EDID MANAGEMENT

Revised 2016-08-15

Table of Contents

EDIDs with Just Add Power

Default EDID

2G and 2G+

- Video up to 1920x1080p@60Hz
- 2-channel LPCM

2G+AVP

- Video up to 1920x1080p@60Hz
- Audio up to 6 channels (5.1)
    - Dolby Digital

3G+AVP

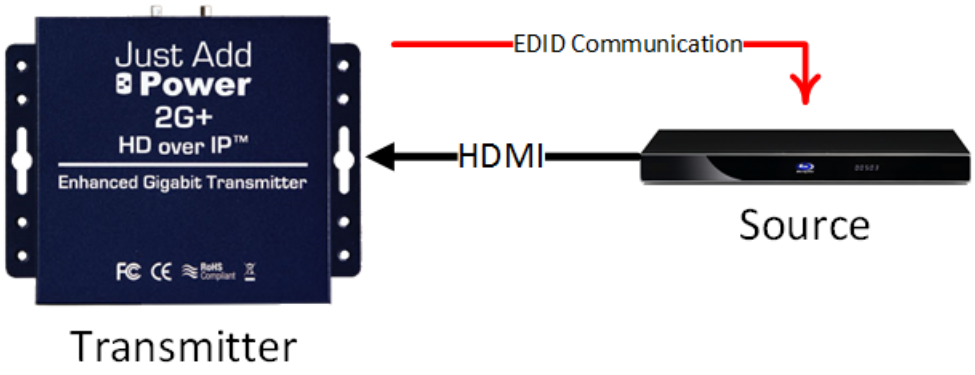
- Video up to 4096x2160p@60Hz
- Audio up to 6 channels (5.1)
    - Dolby Digital

3G+HIFI

- Video up to 4096x2160p@60Hz
- Audio up to 6 channels (5.1)
    - LPCM
    - Dolby Digital
    - DTS

Where does the source get its EDID from?

The source gets its EDID from the Just Add Power Transmitter.



Has its own EDID
Provides that EDID to source
Passes HDCP requirement to Receivers

Gives HDCP requirement to Transmitter
Sees the EDID from ONLY the
Transmitter it is attached to

In a Just Add Power installation, the **ONLY** thing that the source device sees is the Just Add Power Transmitter. This means that the source has no idea how many televisions are connected at the other end. The only thing dictating the video and audio format being sent by the source is the **TRANSMITTER**.

Why Change the Just Add Power EDID?

The EDID describes the formats of audio and video that an HDMI sink can process. The source device uses this information to determine the audio and video format that is output. In a Just Add Power installation, the Transmitter is the only device that is presenting an EDID to the source; no matter how many displays are in the system, they never report their EDID to the source.

Most source devices are set to output according to the EDID it is receiving. Therefore, to make the source device output a different audio or video format, you must update the EDID of the Just Add Power Transmitter.

More Information about EDIDs

For a more detailed description on how Just Add Power Transmitters and Receivers handle EDID handshaking, please e-mail support@justaddpower.com.

EDID Management

The Just Add Power HD over IP system is designed to give the installer complete control over EDID management in a system. To accomplish this, there are multiple EDIDs programmed into each Transmitter that can be changed. Additionally, EDIDs can be copied from endpoint devices and applied to Transmitters so that Transmitters imitate the endpoint device when giving EDID information to the source.

There are three options for managing EDIDs. Click a link to jump

1. Pre-Loaded EDIDs – Each Just Add Power Transmitter comes pre-loaded with a set of EDIDs that provide different audio and video settings. The model of Transmitter determines the pre-loaded EDIDs available.
    - 2G/2G+
    - 2G+AVP
    - 3G+AVP
    - 3G+HIFI

