Just Add Power

2G EDID MANAGEMENT

Revised 2014-0313

HDMI OVER IP

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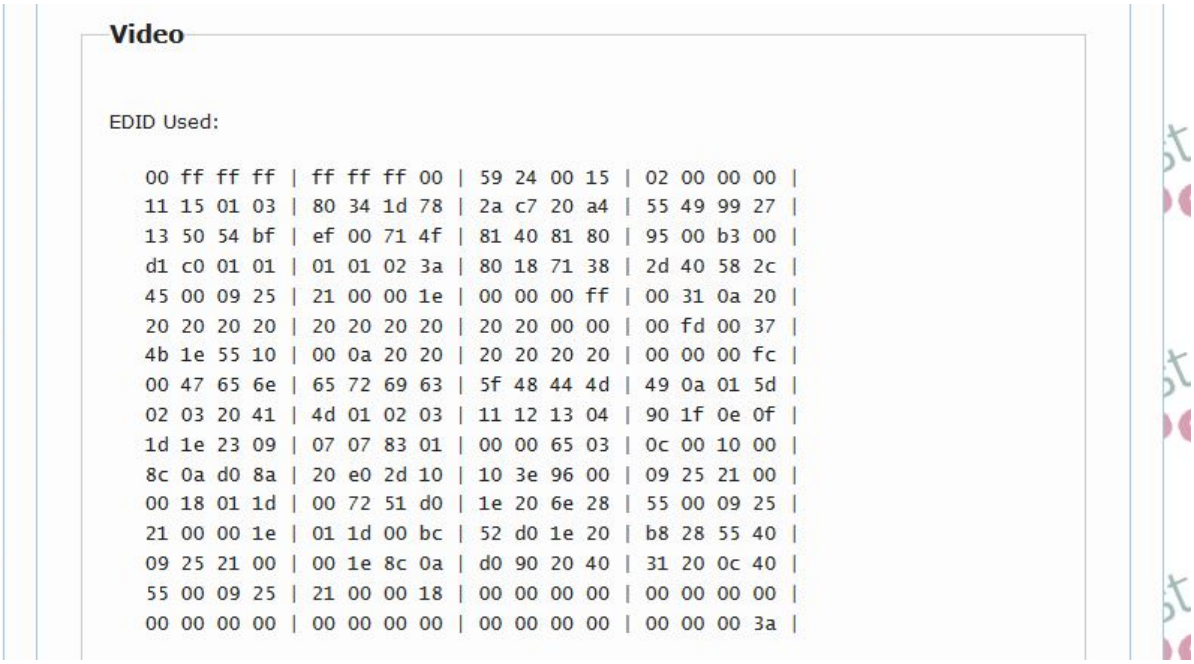
EDIDs with Just Add Power

What is the default EDID?

Just Add Power 2G/2G+ Transmitters are manufactured with an EDID that states as its maximum:

1080p video
Stereo 2.0 audio



Video

EDID Used:

```
00 ff ff ff | ff ff ff 00 | 59 24 00 15 | 02 00 00 00 |
11 15 01 03 | 80 34 1d 78 | 2a c7 20 a4 | 55 49 99 27 |
13 50 54 bf | ef 00 71 4f | 81 40 81 80 | 95 00 b3 00 |
d1 c0 01 01 | 01 01 02 3a | 80 18 71 38 | 2d 40 58 2c |
45 00 09 25 | 21 00 00 1e | 00 00 00 ff | 00 31 0a 20 |
20 20 20 20 | 20 20 20 20 | 20 20 00 00 | 00 fd 00 37 |
4b 1e 55 10 | 00 0a 20 20 | 20 20 20 20 | 00 00 00 fc |
00 47 65 6e | 65 72 69 63 | 5f 48 44 4d | 49 0a 01 5d |
02 03 20 41 | 4d 01 02 03 | 11 12 13 04 | 90 1f 0e 0f |
1d 1e 23 09 | 07 07 83 01 | 00 00 65 03 | 0c 00 10 00 |
8c 0a d0 8a | 20 e0 2d 10 | 10 3e 96 00 | 09 25 21 00 |
00 18 01 1d | 00 72 51 d0 | 1e 20 6e 28 | 55 00 09 25 |
21 00 00 1e | 01 1d 00 bc | 52 d0 1e 20 | b8 28 55 40 |
09 25 21 00 | 00 1e 8c 0a | d0 90 20 40 | 31 20 0c 40 |
55 00 09 25 | 21 00 00 18 | 00 00 00 00 | 00 00 00 00 |
00 00 00 00 | 00 00 00 00 | 00 00 00 00 | 00 00 00 3a |
```

Just Add Power default EDID

Where does the source get its EDID from?

