



ELECTRET CONDENSER MICROPHONE



Stetron's highly qualified Audio Engineers take the guesswork out of audio. We strive to provide the highest level of customer and technical support in the industry. We work with customers to fully understand their audio requirements and help them design solutions that meet their requirements.

An electret condenser microphone is a type of electrostatic capacitor-based microphone, which eliminates the need for a polarizing power supply by using a permanently charged material.



Electret condenser microphones require no polarizing voltage, but they normally contain an integrated preamplifier, which does require a small amount of power (often incorrectly called polarizing power or bias). This preamp is frequently phantom powered in sound reinforcement and studio applications.



Other condenser microphones simply include a 1.5 V battery in the microphone housing, which is often left permanently connected as the current drain is usually very small.



The condenser capsule is charged or “polarized” with a voltage or electric charge.



The traditional way to apply this electric charge is to polarize the capsule with an external voltage. The standard powering system is P48 Phantom power, which delivers 48 volts – enough voltage to polarize the capsule, although many modern condenser mics contain voltage converters for even higher voltages (usually 60-80 volts).



The other method is to “freeze” an electric charge permanently in the capsule. This is done by applying a special substance called “electret”. The term “electret” was coined, because it is the electrostatic equivalent of a permanent magnet. Usually, the electret film is applied to the capsule’s backplate; this variety is called “back-electret”.

SOURCE

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