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Atlona HDMI Troubleshooting Guide



Quick Setup Guide

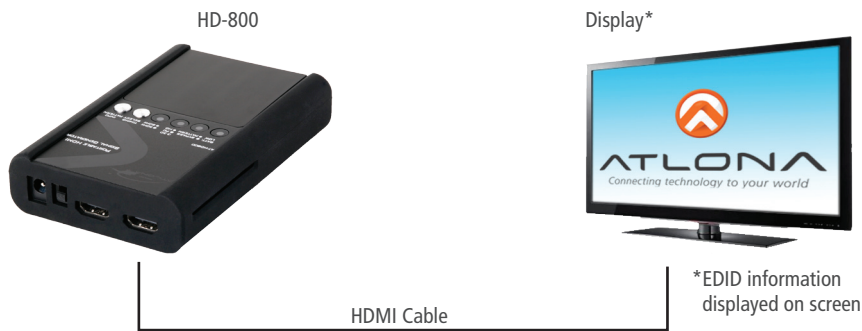
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HD800 Basic Operation

Typical usage of an HD800 is to allow users to diagnose specific resolution, video timing, EDID and color space issues in any DVI or HDMI video system. It features an HDMI output as well as an HDMI pass through to easily switch between test patterns and content from any other digital sources, while also giving the ability to read the EDID from the input source and displaying it on the display. It can also perform a cable test on any HDMI cable.

USE #1

HDMI pass through to easily switch between test pattern and content from any other digital sources, while also giving the ability to read the EDID from the connected display.



USE #2

HD800 can also perform a cable test on and HDMI cable.



USE #3

HD800 is to allow users to diagnose specific resolution, video timing, EDID, and color space issues in any DVI or HDMI video system.



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HD800 Basic Operation

USE #1 Operation

Cycle thru resolutions:

- Insert HDMI cable to HD800 output, insert the other end to displays input
- Turn on HD800
- Press Timing/Select button, OSD menu will reveal forward/backward navigation for resolution settings
- Within three seconds press Timing/Select button to scroll forward, or press Info/Pattern to scroll backwards through resolution options
- 25 options available for video, VESA and 3D resolutions

Source and display EDID comparison:

- Insert HDMI cable to source output, insert cable to HD800 input
- Insert HDMI cable to HD800 output, insert the other end to displays input
- Turn on HD800
- Press Info/Pattern button to display side by side capabilities from OSD menu
- Press button again to disable

USE #2 Operation

Cable Integrity test:

- Insert one end of the HDMI cable to HD800 input, insert the other end to the output
- Turn on HD800
- Press and hold Timing/Select button for 3 seconds then release to enable this function
- If all LED/s are solid, cable has passed the test. If all LED's are flashing, cable is NOT transferring signal properly and has failed the test.
- Press and hold Timing/Select button for 3 seconds then release to disable this function.

USE #3 Operation

Cycle thru Patterns (color bar, full scree purity, 3D, patterns):

- Insert HDMI cable to HD800 output, insert the other end to displays input
- Turn on HD800
- Press Info/Pattern button
- Within three seconds press Timing/Select button to scroll forward, or press Info/Pattern to scroll backwards through pattern options.
- To view all 19 options resolution MUST be set to 720p. Only 10 options available in all other resolutions.

Display EDID Information:

- Insert HDMI Cable to HD800 output, insert the other end to display's input
- Turn on HD800
- Press Timing/Select button, OSD menu will reveal forward/backward navigation for resolution settings
- Within three seconds press Timing/Select button to scroll forward, or press Info/Pattern to scroll backwards through resolution options
- Select 720p (can only view EDID for display in this mode)
- Wait until OSD menu disappears then press Info/Pattern button
- Within three seconds scroll forward or backward until you get to VESA Timing, scroll forward once more for Video Timing.

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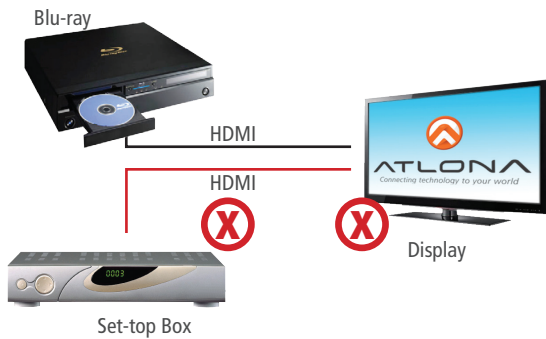
AT-HDSync Scenarios

Typical placement of an HDSync is between source and display that is having HDMI troubleshooting issues. In a bigger HDMI system (HDMI Matrix, AV receivers, and/or multiple HDMI splitters/repeaters/switchers, etc) Atlona recommends to still place HDSync directly after source as a pass-thru configuration.

