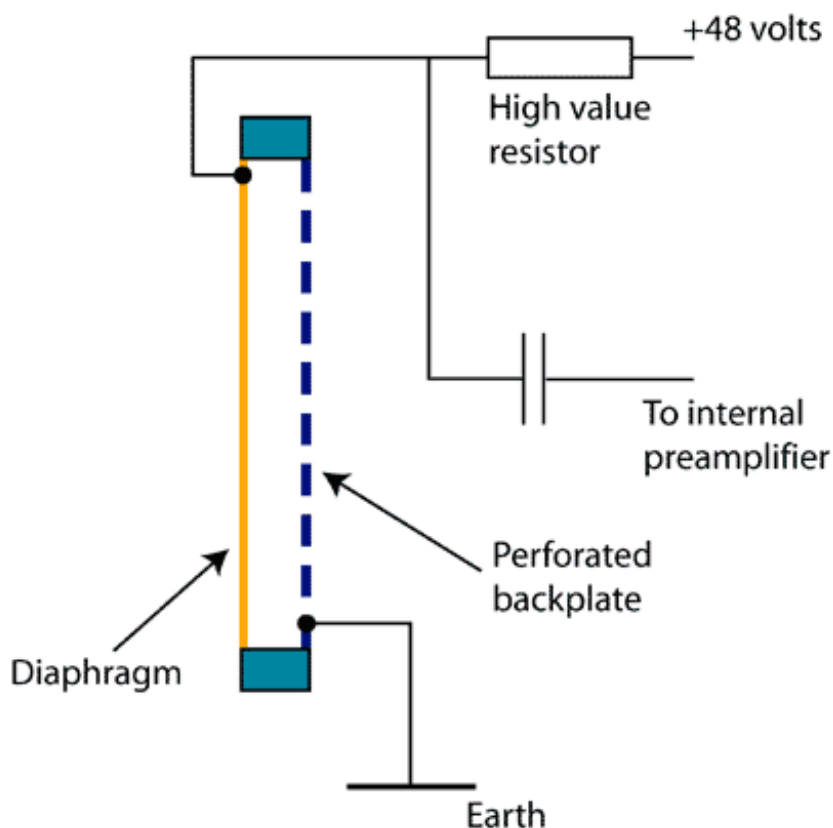


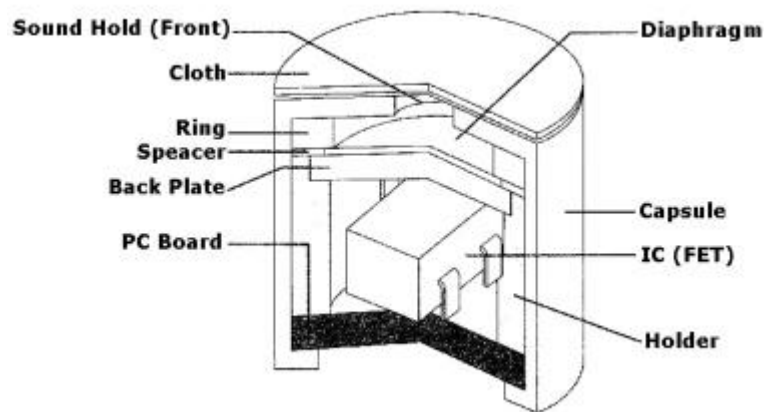
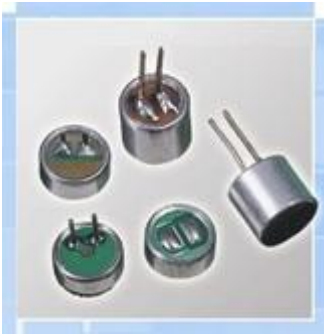
Mikrofon

Capacitor microphones: Commonly called condenser microphones, these microphones function by making the diaphragm one plate of a capacitor. As the diaphragm vibrates, it changes the capacitance of the capacitor in proportion to the sound pressure level. The capacitance is converted to a voltage by a special amplifier inside the microphone. Since this requires outside power, capacitor microphones require a battery or external power supply (known as “phantom” power because it is transmitted back over the same cable as the output signal by a special technique). In addition to the amplifier, the capacitor itself must be charged, so some electricity must be used to polarize the capacitor. In many inexpensive (and some very expensive) capacitor microphones, one plate of the capacitor is permanently charged. This is known as an electret condenser microphone. Unfortunately, the built-in amplifier requires power, so a battery or phantom power is still required. Since the mass of the diaphragm can be much smaller than that of a dynamic diaphragm, the capacitor microphone is usually better suited to high-frequency sound transduction, offering a somewhat more “transparent” sound quality. They are also somewhat more fragile than dynamic microphones.

The construction of the capacitor diaphragm is of special interest, since this is the actual transduction element. The front-facing side of the capacitor capsule is the diaphragm which is vibrated by the sound. The dimensions, material, thickness and tension applied to the diaphragm will determine much of the microphone’s characteristic sound.

The principle of operation of a capacitor (condenser) microphone





Cross-Section of Dynamic Microphone