From the 2G/2G+ Transmitter

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 EDID?

2G Transmitters are manufactured with an EDID that asks for 1080p video and stereo 2.0 audio. As long as your source device is set to output according to the EDID it is receiving (default for most devices) then that is what it will output. Therefore, to make the source device output higher formats, you must update the EDID. This includes:

- Multi-channel audio
- Display with unconventional resolution

****Side-by-side 3D will work without changing EDID****

Keep in mind that changing the EDID on the Transmitter will affect the resolution that **every** display in the installation is receiving on that source (what goes in is what comes out).

How EDID Capture Works

When the EDID capture function is run, these are the actions that Just Add Power devices perform:

1) The user sends the capture command to the Just Add Power Receiver.
2) The Receiver copies the EDID from the HDMI sink it is attached to.
3) The Receiver sends that EDID to the Transmitter.
4) The Transmitter erases its old EDID and replaces it with the new EDID from the Receiver.
5) When the HDMI cable is reattached, the Transmitter offers the new EDID to the source device. This way, the source device thinks it is attached to the HDMI sink at the Receiver end.

For this reason, the EDID capture function must be given to the Receiver. The capture function must also be run once per 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 to request more information.

Three Ways to Change EDID

1. Pre-Loaded EDIDs –3 EDIDs are loaded in every Just Add Power Transmitter
    - HDMI (default)
    - DVI
    - VGA

2. EDIDUpdate software – contains EDIDs for 5.1 multichannel audio, locked-resolutions, etc

3. Capture EDID – use the EDID of an AVR/display/HDMI sink already in the installation

Pre-Loaded EDIDs

Just Add Power Transmitters come pre-loaded with a default HDMI EDID. For firmware A3.54C and later, there are 2 additional EDIDs that are capable of being used on the Transmitters: DVI and VGA.

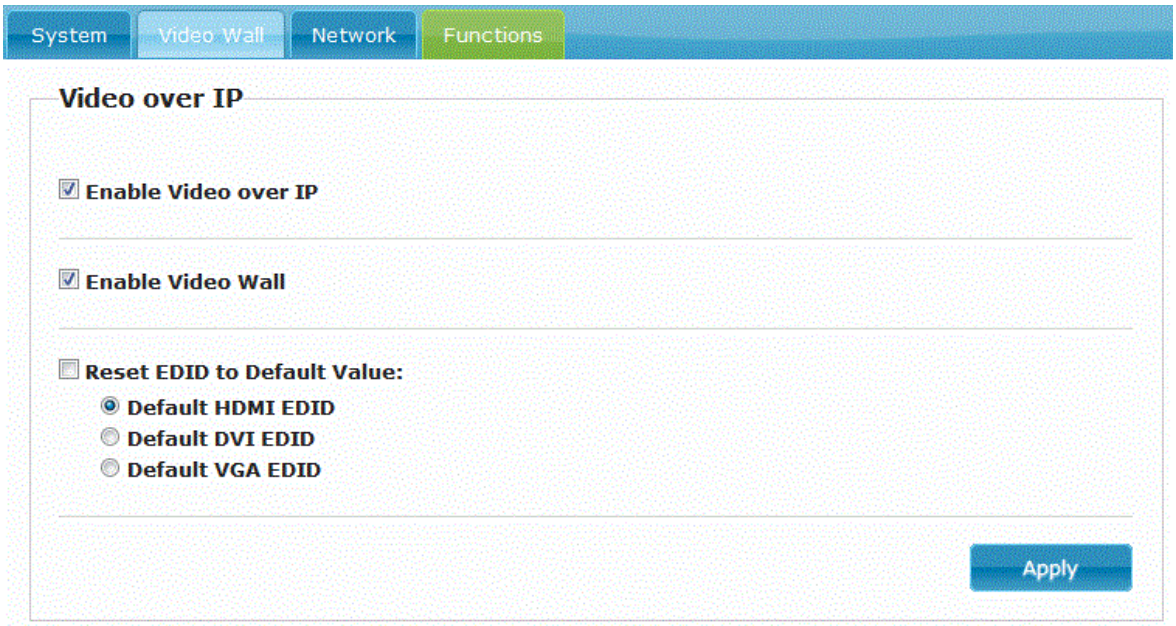
Firmware A3.54C

To enable the HDMI, DVI, or VGA default EDID in firmware A3.54C:

