

# Difference Between Composite & HDMI Cables

*Contributed By: Michele Jensen*

Modern home entertainment systems consist of numerous devices such as televisions, stereos, DVD players, VCR players, camcorders and video game equipment. Cabling is used to connect the devices together. Two common types of cables are composite and high-definition multimedia interface (HDMI).

## 1. Composite Cables

Video signals transmit two types of information, luminance and chrominance. Luminance is the signal that carries brightness and contrast information, while chrominance is the color signal that carries hue and saturation information. Composite cables combine the two signals together into one analog signal for transmission from the output device such as a VCR to the input device such as the television.

## 2. HDMI Cables

The combination or modulation of the two video signals for transmission through the composite cable requires the signal to be demodulated at the receiving end. The process of modulating and demodulating the signal can lead to signal degradation and poorer picture quality. Since HDMI cables carry digital signals, they eliminate the need for modulation, thereby improving signal quality. Additionally, unlike composite cables, HDMI cables carry not only video signals, but audio signals as well.

## 3. Composite Cable Uses

Composite cables are often combined with stereo audio cables to form an RCA-style connector. The yellow connector is for video and the red and the white connectors are for the audio. These types of cable can be used to connect VCRs, camcorders and video gaming systems to one another as well as to a television

## 4. HDMI Cable Uses

While HDMI cables are used to connect VCRs, camcorders and video gaming systems to televisions, they can also connect numerous other electronic devices as well as audio equipment. Additionally, one HDMI cable can replace up to 11 different analog cables. An added feature of the HDMI cable is that it allows the connected devices to exchange settings information to maximize audio and video quality without requiring the user to change menu options on each device.

A typical home theater in a box surround sound will involve you connecting your speakers to a receiver with the included speaker wire. You'll then likely use a Digital Coax to connect the subwoofer to the receiver as well. An HDMI cable would then be preferred when connecting your receiver to your HDTV or projector.

## 5. Choosing Cables

More and more home entertainment electronics are digital. Since HDMI cables optimize system quality and many electronic manufacturers have adopted the HDMI standard, the use of HDMI cables will continue to rise. As HDMI evolves, so do the products supporting the interface. However, newer versions are backwards compatible and designed to work with devices using older HDMI versions. When choosing HDMI cables, check to ensure the cables support the product HDMI versions. Standard cables, also known as category 1, work with a 720p/1080i signal or speeds up to 75MHz/2.25Gbps. High speed cables, also known as category 2, work with 1080p signals, or speeds up to 340MHz/10.2Gbps.