

Noise-Dissipation System

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audioquest[®]

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AudioQuest Noise-Dissipation System

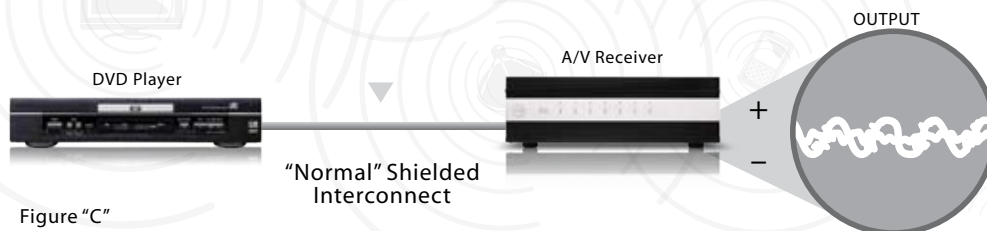
Noise, in the form of Radio Frequency(RF) energy, is the mortal enemy of good sound. Our environment is more contaminated with Radio Frequencies than ever before due to the huge proliferation of RF radiating devices like computers and cell phones, microwave ovens, etc.

Traditionally, RF energy is routed to ground in an interconnect cable through the use of a shield, consisting of either a braided metal and/or a wrapped foil. It's hard not to think of the "shield" in cable as something that thwarts incoming RF and other types of distortion by deflecting it away to ground. This "draining" of RF to ground causes a modulation of the ground plane. This in turn causes a form of signal modulation, a distortion of the signal.

The examples shown below show the effect of various sources of RFI/EMI energy on conventional shielded interconnect when passing a sine wave. Figure "A" shows the modulation of the ground caused by this incoming RFI/EMI energy as it is picked up by the cable shielding. This, in turn, modulates the ground plane of the gear the cable is connected to. One easy analogy is to think of the electrical ground as the earth we walk on. The routing of RF energy to ground causes various degrees of seismic activity in the "earth", otherwise known as earthquakes. These earthquakes in turn wreak havoc on whatever is sitting (or moving) on the earth/ground. Electrically, we have signal "riding" on the ground. When the ground gets modulated, the signal also gets modulated as shown in Figure "B".



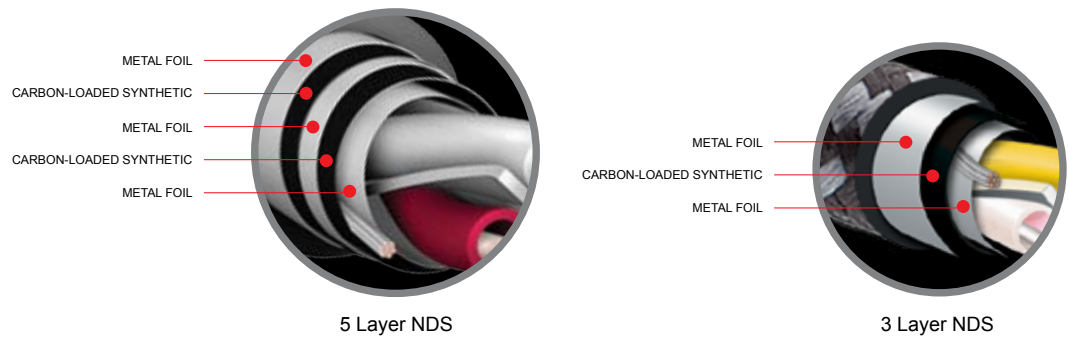
In Figure "C" a DVD player to A/V Receiver cable connection is shown using a conventional shielded interconnect. The effect of incoming RFI/EMI coming into the amplifier



via the interconnecting cable can be seen at the output of the amplifier in the form of a distortion of the sine wave signal

The Noise-Dissipation System greatly reduces the effect of this modulation. How? A combination of different “shield strategies” are used to reduce RF energy BEFORE that RF energy is dumped to ground.

The combined effect of metal and carbon-loaded synthetics prevents most RFI from ever reaching the equipment’s ground plane. The carbon-loaded synthetics have the ability to turn some of this RF energy to heat, to very effectively “lose” this energy. Metal, used in a passive manner, is used to act as another method of dissipating and reducing the incoming RF.



By the time whatever RF is left actually is drained to ground (via an inner foil which IS attached to ground) the RF “enemy” has been greatly reduced. Figure “D” shows dramatically reduced modulation of the signal via the use of the Noise-Dissipation System.

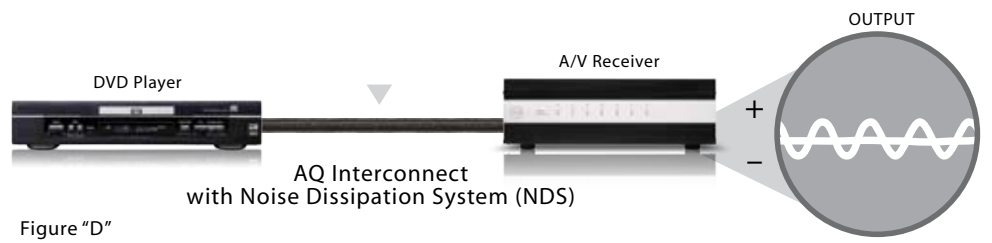
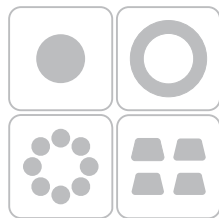


Figure “D”

The result? Dramatically less modulation of the signal, less distortion and better sound.



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