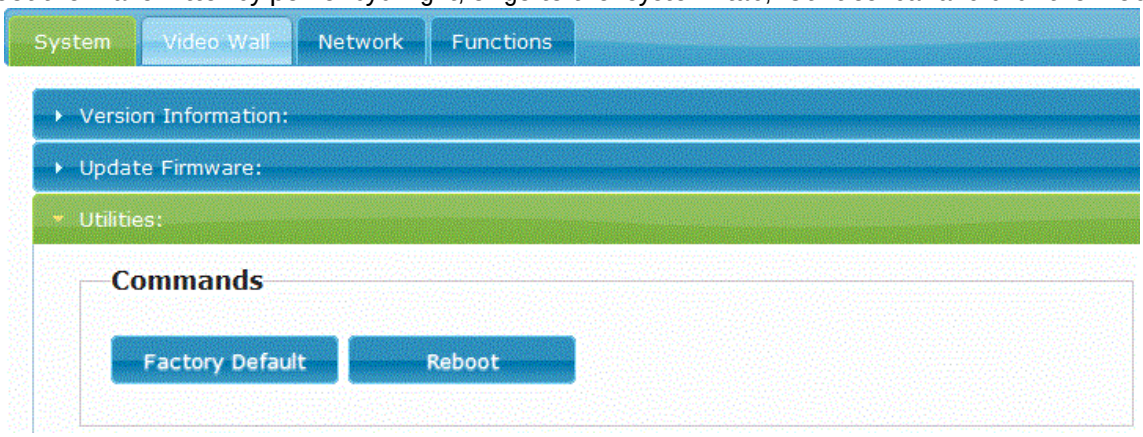
Not Sure How?

Direct Connection to Just Add Power device

1. Connect a computer directly to the 1000BT port of the Just Add Power Transmitter.
2. Type the IP of the Transmitter into a web browser to get to the web page of the Transmitter.
3. Go to the 'Functions' tab, check the box for 'Reset EDID to Default Value', select the default EDID to load, and click 'Apply'.



4. Reboot the Transmitter by power cycling it, or go to the 'System' tab, 'Utilities' bar and click the 'Reboot' button.



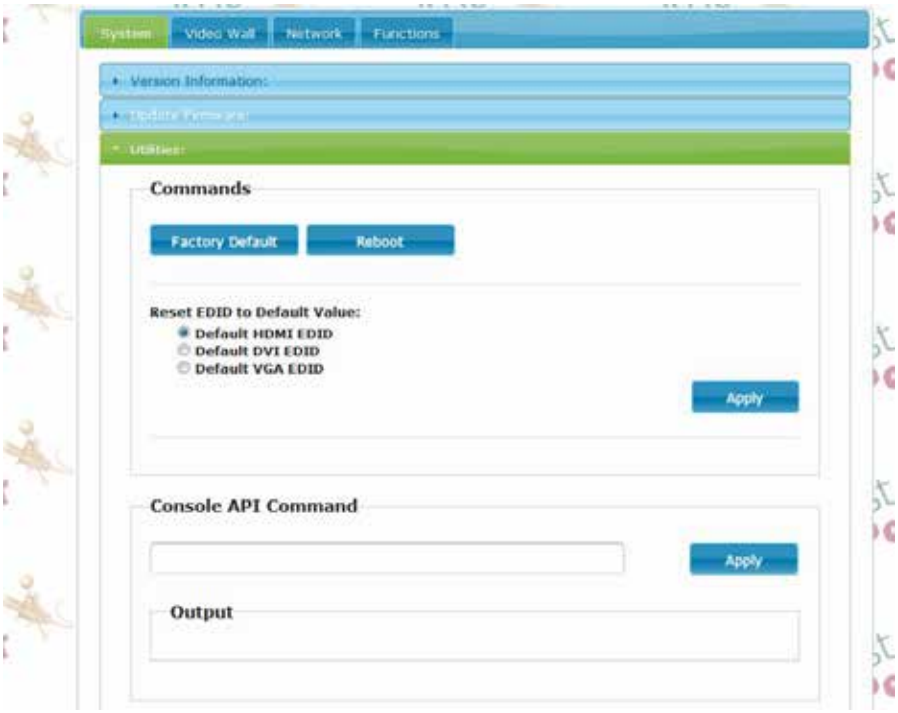
Firmware A5.13

To enable the HDMI, DVI, or VGA default EDID in firmware A5.13:

Not Sure How?

