CAN YOU

Believe it?

WITH ASSOCIATE PROFESSOR DEREK LEINWEBER

Wired for quality

Sometimes, it does take a rocket scientist to figure out how to connect the DVD.

YOU have just bought a new DVD recorder to connect to your plasma television. Now it's time to purchase the cables to hook them up. You'll need a stereo audio cable, a video cable and a cable to pass the antenna through your new machine to the TV.

The salesperson introduces you to racks of cables. There's the cheap $10 cable, the $30 cable or the premium mega cable at $100 . . . each. How do you decide?

The pressure to buy the $100 cable is huge. After all, you've spent hundreds already. Are you going to sacrifice quality if you buy the $10 cable? Fortunately, common sense, a little physics knowledge and scientific method can lead you to the right choice.

Let's start with the connectors.

Some cables have gold-plated connectors. How important is this?

Take a hint from the manufacturer of your TV and the new DVD player. If the connectors on these are gold-plated then you can benefit by purchasing a gold-plated cable. While gold is an excellent conductor, its real value is in its resistance to corrosion. If all connectors are gold-plated, you won't need to worry about corrosion spoiling the electrical connection over a period of years.

Now the audio cable is easy to consider.

The human ear hears audio frequencies in the range of 20 to 20,000 hertz (or cycles per second). That's merely thousands of hertz or kilohertz, not millions, the latter being the speed of old computer chips, for example.

Electronically, this frequency range is easy to handle and an inexpensive cable is fine, even if you are using a digital audio connection. You might want to consider gold-plated connectors for convenience if all terminals are gold-plated.

The antenna cable is also easy to select.

Take a look at the wire bringing the antenna signal into your house. There is little point in buying a better cable than that.

But the video cable requires more attention.

First, there are different ways of connecting a DVD recorder to a TV.

There's the Composite RCA jack, perhaps the most common or familiar connection.

There's often an S-Video connection available which is better. S-Video splits the video signal into separate colour and brightness channels for a higher quality picture. But the best highest-resolution connection is via the red-green-blue (RGB) component-video connection where three channels of video information are carried by separate cables.

In addition, the cable must also have a built-in conducting shield that surrounds the inner core wire. Some cables only have a braided wire that surrounds the core, but this is generally not enough. Most cables also include a foil wrapper around the core that ensures a comprehensive shielding of the signal.

My advice is to use the scientific method and do a side-by-side comparison. Have the store set up two identical TVs with two identical DVD players playing the same disk, and compare two different cables. And be certain to use exactly the same connection method.

A trick for selling expensive cables is to connect these through the superior RGB connectors and compare this image with the worst-case single RCA jack connection. In this case, the observed differences will involve both the differences in the cables and the different connection methods. It is impossible to draw any conclusion on which cable to buy.

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Making the right connections

- Whether a cable is gold plated or not, it's the difference in the type of cable - RGB, RCA, Coaxial and S-Video - that produces the greatest different in quality.
- Gold-plated cables benefit mostly from their resistance to corrosion, if both the cable and the connection in the electrical device are gold plated.
- Higher quality materials do have some impact on the quality of video signal carried - particularly for higher definition signals. However, audio data puts little strain on even basic cables.
- A cable's shielding protects the signal it carries from outside interference. Look for cables with foil wrapped around the core.