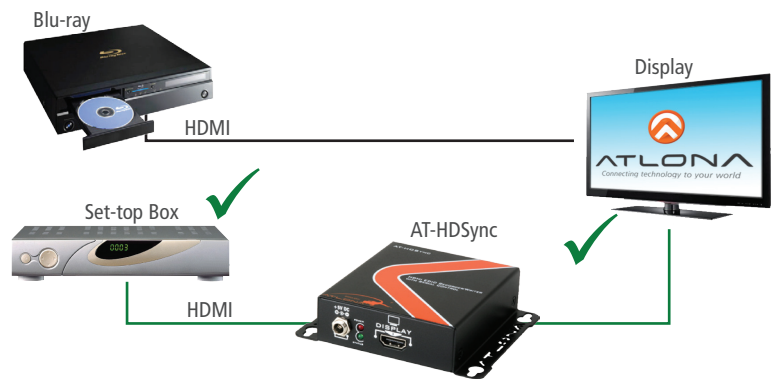
(See illustrations)

HDSync Between Source and Display

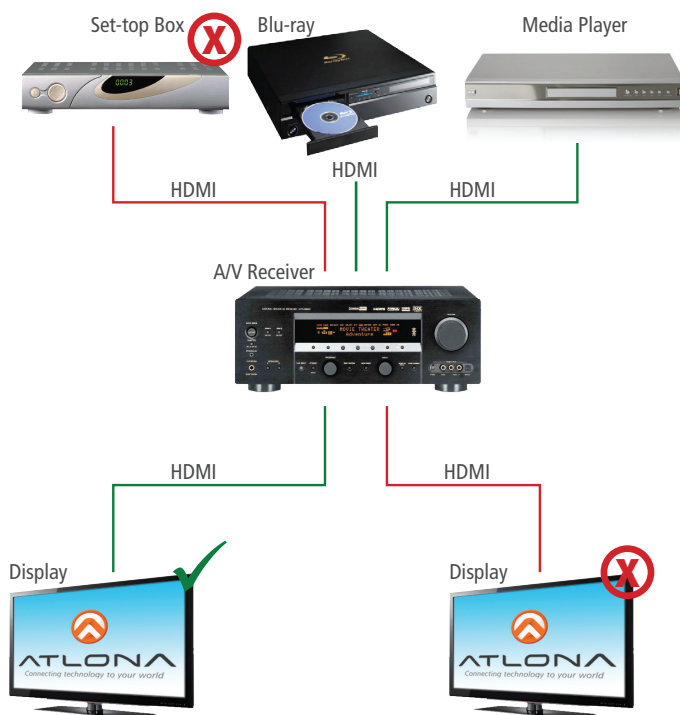
Challenge: No Picture from Source



Solution: Place HDSync in-line to resolve EDID issue



HDSync in a bigger HDMI System (HDMI Matrix, multiple HDMI splitters/repeaters/switchers, AV Receivers)



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HDSync Scenarios Explained

Troubleshooting Issue #1

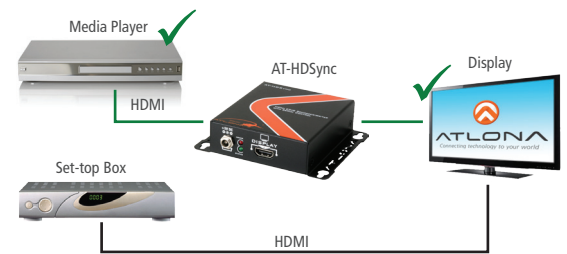
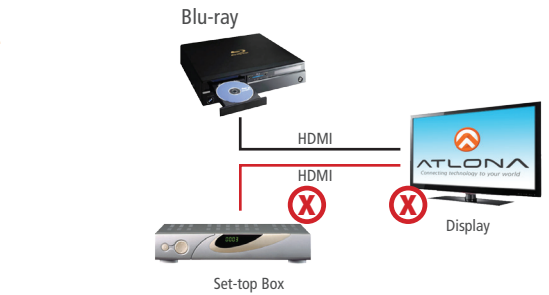
Two or more sources hooked up to one display

Challenge: Customer connects both a Set-Top Box and a Blu-Ray player to a Display, on two different inputs on TV (Fig.1). Blu-Ray player always works, but set-top box is constantly displaying "error" signal. Powering down temporarily solves the issue, but as soon as customer switchers from Blu-Ray to Set-top box and back again, error occurs.