Direct Connection to Just Add Power device

1. Connect a computer directly to the 1000BT port of the Just Add Power Transmitter.
2. Type the IP of the Transmitter into a web browser to get to the web page of the Transmitter.
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.

EDIDUpdate software

The Just Add Power EDIDUpdate software– along with loadable EDIDs – is available for download at www.justaddpower.com.

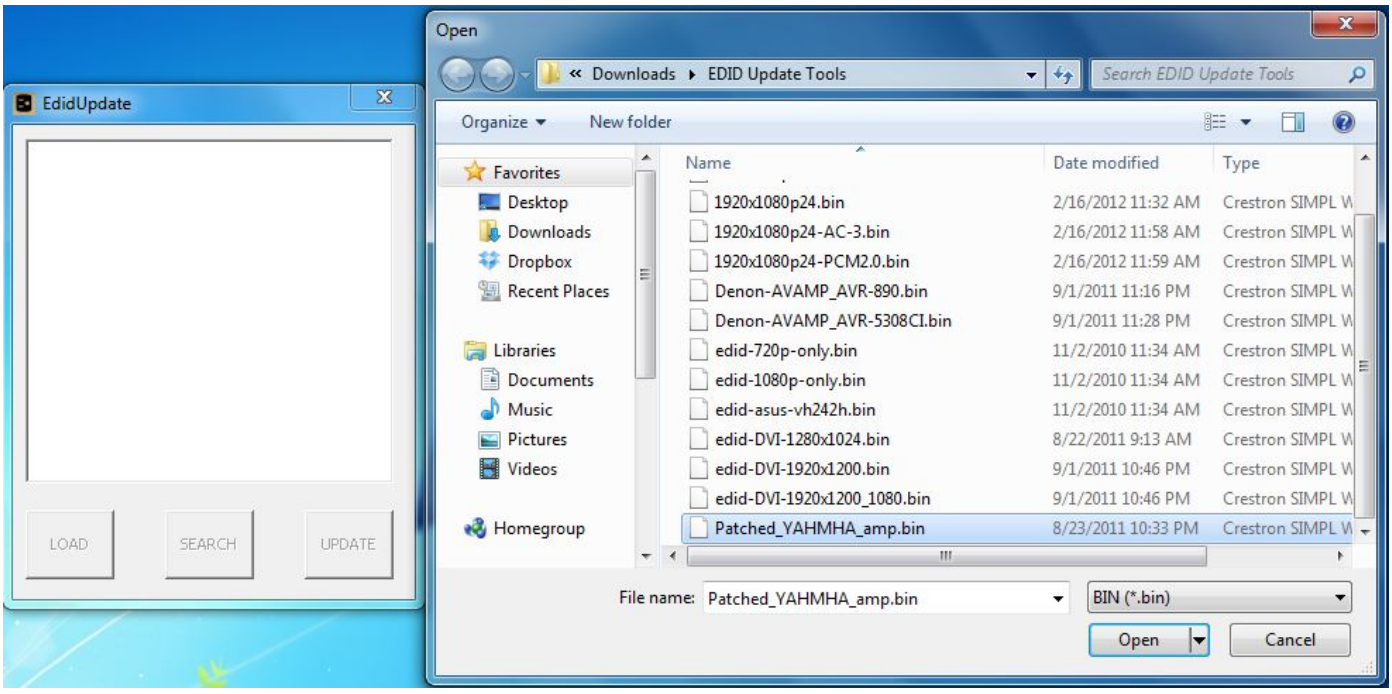
Available EDIDs

The EDIDs available for use include locked-resolution, specific audio formatting, and DVI EDIDs.

