement and Positioning - continued

around the table. All microphones, especially uni-directional or 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. However, since the CM11B is omni directional it exhibits very little proximity effect.

CM11B 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, unidirectional, or 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. In contrast, omnidirectional mics accept all signals regardless of where those signals originate (in front of the mic, behind it, to the side, etc.). The pickup pattern utilized by the CM11B is omnidirectional (as shown in the illustration below).

For this reason, the CM11B excels in environments where capturing the sound from all directions around the microphone is desired. The CM11B will pick up the sound in a 360-degree pattern, which makes it ideal for placing in the center of a conference table to record a meeting. 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 CM11B is omnidirectional, special attention to the microphone and speaker placement should be considered in live sound applications.

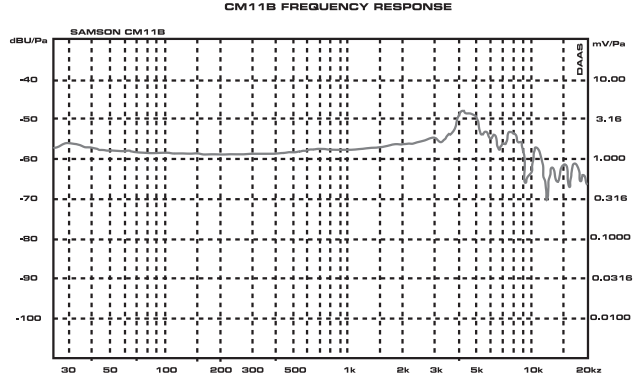




CM11B Installation

The CM11B 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.

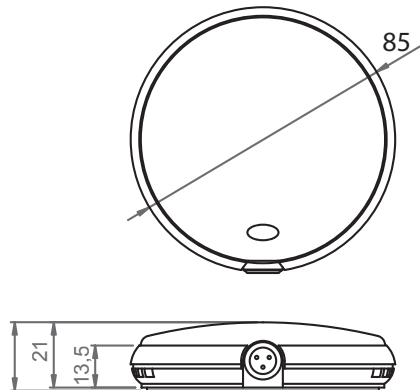
CM11B Frequency Response






CM11B Specifications

Specifications

Element Type	Fixed charge condenser
Polar Pattern	Omni-directional
Frequency response	30 - 18000Hz
Sensitivity	-39dBV/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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