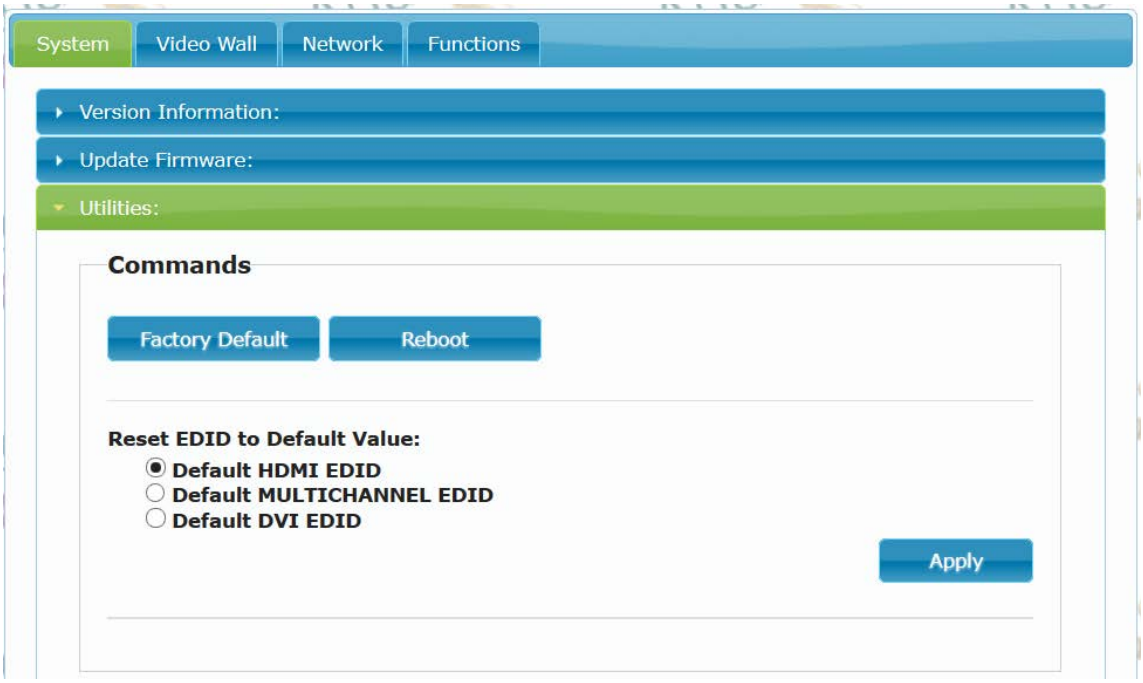
2. Copy EDID – use the EDID of an AVR/display/HDMI sink already in the installation

3. EDID Customization – build an EDID from scratch and load it onto a Just Add Power Transmitter. This process is for **ADVANCED USERS ONLY** that have an intricate knowledge of building and customizing EDIDs using third-party software.

Pre-Loaded EDIDs

Just Add Power Transmitters come pre-loaded with 3 EDIDs. The EDIDs available depend on the model of unit.

2G/2G+



Available EDIDs

1. Default HDMI EDID – **DEFAULT SETTING**
   - Video up to 1920x1080p@60Hz
   - 2-channel LPCM

2. Default MULTICHANNEL EDID
   - Video up to 1920x1080p@60Hz
   - Compressed audio up to 6 channels (5.1)
     - Dolby Digital

3. Default DVI EDID
   - Video up to 1920x1080@60Hz
   - No audio

Change EDID

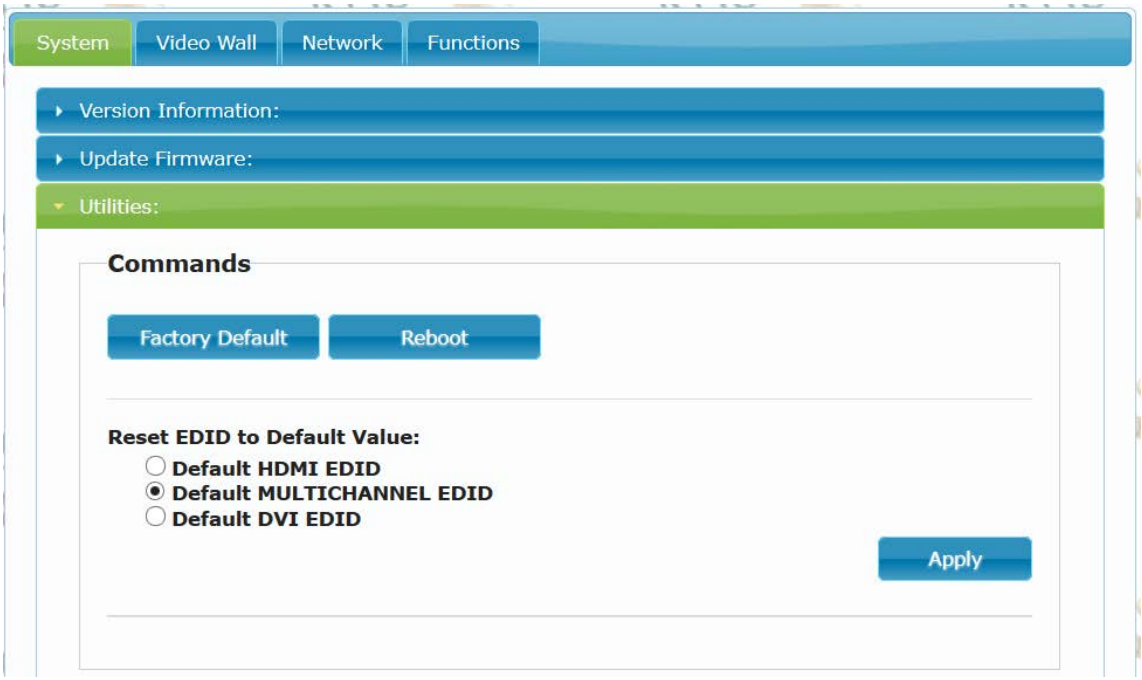
1. Confirm that the device is on Firmware ***A5.30*** or later

