

Honeywell Cable & Custom Electronics



CURE Light

Honeywell

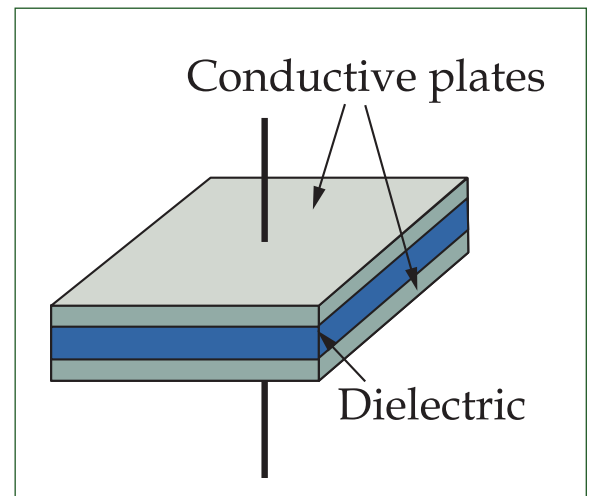
Problem 1: HDCP – High Bandwidth Digital Content Protection

The HDMI interface consists of a multitude of data channels required for the HDMI system to function. The DDC, Display Data Channel, which carries High Bandwidth Digital Content Protection or HDCP encryption key, continues to cause problems in the field. However, without the HDCP key the system is unable to authenticate any copyright material which is standard on most media material produced today. The life span of the encryption key exchange only lasts approximately two seconds and new key transfers are required for the system to continue functioning. Intermittent pictures, changing of colors and no sound are just a few symptoms that occur when this channel becomes problematic. These errors are due to loading capacitance on the channel that accumulates over cables, connectors and electronics.

Problem 2: Capacitance Build = Failure

A quality HDMI system can work well when first installed but may stop working on a consistent basis or altogether after a only a few days or months. The reason for this is often associated with capacitance. There is a maximum capacitance that HDMI systems can withstand and since capacitance issues build over time, problems can often surface after the initial installation.

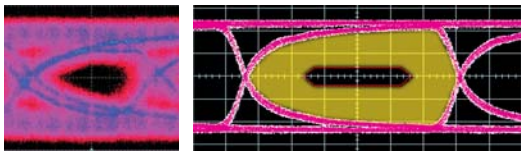
When environmental factors such as dust and humidity creep into the components and connectors, the effective capacitance changes just as the properties of the dielectric material between the plates of a capacitor changes the capacitance. Capacitance is also cumulative – each device or connector adds to the capacitance of the system. At some point the capacitance exceeds the HDMI parameters. The result degrades the transmission of data which causes continuous or often intermittent issues throughout the life of the system.



Problem 3: Capacitance vs. Speed

The higher the capacitance, the slower the speed at which the digital signal can be transmitted.

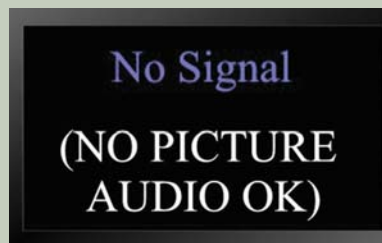
As the capacitance builds, the digital signal is compromised.



Think of a square wave or the eye pattern test pictured above. As capacitance builds, the lines blur together causing a less square wave.

If capacitance is too high, it will take longer to change from 0 to 1 volts and back again. When this change is not properly detected it causes digital transmission break down. Self-correcting systems will retry transmissions up to a point (hence intermittent operation), but when these attempts fail the system will stop working.

Examples of what your HDMI equipped TV might look or sound like when experiencing capacitance issues.





The Solution: CURE Light™ HDMI Cable

Honeywell's CURE Light HDMI Cable actively corrects capacitance issues by featuring a diagnostic system that allows the user to verify the proper 5V level, indicate proper Hot Plug detection and observe HDCP operation to assure it's actively working. At a glance, you can observe the operation of these very important channels to determine the root cause of any failure.

Studies show that more than 60% of HDMI failures are due to capacitance loading problems that get worse as the cables get older. Honeywell's CURE Light HDMI Cable reduces effective capacitance to less than a quarter of HDMI's defined limits within its chip set, restoring the degraded signal to its original integrity and ensuring error-free transmission. With this technology, communication data is restored to its original specification, allowing you to get the full benefit of HDMI digital performance!





Honeywell's Genesis Series low voltage wire and cable is produced with innovative equipment and technology. Our leading edge production facility, located in Pleasant Prairie, Wisconsin enables Honeywell to produce the highest quality and cost effective thermostat, electronic, security, fire, sound, voice, data and video wire and cable.

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For more information:

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