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CHAPTER 4 CHOOSING AND USING MICROPHONES

Let's talk a bit about basic microphone types and what you should choose to get the best results for your songs in Cubase.

Microphones come primarily in three types:



Three Types of Microphones

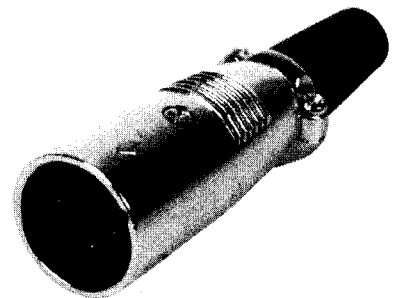
- **Condenser Microphones.** These are the kind of microphones commonly used in recording, broadcast media, and similar uses. Condenser mics typically require power from the mixer or device they connect to in order to work.
- **Dynamic Microphones.** These are the kind of microphones one would typically use in a hand-held situation or on a microphone stand for a live performance.
- **Ribbon Microphones.** A ribbon mic is a type of dynamic microphone. It uses a thin aluminum, duraluminum, or nanofilm ribbon placed between the poles of a magnet to generate voltages by electromagnetic induction.

Professional-level microphones typically use an XLR connector cable. This cable has three prongs inside one end of the end, which connects to your mixer or audio device, and a three-hole connector on the other end, which connects to the microphone.

Condenser Microphones

Condenser microphones work differently from dynamic microphones and are the preferred choice for serious audio recording. Condenser microphones are more sensitive and pick up a wider range of frequencies, allowing you to pick up more detail in your recordings and hear subtle nuances you might not otherwise capture with a dynamic microphone. With a condenser microphone, the sound enters into the diaphragm of the "capsule," which is made up of two plates. The two plates of the capacitor are made up of fixed and movable plates. One plate acts as a capacitor, and the vibrations from your voice or instrument produce changes in the distance between the capacitor's plates.

Condenser microphones can be *unidirectional*, meaning they are intended to pick up sound primarily from one side of the microphone. They can also be *bidirectional*, meaning they pickup from both sides, which is usually controlled by a switch on the microphone.



XLR Connector