

The HDM-JR (also know as Junior)

For years you have been taking your “DAD” (HDM-DAD) to work for testing, troubleshooting and repairing your HDMI systems and the “DAD” has done it's job exemplary. Well now it's time to pass along the mantle to the next generation of HDMI repair products. The new HDM-JR has arrived and it was developed to take over “Just the Repair” functions of the “DAD”.

You will still keep your “DAD” in the tool box to verify the 5V, Hot Plug Detect, EDID and clock feeds as before, But now instead of leaving the more expensive “DAD” on the job site you will place the much smaller and more cost effective “JR” in it's place to solve the most common HDMI problems.

So, what will the HDM-JR will do for you.

Here is a quick check list.

Are you having audio drop outs?

Are you experiencing long sync times between sources?

Do you see “HDCP not supported” on your display screen?

Do you see “Mode not supported” on your display screen?

Do you see “Mode out of range” on your display screen?

Do you get a black screen on your display?

Do Picture and Sound drop out for a few seconds and then return?

Well great news the JR fix's all of those problems.

OK, so how does it work?

The vast majority of issues that we see in HDMI installations are in the EDID (Low Speed) feeds.

EDID encompasses all of the questions and answers that happen between the source and the display.

This communication must happen prior to the release of the Audio and Video from the source.

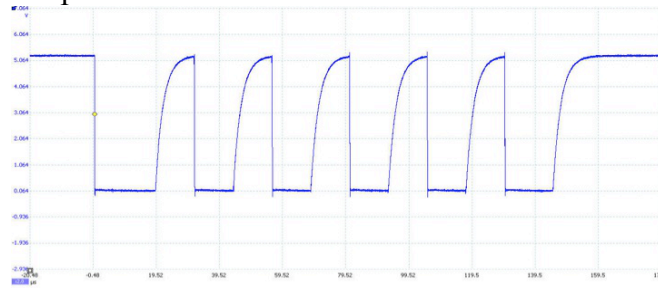
If any of the questions fail to get a response, the audio will fail first it is like a dashboard idiot light, if the problem continues or gets worse the picture will fail next (this is usually an HDCP issue).

Now, as to the cause of these failures; “Capacitance” on the low speed data buss.

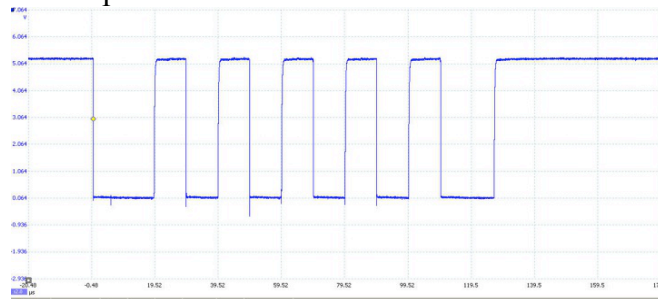
Capacitance slows down the rise time (the time it takes to transition from one state to another) of the data between “0's” and “1's”. The impact on the Data stream is much like us trying to run in thick sand or snow. This slows down the EDID information and creates a situation where the data is not in the correct position (high or low) when the data clock strikes. If this happens the communication between the source and display collapses. No data, no entertainment.

This capacitance can come from any of a number of places; overall product design, circuit boards, cables, environmental conditions, time or simply because it is Tuesday. It is not uncommon for these issues to take a while to manifest. You finish up an install with everything working great only to get a call from the client maybe a week or a month later with the system not working. You drive to the job site reset the system and voila it is working again, you are happy the client is happy for about a week or a month, then it is down again.

This is an actual EDID string with the rise time reduced by capacitance, note how the upward swing is rounded at the top.



Now here is the same data with the HDM-JR in the data stream, please note how the upward swing is now square at the top.



The EDID data will now be in the correct place when the data clock strikes.