Solution: HDSync. Root cause is the set-top box as a source (Fig.1). The set-top box must support a special function of HDCP called "HotPlug ON" in standby mode. If the source does not support it, the HDMI connection will be inactive and unable to re-handshake to TV.

Atlona's HDSync maintains an always on, "HotPlug ON" connection with HDMI, thus keeping your connection live to the TV. When your input source says "no Sync" think HDSync!

Figure 1.



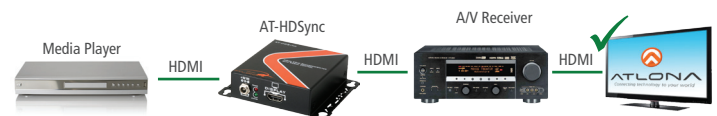
Troubleshooting Issue #2

A/V Repeater hooked up in-between source and TV

Challenge: Customer connects one source (media player, set-top box, etc) directly to a display with an HDMI cable, and it works! As soon as something is introduced in the middle however (A/V receiver, Matrix switch, distribution amplifier, etc) (Fig. 2), an error occurs on TV in form of snow or no picture. The EDID of the Display is not correctly exchanged, so the error occurs.

Solution: Use an HDSync to re-capture the EDID of the display (Fig. 2), and present it again to the source, or use on of HDSync's position-6 to record EDID's to match your source content.

Figure 2.



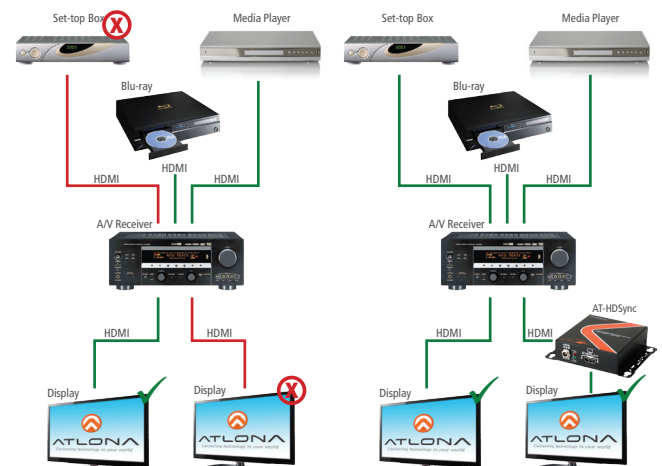
Troubleshooting Issue #3

Multiple sources hooked up to switcher/splitter/AV Receiver and to multiple TV's

Challenge: Customer connects multiple sources (media players, set-top boxes, Blu-Rays, etc) directly to a middle point (splitter, switcher, AV Receiver, etc) then is split/routed to multiple displays! (Fig. 3) System only works in a particular sequence or combination of sources and displays. Error is displayed on TV, or source, or both. Possible root problem: the EDID of the Display is not correctly exchanged, so the error occurs.

Solution: First use an HDSync in front of the source which is giving errors; this will let you block out all EDIDs in the system. (Fig. 3) Try out the appropriate mode that matches your equipment as found on page 6 (1080p - 2Ch audio, 1080p - Multichannel audio, etc). If that doesn't work, then record the EDID manually from the HDMI monitor as found at the top of page 6; once recorded, plug HDSync back in front of the source.

Figure 3.



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EDID:

Modes

Mode 0: 1080p - 2Ch audio

3D and multichannel audio will not work in this mode

Mode 1: 1080p - Multichannel audio

3D will not work in this mode

Mode 2: 1080p - 2Ch audio - 3D

Multichannel audio will not pass in this mode

Mode 3: 1080p - Multichannel audio - 3D

The highest resolution the display and source are capable of will pass in this mode

Mode 4: 1080p - Dolby Digital audio - 3D

Only Dolby Digital and 2Ch will pass in this mode

Mode 5: 1080i or 720p - 2ch audio

Multichannel audio will not pass in this mode

Mode 6: 1080p - EDID learning

Learn the EDID of the display while in this mode. The EDID learn is non-volatile

Mode 7: Software mode

Read, save, and analyze EDID or update firmware with the included software in this mode

