

AV Pro **edge**

QUICKSTART GUIDE

MU-FXHD-KIT

FOX & HOUND

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Thank you for purchasing the Fox & Hound HDMI Testing Kit. This will be your quickstart guide for testing distributed audio/video systems and products.

This testing and troubleshooting kit includes:

- (1) Fox & Hound Generator
- (1) Fox & Hound Analyzer
- Hardshell Custom Carrying Case
- (2) 5.0 V Power Supply
- HDMI Cables

The Generator and Analyzer devices will be used as a stable and trustworthy source and sink for testing purposes.



TERMS

SOURCE

A source is anything that creates the video signal: Blu-ray, Apple TV, Roku, media player, computer, etc.



SINK

A sink is anywhere the signal ends up such as a TV, projector, or computer monitor

REPEATER

A repeater is any product that take in a video signal and outputs that same signal; like a matrix, switch or distribution amplifier



EXTENDER

Also known as a balun or HDBaseT Tx & Rx, allows you to 'extend' an HDMI cable via CAT 5/6/7

HDCP

High-bandwidth Digital Content Protection, form of digital copy protection developed by Intel Corporation to prevent copying of digital audio and video content as it travels across connections.

HDCP™
HIGH-BANDWIDTH DIGITAL CONTENT PROTECTION

WHY PRE-TEST PRODUCTS? Nothing is worse than integrating a complete set up and then finding out that you are not getting a picture where it was intended to be. Pre-testing all your products can save you time and the hassle of having to track down one bad piece of equipment in a job that has 100 components. Many integrators will test each product before installation at the job site. Others will have someone test all the products in a lab or warehouse before they get to the site. Let the Fox & Hound save you time and money by giving you the ability to pre-test products.



TROUBLESHOOTING 101

THE FIRST THING TO DO WHEN TESTING A COMPLETED AUDIO/VIDEO DISTRIBUTION SYSTEM IS TO CHECK COMPATIBILITY OF ALL THE PRODUCTS UTILIZED. BE SURE THAT EVERYTHING IN YOUR SYSTEM CAN WORK TOGETHER.

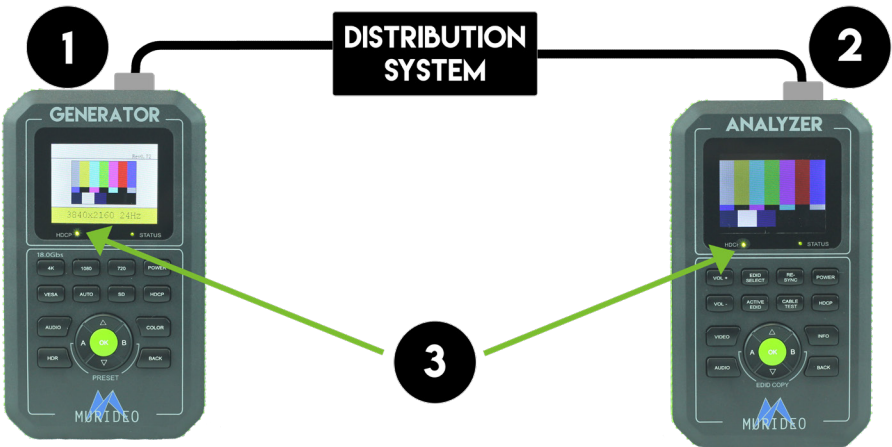
1. Use the GENERATOR in place of your source, choose a test pattern and the resolution you are wanting to distribute.
2. Place your ANALYZER in place of your sink, press "OK" to analyze the audio and video signal being distributed.
3. Look for any differences. Is the signal you are sending unchanged by your distribution system? Or has something been downscaled? Compressed? Altered? If your bandwidth, timing, or resolution is different from what the GENERATOR is outputting, then you know it was changed by a product in your distribution system.
4. If there is a difference showing on the analyzer, work backwards from the sink using your analyzer, checking the signal after each repeater product to find where the change originated.



TROUBLESHOOTING 101

THE SECOND ASPECT OF TESTING A COMPLETED A/V DISTRIBUTION SYSTEM IS TO CHECK FOR HDCP COMPATIBILITY THROUGHOUT.

1. Use the GENERATOR in place of your source, choose a test pattern and the highest resolution your distribution system can handle. Then press “HDCP” on the GENERATOR and select 2.2.
2. Set your ANALYZER in place of your sink, press “OK” to analyze the signal. Make sure you are getting HDCP 2.2 by pushing “HDCP” on the ANALYZER.
3. If you get picture on your ANALYZER and the HDCP light is lit your system is ready to go. If you get no picture, or no HDCP light, work backwards from the sink with your analyzer checking the signal after each repeater product to find the where HDCP was lost.