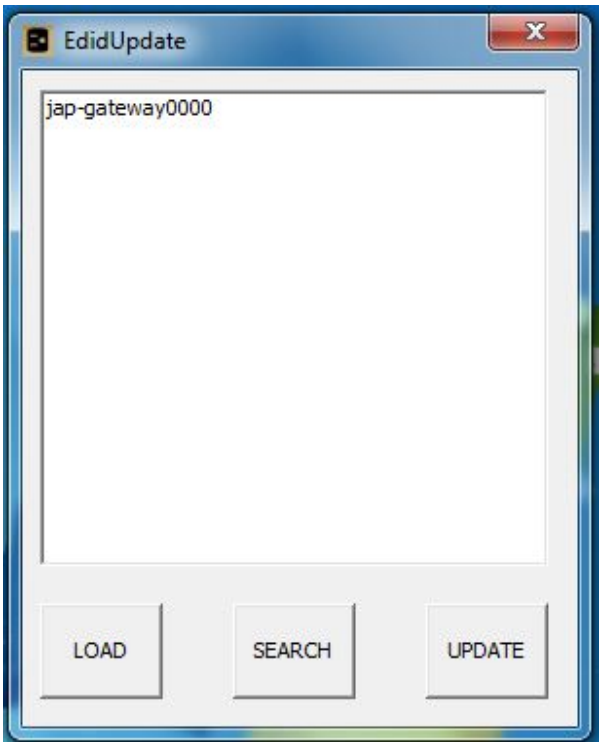
Desired Result	EDID(s) to Load
5.1 Dolby Digital (recommended)	Patched_YAHMHA_amp
DVI	edid-DVI-1280x1024 edid-DVI-1920x1200 edid-DVI-1920x1200_1080
720p Only	edid-720p-only 1280x720p60-PCM2.0
1080p	edid-1080p-only 1920x1080p24 1920x1080p24-AC-3 1920x1080p24-PCM2.0
Denon AVRs (untested)	Denon-AVAMP_AVR-890 Denon-AVAMP_AVR-5308CI

Instructions

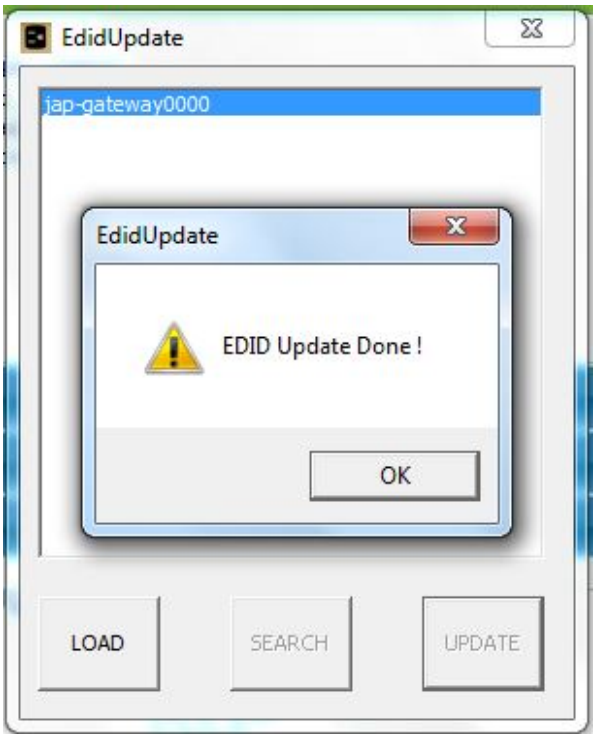
1. Download the EDIDUpdate software from the Firmware section at www.justaddpower.com.
2. Connect a computer directly to the 1000BT LAN port of the Just Add Power Transmitter.
3. Run the EDIDUpdate software, click LOAD, and choose the proper EDID.



4. Click SEARCH to automatically discover the connected Just Add Power device. If discovery fails, disable the firewall on the computer or allow EDIDUpdate access through the firewall to allow discovery.