2. Log into the web interface of the Transmitter by typing the IP address into a web browser

3. Under the *System* tab, go to the *Utilities* bar. Select the default EDID to load, and click *Apply*

4. Reboot the Transmitter by clicking the *Reboot* button **AFTER** the confirmation message has appeared.

2G+AVP



Available EDIDs

1. Default HDMI EDID
   - Video up to 1920x1080p@60Hz
   - 2-channel LPCM

2. Default MULTICHANNEL EDID – **DEFAULT SETTING**
   - Video up to 1920x1080p@60Hz
   - Compressed audio up to 6 channels (5.1)
     - Dolby Digital

3. Default DVI EDID
   - Video up to 1920x1080p@60Hz
   - No audio

Change EDID

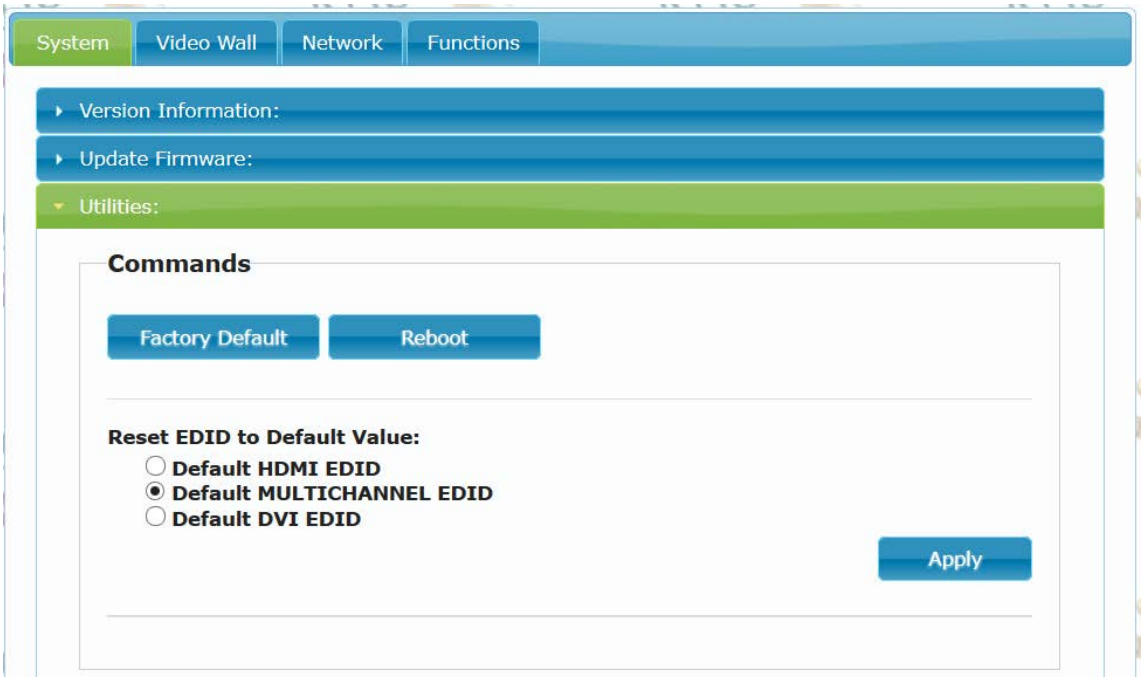
1. Confirm that the device is on Firmware ***A5.30*** or later