HDCP™
HIGH-BANDWIDTH DIGITAL CONTENT PROTECTION



HOW TO TEST AND VERIFY

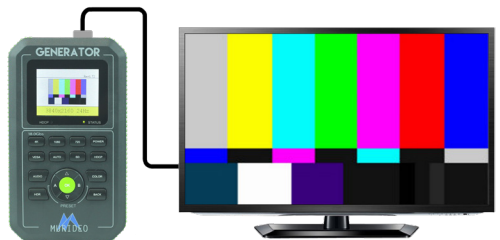
HOW TO TEST A SOURCE

1. Take a trusted HDMI cable from the output of the source and plug it into the ANALYZER. This will show you the picture from the source.
2. Press the “OK” button, the ANALYZER will show you exactly what is being output from the source.
3. Read the data and make sure it is what you want the source to output. Some questions to ask yourself – Is it doing 4K? Does it have the correct color space? Is the bandwidth correct for this content?
4. If everything reads correctly, you know your source is ready. If not, you will need to get into the source’s menu and make sure that it is sending an optimized signal. If your source isn’t optimized, there is no way for the rest of your system to distribute a truly higher resolution.



HOW TO TEST A SINK

1. Take a trusted HDMI cable from the input of the Sink to the output of your GENERATOR.
2. Select any test pattern from the GENERATOR using the up down arrows. Then choose the resolution you want to distribute by selecting either “4K”, “1080”, “720” or “VESA”, then click “OK”.
3. The test pattern should appear on the display, if it does not, start decreasing your resolution until you get a picture on screen. Once you are able to obtain a picture, this is the maximum resolution available for the display.



HOW TO TEST AND VERIFY

HOW TO TEST A REPEATER

1. For this test you need two trusted HDMI cables. Plug one end of the first cable into the GENERATOR, and the other into the repeater's input. Use the other cable to connect the repeater's output into your ANALYZER.
2. With the GENERATOR, choose any test pattern, and select the highest resolution, timing, and bandwidth you want to pass through the repeater.
3. Select "OK" on the ANALYZER to read what is being output. It should be the exact same thing that the GENERATOR was inputting. If not, use that repeater's internal options to make sure your signal is being optimized. If you can't optimize the repeater to pass the resolution, timing, and bandwidth you want you will need to swap products or "dumb-down" your entire system to meet it's capabilities.



HOW TO TEST AN EXTENDER

1. For this test you need two trusted HDMI cables and a trusted CAT 5/6/7 cable. Plug one end of the first cable into the GENERATOR, and the other into the Extender Transmitter's input. Use the other HDMI cable to connect to Extender Receiver's output and then into your ANALYZER. Connect the Transmitter and Receiver with the trusted CAT cable.
2. With the GENERATOR, choose any test pattern, then select the highest resolution, timing, and bandwidth you want to pass through the extender.
3. Select "OK" on the ANALYZER to read what is being output. It should be the exact same thing that the GENERATOR was inputting. If not, your extenders are changing the signal, and in most cases if there is something wrong you will get NO PICTURE. At this point you will need to swap products or "dumb-down" your entire system to meet the extender set's capabilities.



COMMON PROBLEMS IN A DISTRIBUTED A/V SYSTEM

NO VIDEO?

Use the “Troubleshooting A/V Systems” section to run your system through the process and find out where the issue is coming from.

NO 4K?

Individually check that each product can handle the same types of 4K; 4K 18Gpbs is drastically different than 4K 10.2Gpbs. Manage your EDID’s on each repeater and sink to make sure you have your system optimized for the 4K signal you are trying to distribute.

INCOMPATIBLE VIDEO?

Are you getting a signal to the sink but it’s telling you that the signal is incompatible? Test the maximum capability of the Sink and make sure you are not feeding it something it can’t handle. If you know if the Sink should be able to handle the signal, strip the EDID from it to make sure the rest of your setup is ready for that same EDID.

DISCOLORED VIDEO?

First check that the Sink’s settings are set up to show the correct color. Then, use the “Troubleshooting A/V Systems” section to find out where the issue is coming from. Remember you get a live video preview on the ANALYZER so you can visibly see what is being output at each spot you test.

SOURCE PROBLEMS?

You can check if your source has problems by plugging the ANALYZER directly into your source. You can find out what it is actually being output compared to what it should output. You will be surprised that they are not always the same, and when you have a problem with your source, nothing can be done with your distribution system to fix it.

HAVE A QUESTION OR NEED ASSISTANCE? DON'T HESITATE TO CONTACT US!

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DRIVERS ARE AVAILABLE ON MURIDEO.COM