5. Click UPDATE to load the EDID.

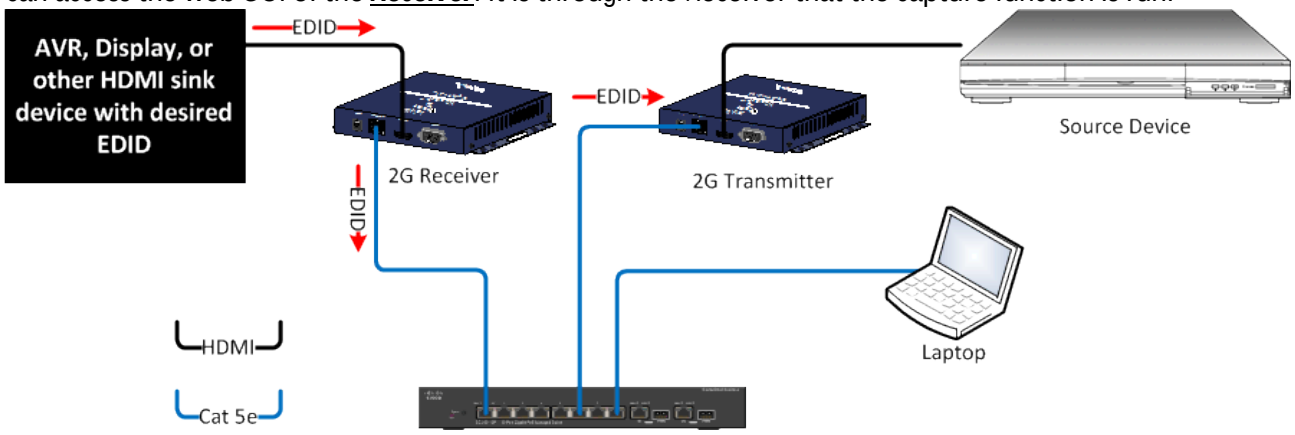


6. Power cycle the Transmitter, then power cycle the attached source to get the new EDID going.

Capture EDID

Just Add Power devices are capable of **capturing** the EDID of an attached AVR/display/HDMI sink device and changing the EDID on the Transmitter so that it matches the EDID of the attached AVR/display/HDMI sink.

In order to change the EDID on a 2G Transmitter, the correct connections must be made. First, the AVR/display/HDMI sink whose EDID is being captured must be watching the source that we want to give the EDID to. This means that the Receiver and Transmitter are communicating with each other. Second, a computer must be connected to the switch so that it can access the web GUI of the ***Receiver***. It is through the Receiver that the capture function is run.



When the capture function is executed, the **Receiver** 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.

Firmware A3.54c or higher

Instructions for firmware versions:

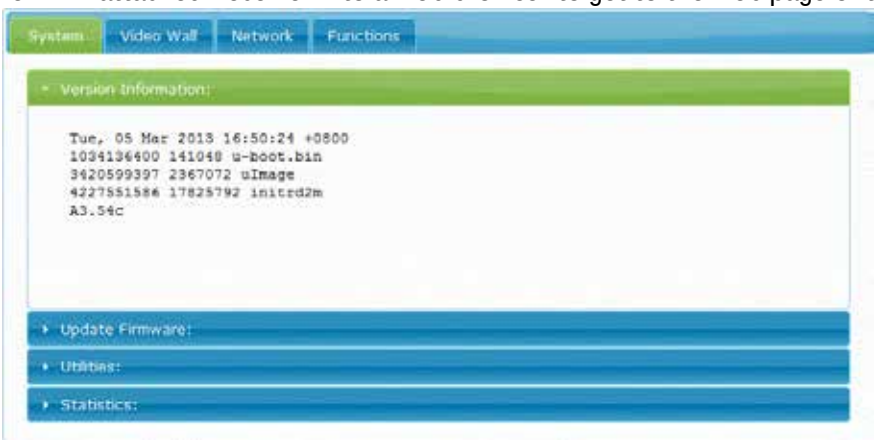
A5.13d
A3.54c

The following procedure will force the 2G Transmitter to use a new EDID that is extracted from a display, AVR, or other HDMI sink attached to a 2G Receiver.

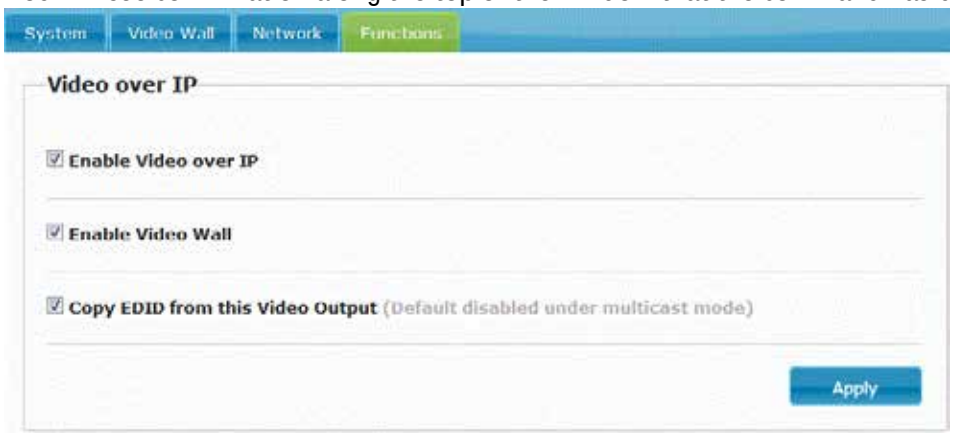
Not Sure How?