2. Log into the web interface of the Transmitter by typing the IP address into a web browser

3. Under the *System* tab, go to the *Utilities* bar. Select the default EDID to load, and click *Apply*

4. Reboot the Transmitter by clicking the *Reboot* button **AFTER** the confirmation message has appeared.

3G+AVP



Available EDIDs

1. Default HDMI EDID
   - Video up to 4096x2160p@60Hz
   - 2-channel LPCM

2. Default MULTICHANNEL EDID – **DEFAULT SETTING**
   - Video up to 4096x2160p@60Hz
   - Compressed audio up to 6 channels (5.1)
     - Dolby Digital

3. Default DVI EDID
   - Video up to 1920x1080p@60Hz
   - No audio

Change EDID

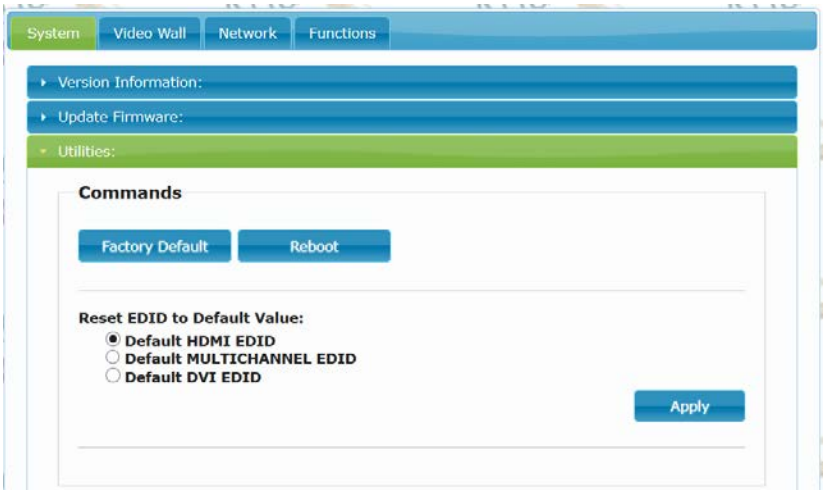
1. Confirm that the device is on Firmware ***A6.1.10*** or later

2. Log into the web interface of the Transmitter by typing the IP address into a web browser

3. Under the *System* tab, go to the *Utilities* bar. Select the default EDID to load, and click *Apply*

4. Reboot the Transmitter by clicking the *Reboot* button **AFTER** the confirmation message has appeared.

3G+HIFI



Available EDIDs

1. Default HDMI EDID – **DEFAULT SETTING**
   - Video up to 4096x2160p@60Hz
   - Audio up to 6 channels (5.1)
     - LPCM
     - Dolby Digital
     - DTS

2. Default MULTICHANNEL EDID
   - Video up to 4096x2160p@60Hz
   - Audio up to 8 channels (7.1)
     - 2-channel PCM
     - 6-channel PCM
     - Dolby Digital
     - DTS
     - Dolby Digital Plus
     - DTS-HD
     - Dolby Atmos

3. Default DVI EDID
   - Video up to 1920x1080p@60Hz
   - No audio

Change EDID

1. Confirm that the device is on Firmware ***A6.1.10*** or later

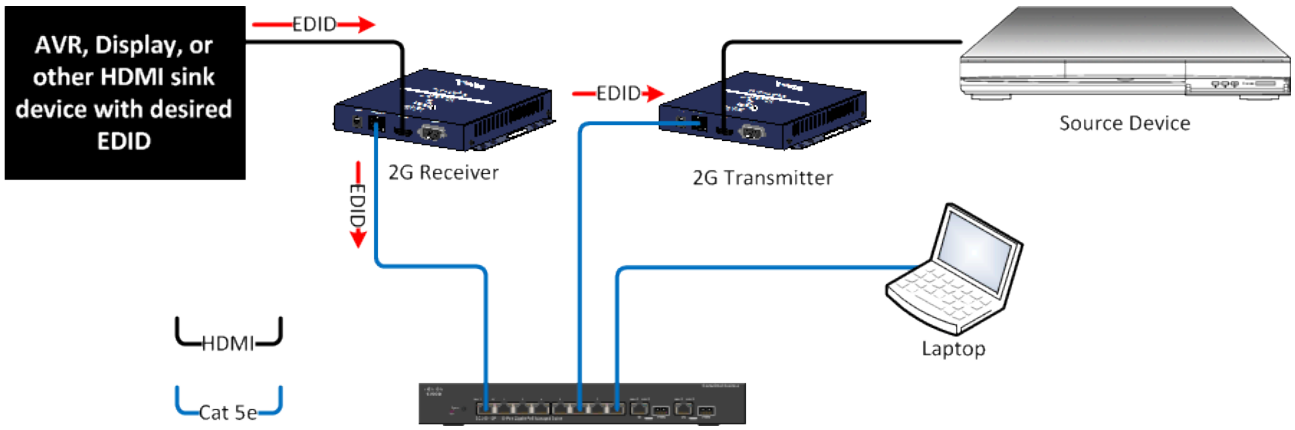
2. Log into the web interface of the Transmitter by typing the IP address into a web browser