Learn:

1. Connect the HDSync Display HDMI port to the displays HDMI port
2. Plug in the 5V DC power supply to the HDSync and wall
3. Turn on the display
4. Turn the HDSync rotary to mode 6
 - *Status LED will blink while learning the EDID*
5. When LED stops blinking, the EDID learn is complete. Leave the EDID rotary on mode 6

** To relearn or learn a different EDID, turn the rotary from mode 6 clockwise until it reaches mode 6 once more. Repeat the above steps**

Software:

Read, save, or analyze EDID and update firmware from your computer using the included software. Easily troubleshoot compatibility issues or verify what a device is capable of.

Setup:

1. Connect a 9-pin to 9-pin cable from the HDSync to your PC
2. Turn on your PC and HDSync
3. Insert the included software into your computers disc drive
4. Open the software file "HDMI EDID Recorder". For detailed instructions see HDSync instruction manual (latest version)

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HDSync How to:

Read the EDID manually from an HDMI monitor or projector

- Connect the HDMI display device to the HDSync via the HDMI port labeled display.
- Plug in the 5V DC power supply unit.
- Set HDSync to MODE 6.
- The EDID reading sequence is done when the green LED stops blinking.
- Leave the dial set on position-6.

NOTE: DO NOT let the rotary arrow pass by Mode 5, which will erase the EDID just learned, and restore the default EDID

HDSync Dial Modes:



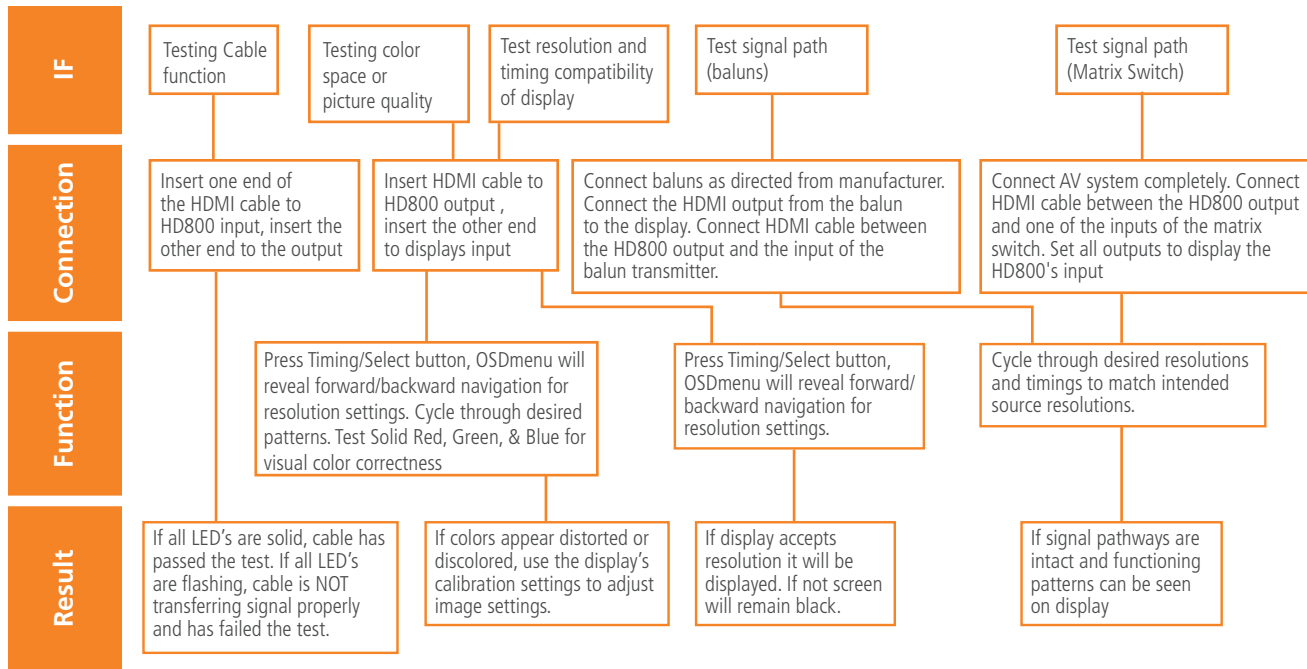
1. Connect a 9-pin to 9-pin cable to a computer to use the included software
2. Connect to an HDMI or DVI (with adapter) source.
3. EDID rotary for switching between EDID modes
 - Mode 0 = 1080p - 2Ch audio
 - Mode 1 = 1080p - Multichannel audio
 - Mode 2 = 1080p - 2Ch audio - 3D
 - Mode 3 = 1080p - Multichannel audio - 3D
 - Mode 4 = 1080p - Dolby Digital audio - 3D
 - Mode 5 = 1080i or 720p - 2ch audio
 - Mode 6 = 1080p - EDID learning
 - Mode 7 = Software mode

