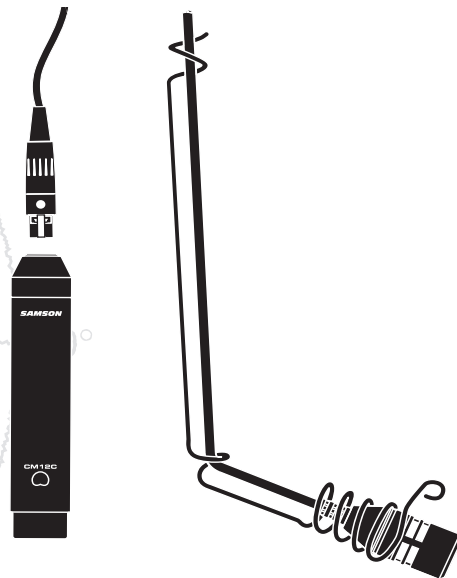


CM12C

HANGING MINIATURE CONDENSER
CHOIR MICROPHONE

Owners Manual



SAMSON®
A U D I O



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Introduction

Thank you for purchasing the CM12C hanging microphone from Samson Audio! The CM12C is a miniature hanging condenser microphone which can be placed over an orchestra, choir or sound stage, and with its minimal profile, is mostly undetectable from even a slight distance. The CM12C features a permanently charged condenser element with a cardioid pickup pattern. The microphone exhibits excellent rear rejection providing maximum gain before feedback. The CM12C includes a steel hanger that allows the microphone to be pointed, and fixed, towards the position of the sound source. The microphone is supplied with a 30 foot cable terminating in a mini female XLR which connects to the included, PM5 power module with standard male XLR connector. The CM12C operates on standard 9 through 52 Volt phantom power supply. A multi-stage pop filter is also included. The microphone element is protected by rugged metal housing and the entire microphone has a low reflectance, matte black finish.

Should your CM12C Instrument Microphone or PM5 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 CM12C in its original carton and packing materials.

CM12C Features

The Samson CM12C utilizes state-of-the-art microphone technology and is engineered to the finest detail. Here are some of its main features:

- Miniature hanging Choir Mic
- Mini XLR connector
- Steel Hanging positioning bracket
- Includes 30-foot cable with mini XLR connector
- PM5 Mini to standard XLR adapter
- Multistage windscreen
- Standard 9 – 52 Volt Phantom Power Operation

Using the CM12C

Powering the CM12C

The CM12C is a condenser microphone and therefore it needs to be operated by connecting a phantom power supply. The CM12C 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 CM12C 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 CM12C was designed to hang over a orchestra, choir or sound stage. Since the CM12C 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. In order to maximize the sound quality, you must pay careful attention to the placement of your CM12C and how it is positioned for the instrument or vocalist that you are miking. All

Using the CM12C

Microphone Placement and Positioning - continued

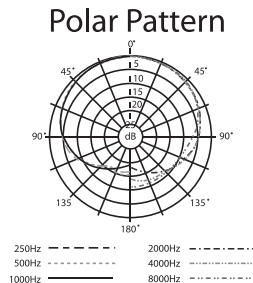
microphones, especially uni-directional or cardioid microphones, exhibit a phenomenon known as “proximity effect.” Very simply put, proximity effect is a resulting change in the frequency response of a microphone based on the position of the mic capsule relative to the sound source. Generally, you will 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.

CM12C 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.).

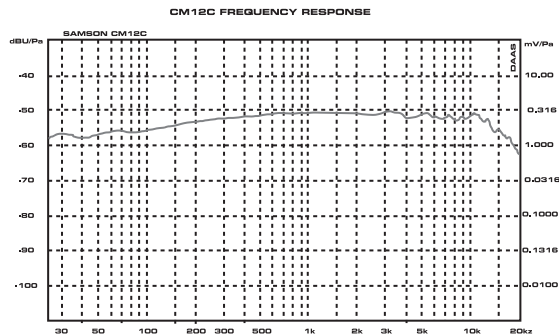
In contrast, directional cardioid mics are specifically designed to accept mostly signal coming from directly in front, and to reject signal coming from behind or from the side. The cardioid pattern is utilized by the CM12C (as shown in the illustration below). For this reason, the CM12C excels in environments 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 cardioid pattern utilized by the CM12C is so good at rejecting signal coming from in the rear of the mic, you'll find that use of the CM12C greatly minimizes feedback problems.



CM12C

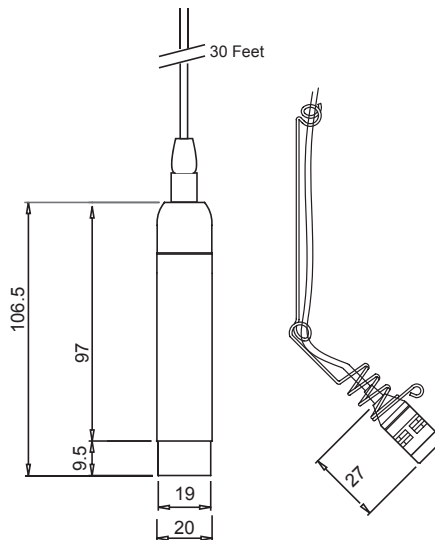
CM12C Frequency Response



CM12C Specifications

CM12C Specifications

Element Type	Fixed charge condenser
Polar Pattern	Cardioid (Uni-directional)
Frequency response	50 - 18000Hz
Sensitivity	-40dB/Pa
Rated impedance	200
SPL	136dB
Dynamic range	112dB
S/N ratio	70dB
Power Supply	9 - 52V phantom supply
Power consumption	2.5mA





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