3. Under the *System* tab, go to the *Utilities* bar. Select the default EDID to load, and click *Apply*

4. Reboot the Transmitter by clicking the *Reboot* button **AFTER** the confirmation message has appeared.

Copy EDID

Just Add Power devices are capable of copying the EDID from an AVR/display and using that EDID information for the source. In this way, the source device believes that it is directly connected to the AVR/display even though it is connected to the Just Add Power Transmitter.



The capture function is executed through the Receiver. It copies the EDID from the display, passes it through the switch to the Transmitter, where the Transmitter erases its current EDID and writes in the new one.

Instructions

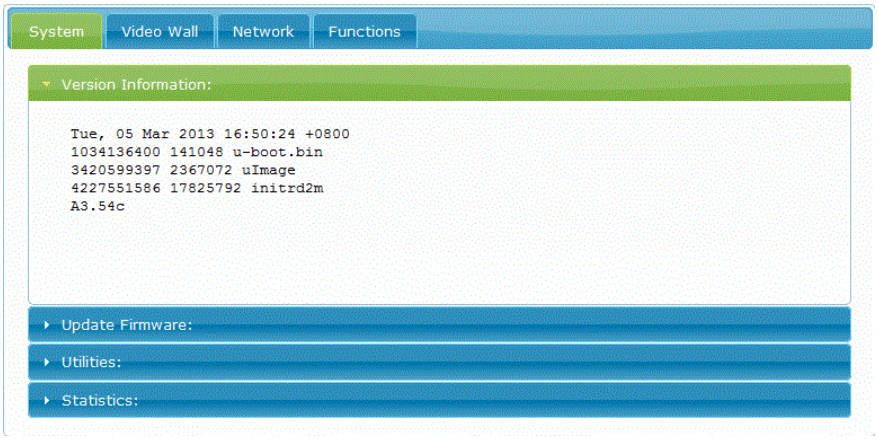
This will copy the EDID from an AVR, display or other HDMI sink attached to a Receiver and apply it to all connected Just Add Power Transmitters in the system.

Works on 2G and 3G devices

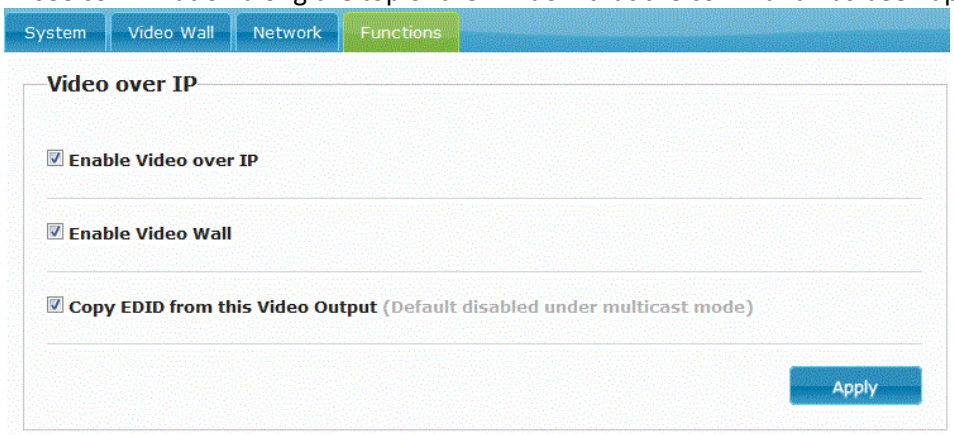
1. The AVR/display, the Receiver attached to that AVR/display, and any Just Add Power Transmitters that are getting the copied EDID must be powered on and attached to the Just Add Power system.