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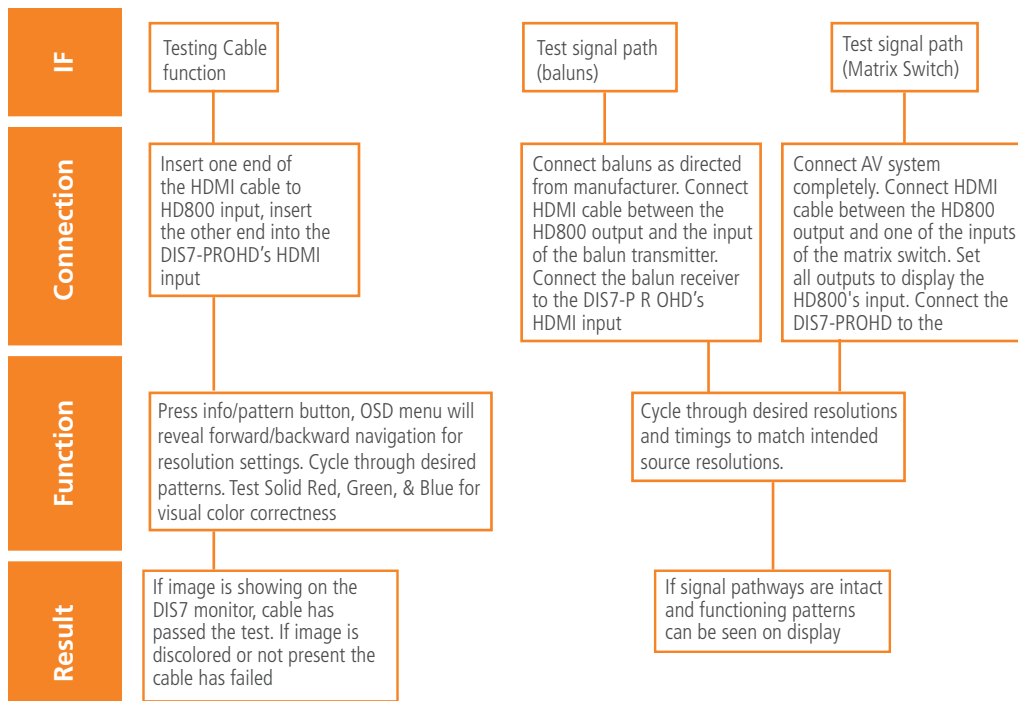
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Testing with HD800



Testing with DIS7-PROHD

DIS7-PROHD



Atlona HDMI Test Kits

Atlona Custom Installation Testing Kits are designed to diagnose digital connectivity issues in AV systems. This complete tool suite allows residential and commercial integrators and installers the ability to diagnose 99% of all digital connectivity issues in moments, saving time, labor profit dollars, and overhead.



KIT-PROHD3

Signal Generator	AT-HD800
Monitor	AT-DIS7-PROHD
HDMI EDID Emulator	AT-HDSync
Monitor Battery	AT-BAT-DIS7PRO



AT-HD800

- Portable size and battery operated HDMI generator
- Supports 13 Testing Patterns which includes 6 x 3D, and over 20+ resolutions
- EDID Reading function, allows user to view display's capabilities (video + audio formats) HDMI in/HDMI for passthru EDID reading



AT-HDSYNC

- HDMI 1.3c, DVI 1.0 and HDCP 1.1 compliant
- Built-in default EDID
- Able to read and store the EDID of monitors/projectors/TVs
- Prevent computers from deactivating inactive HDMI ports



AT-BAT-DIS7PRO

- Portable battery for AT-DIS7-PROHD.
- Up to 4 hour Battery
- Comes in a leather case with all required adapters.



AT-DIS7-PROHD

- 7" PRO HDMI, DVI, VGA and Component (HDMI and HD15 inputs)
- From 480p to 1920x1200,
- HDCP Compliant, with display indicator
- Built-in Speakers



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