

# So, what's an HDMI Repeater and why should I care?

When the HDMI licensing company, comprised of Hitachi, Panasonic Corporation, Philips, Sony, Thomson (RCA), Toshiba, and Silicon Image supported by Fox, Universal, Warner Bros. and Disney, and system operators DirecTV, EchoStar (Dish Network) and CableLabs developed HDMI (the High Definition Multimedia Interface) some argued that its only purpose was to enforce Digital Rights Management. Others argued it was developed to improve performance and simplify component hook-up. Perhaps both were correct. HDMI is capable of the highest definition picture and the highest resolution audio ever available, yet requires constant communication between all interconnected components to verify that each is authorized to receive the content.

One of the more confusing aspects of HDMI is that components with seemingly identical HDMI connectivity have different capabilities.

Perhaps the most confusing is the distinction between HDMI switching and HDMI repeating. Take, for example, Sherwood's RD-6513 and RD-6504 5.1 A/V receivers. On the RD-6513, the HDMI circuitry is completely independent of the receiver's audio/video pathway. Signals arriving via either of the unit's two HDMI inputs may be switched to its single HDMI output. Period. The signals are neither recognized nor processed by the receiver. They are only switched. The consumer must run a separate audio cable or cables to the receiver to hear sound from his system.

The RD-6504, on the other hand, is an HDMI repeater. It receives signals from HDMI sources, acknowledges its presence in the signal chain via HDCP handshakes with the Source and Sink (the technical name for the display device) and processes the signal. In the case of the RD-6504, it accepts the audio signal from the HDMI data stream, decodes, process and amplifies the audio and sends the video on.

Units that have HDMI repeater capability have two advantages: Only a single cable is necessary from the source unit to the receiver for both audio and video; Only Repeaters can playback the lossless audio tracks found on Blu-ray discs.

While units that support only HDMI switching will always require an additional cable or cables to get sound from the audio system and cannot decode lossless audio, these advantages may not be worth the added cost of repeater technology. 1) The receiver and source units are usually co-located so there is little inconvenience or cost associated with the necessary digital audio cable and, 2) The sonic improvement of lossless audio is small and can be difficult for even experts to discern on typical home systems.



The Sherwood RD-6504 is an HDMI Repeater. It takes in the HDMI signal, processes the audio and sends the video on to the TV.



The Sherwood RD-6513 is an HDMI Switcher. The receiver does not accept or process signals over HDMI. It only passes them on.