2. Any Transmitters that are **NOT** getting the copied EDID must be disconnected from the system or powered off. When the copy procedure is completed, all connected Just Add Power Transmitters will get the same EDID information.

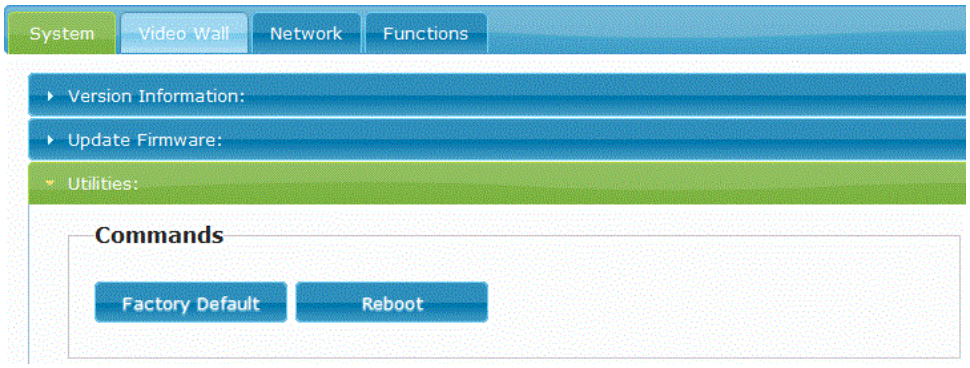
3. Open the web interface of the Receiver attached to the AVR/display by typing the IP address of the Receiver in a web browser.



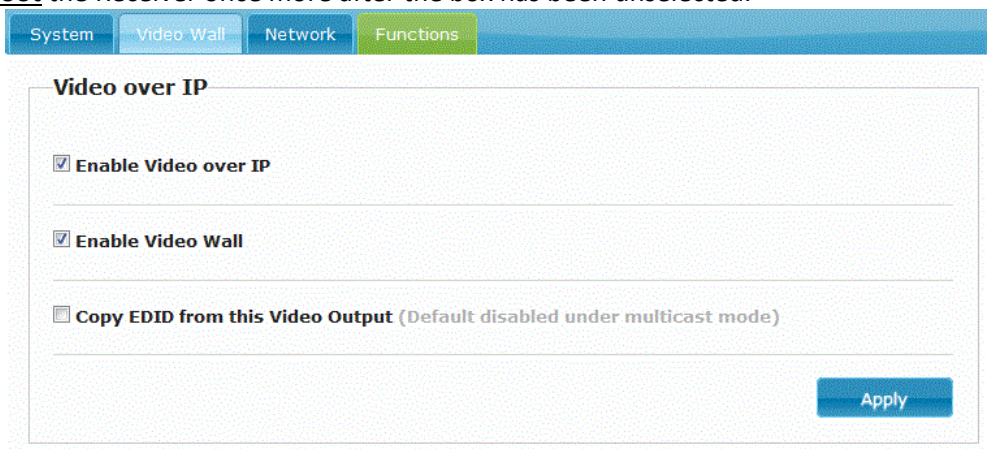
4. Click on the *Functions* tab along the top menu. Check the box labeled *Copy EDID from this Video Output* and click *Apply*. You will see confirmation along the top of the window that the command has been applied.



5. Go to the *System* tab and *Utilities* bar. Click the *Reboot* button to reboot the Receiver. Once the Receiver reboots, it will grab the EDID from the attached HDMI sink and send it back to **ALL** Transmitters that are connected.



6. Reload the web page and go to the *Functions* tab. Un-select the *Copy EDID from this Video Output* box, and click *Apply*. **Reboot** the Receiver once more after the box has been unselected.



7. Done! The source devices may need to be power-cycled to cause them to pick up the new EDID information.

8. If you need to apply a different EDID to other Transmitters, repeat this process from the beginning.

EDID Customization

Just Add Power Transmitters can have custom-built EDIDs loaded onto them. This process is for **ADVANCED USERS ONLY** and covers how to format and load a customized EDID onto a Just Add Power Transmitter. An EDID is a string of 256 bytes of information formatted in hexadecimal notation. These bytes share information on all of the capabilities of the endpoint device, and different devices format the EDID in their own way.

