

AEQ CM 179



**WIDE DIAPHRAGM
CONDENSER
MICROPHONE**

USER'S MANUAL

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1. DESCRIPTION.

Large-diaphragm condenser microphone with selectable directivity patterns.

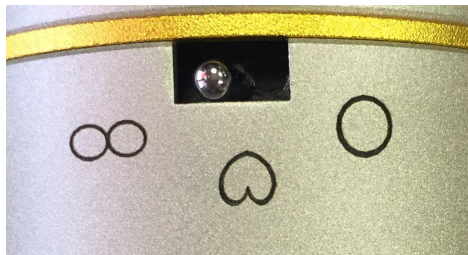
Specially designed for voice, it features an excellent dynamic range, generating a response that is not only clear, transparent and bright, but also compact and full of detail at low frequencies, with extremely low distortion independently on the received sound pressure level.

It is fed with 48 volts and connection is balanced using an XLR connector.

2. DIRECTIVITY, SENSITIVITY AND HIGH-PASS FILTER SWITCHES.

In order to be able to pick up the audio with fidelity and clarity in a variety of situations, the CM169 has three switches which can be positioned carefully using any fine pointed object such as a ball pen cap or a tiny flat screwdriver or trimmer.

Directivity:



There are three different positions:

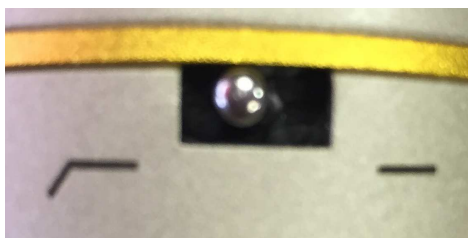
- **Bi-directional:** "8" shaped diagram, is used for voice recording or dubbing with two people located face to face.
- **Cardioid:** wide unidirectional diagram, to capture audio from a single person or a musical instrument in front of the microphone.
- **Omnidirectional:** good response is obtained from any position around the microphone, for the capture of ambient sound or an indeterminate quantity of talkers or singers around it.

Attenuation:



The "-10 dB" setting decreases the sensitivity with flat response, for example for outdoor or stage use, very close to the mouth of a speaker, singer, wind instrument, or any other situation where sound pressure can be excessive.

High-pass filter:



Provides maximum sensitivity with low cut at 100 Hz and attenuation of 12 dB / octave. This position is appropriate, for example, for outdoor use or locations with noisy air conditioners, computers, etc. and with a recommended distance of use of 20 to 50 cm from the mouth of the speaker or sound source.

3. DE-POP FILTER.

When using the microphone in near field or outdoors, the abilities of the incorporated acoustic and electronic filters can be enhanced with the provided foam filter.

4. INDICATIONS FOR A CORRECT USAGE.

This microphone allows for the best possible near or far field sound capture, controlling the close voice pops using the included de-pop filter as well as blows from wind instruments and vibrations and external noises thanks to its suspension and high pass filter.

The CM 179 microphone has been developed so it can adapt to the most varied sound capture conditions, such as the ones listed below:

Voice in radio, recording or dubbing studios

Its triple directivity diagram (omnidirectional, cardioid or bidirectional) make it suitable for different studio types and number of people in it.

Cardioid is best suited for a single person, for example in radio self-control productions. Bidirectional is, on the other hand, the best suited diagram for voice recording or dubbing from two different people, one in front of the other. Omnidirectional diagram is good for recording or voice dubbing from an undetermined number of people around the microphone.

The human voice is very complex and with a microphone with an ample response, we are able to recognize the timbre or "signature" of each voice. There are syllables which reach the 8-16 kHz octave (including their harmonics), while others contain frequencies in 63 to 125 Hz octave. These can cause unwanted effects of pops and wind that this microphone can correct.

Use it normally, without attenuation. If you notice buzzing background noise, air conditioning, computers, vibrations or pops caused by the voice, try the 100 Hz filter.

Singing on stage and in studio

The CM 179 is particularly suitable for singing, since it is designed to be insensitive to vibrations having a wide frequency response and switches to incorporate filters and attenuators. Use the different positions of the switches to suit the situation.

Its 100 Hz high-pass filter allows it to be used in scenarios such as stages, where low frequency vibrations may be present, which can distort the capture of bass sounds.

