

When Technology Defines The Accessories For Your Microphones

The audio system is an ever-changing technology. With the recent changes in the audio market, the microphones available are various, meeting different needs of those who are looking for it. However, we should remember that the basic designing structure of a microphone stays the same. Sound is created by pressure and thus microphone works on this principle. The accessories for your microphones though basically stay the same, slight changes may occur depending on the type of microphones. However the basic fact that remains the same is that a purely mechanical system shows how much energy the vibrations in the air can have and thus further create sound. Various types of microphones are discussed below in details that will help you to identify the reason why you need different accessories for each of them. The very first microphone was designed by using a metal diaphragm, which was attached to a needle, and this needle scratched a pattern onto a piece of metal foil. The pressure differences in the air that occurred, when one spoke towards the diaphragm moved the diaphragm. This moved the needle, which was recorded on the foil. Later when the needle was ran back over the foil, the vibrations scratched the foil. Then this will move the diaphragm and recreate the sound. All the latest and modern microphones still work on the historical principles. They still accomplish the same thing as the original, but do it electronically rather than mechanically. A microphone takes varying pressure waves in the air and converts them into varying electrical signals. There are five different technologies commonly used to accomplish this conversion. The oldest and simplest microphone is a carbon microphone. It uses carbon dust. The carbon dust has a thin metal or plastic diaphragm on one side. As sound waves hit the diaphragm, they compress the carbon dust, which changes its resistance. By running a current through the carbon, the changing resistance differs the amount of current that flows. A dynamic microphone on the other hand takes advantage of electromagnet effects. It functions when a magnet moves past a wire. The magnet induces current to flow in the wire. The diaphragm then moves either a magnet or a coil when sound waves hit the diaphragm, and the movement creates a small current. Where as in a ribbon microphone, a thin ribbon is suspended in a magnetic field. Sound waves move the ribbon, which changes the current flowing through it. Thus, sound is generated. A condenser microphone is also addressed as a capacitor. It has one plate of the capacitor moving in response to sound waves. The movement changes the capacitance of the capacitor, and these changes are amplified to create a measurable signal. Condenser microphones usually need a small battery to provide a voltage across the capacitor. In crystal microphones certain crystals attached in the diaphragm change their electrical properties as they change shapes. By attaching a diaphragm to a crystal, the crystal will create a signal when sound waves hit the diaphragm. A variety of accessories fused with technology have been linked to convert sound waves into electrical signals. However even with the variety in accessories the common accessories for all is the diaphragm. The diaphragm collects the sound waves and creates movements in a method based on the technology, used to create the signals.

About the Author

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