Format EDID

The EDID file must be formatted properly in order to be imported to a Just Add Power Transmitter.

1. Create a text file called `edid.txt`

2. Paste the 256-byte EDID directly into the edid.txt file **WITHOUT** any spaces, commas, line feeds, carriage returns, or other delimiters
   a. Example:

```
00ffffffffffff005924001502000000111501038034 1d782ac720a45549992713505
4bfef00714f814081809500b300d1c001010101023a801871382d40582c4500092521
00001e000000ff00310a202020202020202020202020000000fd00374b1e5510000a202
020202020000000fc0047656e657269635f48444d490a015d020320414d0102031112
1304901f0e0f1d1e230907078301000065030c0010008c0ad08a20e02d10103e96000
92521000018011d007251d01e206e28550009252100001e011d00bc52d01e20b82855
4009252100001e8c0ad090204031200c405500092521000018000000000000000000
00000000000000000000000000003a
```

3. Save the file `edid.txt`

Upload EDID to Transmitter

A TFTP server program and telnet program are necessary to upload the custom EDID to the Transmitter.

1. Open a TFTP server program and point the TFTP server directory to the location of the `edid.txt` file.

2. Set the server interface the TFTP server PC's IP address.

3. Telnet into the Transmitter's IP address.

4. In the telnet window to the Transmitter, enter the two commands listed below followed by a carriage return
   a. First command has the Transmitter get `edid.txt` from the TFTP server PC at **`192.168.1.97`**:

```
tftp 192.168.1.97 -c get edid.txt
```

   b. Second command formats the edid.txt file for proper entry into the Just Add Power Transmitter's EDID reader and copies the formatted file to the EDID directory:

```
cat edid.txt | sed 's/../0x\0 /g' | sed 's/ /,/g' > /sys/devices/platform/videoip/eeprom_content
```

5. The new EDID is now available and can be read in the web interface of the Transmitter under *System → Statistics.*

6. The source device may need to be power-cycled (physically remove power and re-apply it) in order for the source to accept a new EDID.

Not Sure How?

Access Web Interface

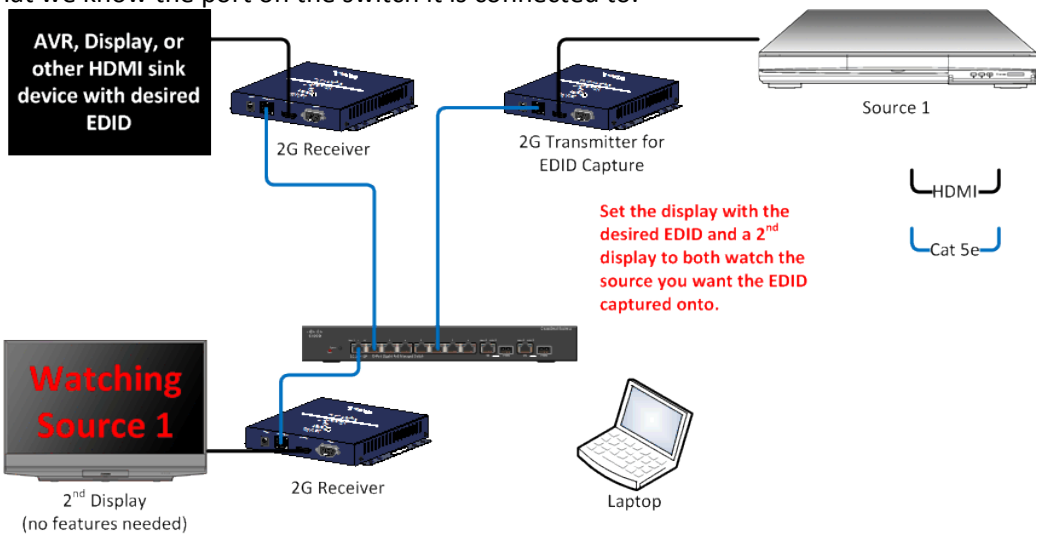
Just Add Drivers Installations

Note: EDID capture should be done **AFTER** ensuring that all switching and control functions are implemented.