If the microphone is not shared by several singers, you'd better set it in cardioid diagram mode.

It is usual that buzzes and ambient noises are found in stages. Try the "-10dB" setting while placing the microphone close to the mouth. The high-pass filter can also be tested in these situations.

Tips for singing: Experienced singers will be able to get the most out of the microphone through the practice and experimenting with it. In addition to practicing with switches positions, depending on the position from where the singer is vocalising (directly or laterally to the microphone) and the distance from mouth to microphone, it is possible to obtain variations in sound that can be consciously practiced and improved.

Instruments

Its flat and extended frequency response allows for a perfect capture from any type of musical instrument, specially wind, strings, charles and snares, boxes and drums.

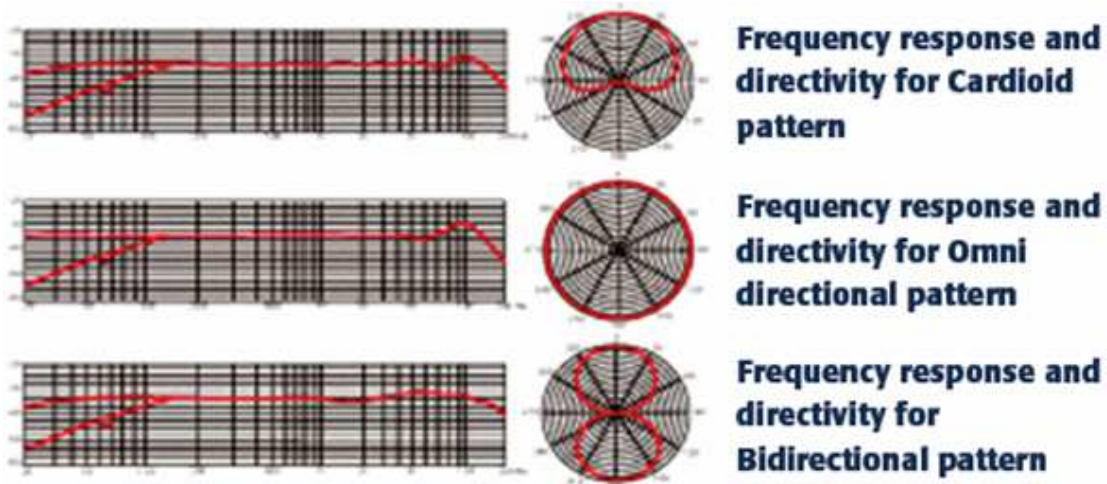
Use your experience or obtain on-line guidance and consultation in regards to how to correctly pick up the sound of your instrument, tips for the location and orientation of the microphone that allows for the achievement of different effects of tonal balance. Note that if you place the microphone near the instrument it may be advisable to use the attenuator.

5. TECHNICAL SPECIFICATIONS.

Operating principle: pressure and pressure gradient condenser transducer, connected to a pre-amp with adaptive impedance and filters. Phantom powered.

Polar pattern: cardioid / bidirectional / omni-directional (three selectable patterns).

Frequency range: 20 - 20.000 Hz.



Sensitivity: -32 dB / -34 dB / -36 dB (0dB = 1V/Pa at 1 KHz).

Electrical impedance: 200 ohm, ± 30 % balanced.

Load impedance > 1000 ohm.

Case material: zinc and aluminum alloy, steel grid.

Finish: silver grey, matte.

Maximum sound pressure level: 134 dB SPL for distortion < 1%.

Maximum sound pressure level with -10dB attenuator: 144 dB SPL for distortion < 1%.

High pass filter: 100 Hz. 6 dB / octave.

Dimensions and weight:

- Diameter: 50 to 38 mm.
- Capsule diameter: 34 mm for dual 28mm membrane (1,1").
- Total length: 180 mm.
- Weight: 550 g net.

Power supply: Phantom power supply according to IEC 61938. Accepts 48V.

Accessories included:

- Elastic co-axial suspension, support thread pitch: 5/8 ".
- De-pop filter.
- Anti-shock transport case.

Microphone dimensions and weight inside its case:

- Length x width x height: 263 x 234 x 115 mm.
- Weight: 1370 grams.