

Transmit Clean Digital Audio with Digital Coaxial Cables

In the world of digital audio, there are two types of cable to choose from; optical cables which use light to transmit signal and digital coaxial cable. These audio cables will enable your home theater system to transmit digital data between components. This will provide you with superior sound quality over typical RCA audio cables.

How Digital Coaxial Cable Works

Digital coaxial cables employ the same principles as other coaxial cables. The inner conducting layer is surrounded by an outer conductor as well as the rubbery insulating layer outside the cable. The digital signal is sent through the inner conductor as it travels between components. During the course of its transmission, the signal routinely comes in contact with the outer conductor. The outer conductive layer is created with materials that act as a reflector for the signal, thereby bouncing it back off of its surface. The signal will continue to reflect within the confines of inner conductor until it reaches the receiving component.

Dedicated to Digital Audio

Digital coaxial cable has only one purpose; to deliver digital audio between components. This is in complete contrast to RF coaxial cable which transmits both video and audio along the same path. As you may suspect, dedicating the entire bandwidth of the cable to sending only digital audio has excellent ramifications for your home theater's sound quality. This practice results in greater signal fidelity between the transmitting device and the receiving component. Greater signal fidelity means that the sound you hear from your home theater speakers will be truer to the way the sound was originally recorded.

Benefits of Digital Coaxial Cables

Digital coaxial cable also has another benefit related to its dedication to digital audio. In the manner that signal transmission usually takes place, the digital signal from the source, a DVD for example, is sent to a digital-to-analog converter (DAC). The signal is converted to analog and sent through the given cable where it reaches the receiving component on the other side. This component uses an analog-to-digital converter (ADC) to reconstruct the digital signal as closely as possible. During this process, errors and variations can be introduced to the signal resulting in audible artifacts and distortions that diminish your home theater's sound quality. Unlike with other audio cables, digital coaxial cable can transmit digital signals along its length without the need to convert to analog. Digital coaxial cable is capable of by-passing this process and delivers a cleaner signal to your home theater receiver.

Applications of Digital Coaxial Cables

Connections for digital coaxial cables can be found on everything from DVD players to home theater receivers. If it uses digital audio, then chances are there is a manufacturer who has made that component with digital coaxial cables in mind.

About the Author

Apparent optical property A ratio of radiometric quantities that depends both. optical oceanography The subdiscipline of oceanography.

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