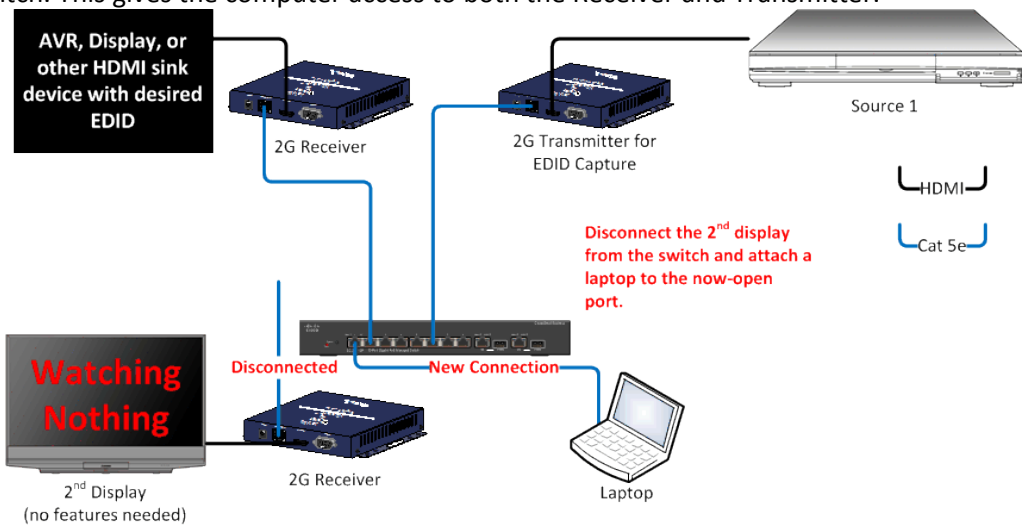
1. Enable Layer 3 access by configuring the Static Route on the router
2. Use the notepad document containing device IPs to identify the IP of the Receiver
3. Connect a computer to the network and enter the IP address of the Receiver into a web browser

Non-Just Add Drivers Installations

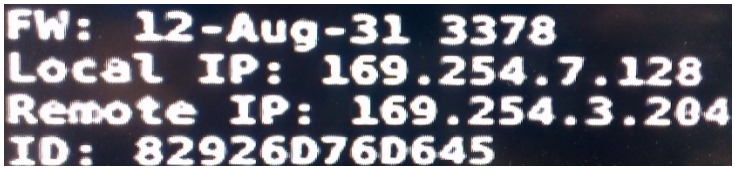
1. Use the control system to set ***2*** displays to watch the Transmitter: 1) display with the EDID we want; 2) a second display that we know the port on the switch it is connected to.

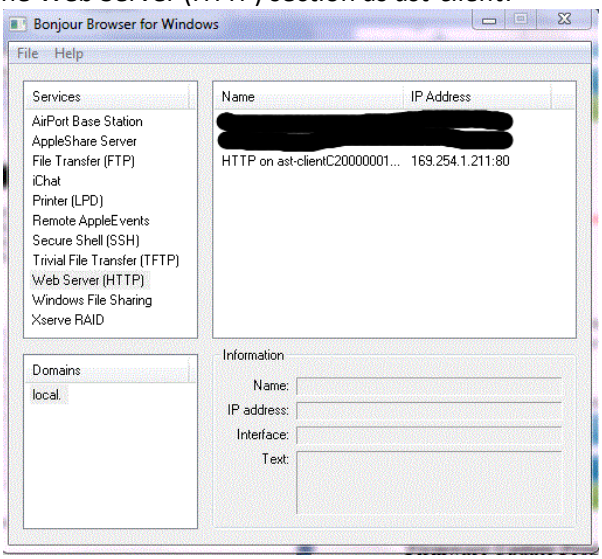


2. Disconnect the Ethernet cable for the second display from the switch and connect a computer to the same port of the switch. This gives the computer access to both the Receiver and Transmitter.



3. Notice the Local IP on the TV screen when the Receiver powers up. This is the IP of the Receiver. It can also be discovered by using Bonjour Browser (available for download at www.justaddpower.com any of the Firmware folders) to find the IP of the Receiver. It will show up under the Web Server (HTTP) section as *ast-client*.





4. Change the IP of the computer to be in the same IP/Subnet of the Just Add Power device. For default devices, set the computer's IP address to 169.254.100.200 with a subnet of 255.255.0.0.
    a. On a Windows PC, this is accessible through the "Network and Sharing Center." Click on Local Area Network, Properties, Internet Protocol 4 (TCP/IPv4).
    b. On a Mac, go to System Preferences. Select "Network" and "Built-in Ethernet." Select the TCP/IP tab and choose to Configure IPv4: Manually.