Computer Access to JAP Receiver

1. If you have not already done so, turn on the Transmitter, Receiver, and HDMI sink.
2. Set the EDID-attached Receiver to watch the target Transmitter, and connect a computer to the system so that it can access the EDID-attached Receiver.
3. Type the IP of the EDID-attached Receiver into a web browser to get to the web page of the Receiver.

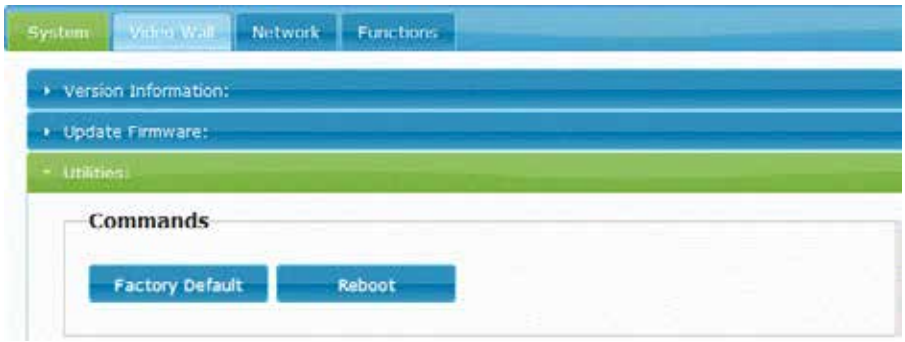


4. Click on the 'Functions' tab along the top menu. Check the box labeled 'Copy EDID from this Video Output' and click 'Apply'. You will see confirmation along the top of the window that the command has been applied.

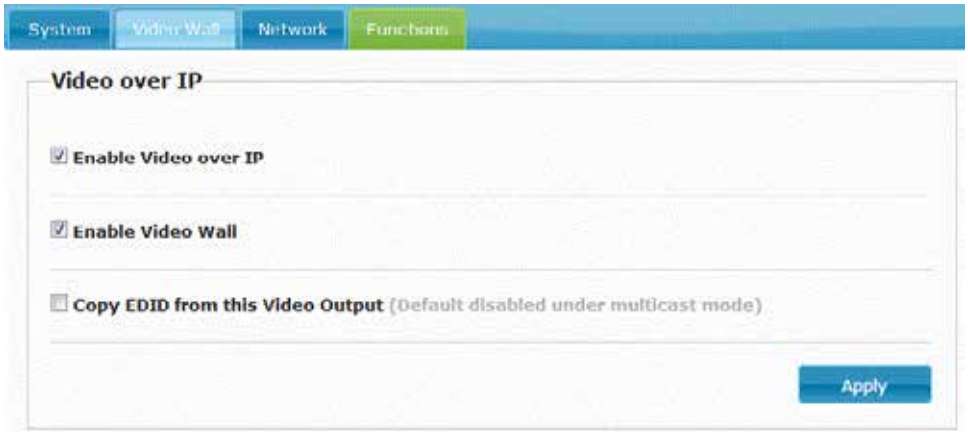


5. Go to the 'System' tab and 'Utilities' bar. Click the 'Reboot' button to reboot the Receiver. Once the Receiver reboots, it will grab the EDID from the attached HDMI sink and send it back to the Transmitter it is watching.

Note: If this is being done in a JADConfig system, this will update the EDID on **ALL** Transmitters.



6. Return to the 'Functions' tab, uncheck the "Copy EDID from this Video Output" box, and click 'Apply' to return the Receiver to default values.



7. Done! Reboot the Receiver & Transmitter. Then reboot the source device attached to the Transmitter to activate the new EDID.

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

Firmware A3.2a & A3.21c

Instructions for firmware versions:

A3.2a
A3.21c

The following procedure will force the 2G Transmitter to use a new EDID that is extracted from a display, AVR, or other HDMI sink attached to a 2G Receiver.

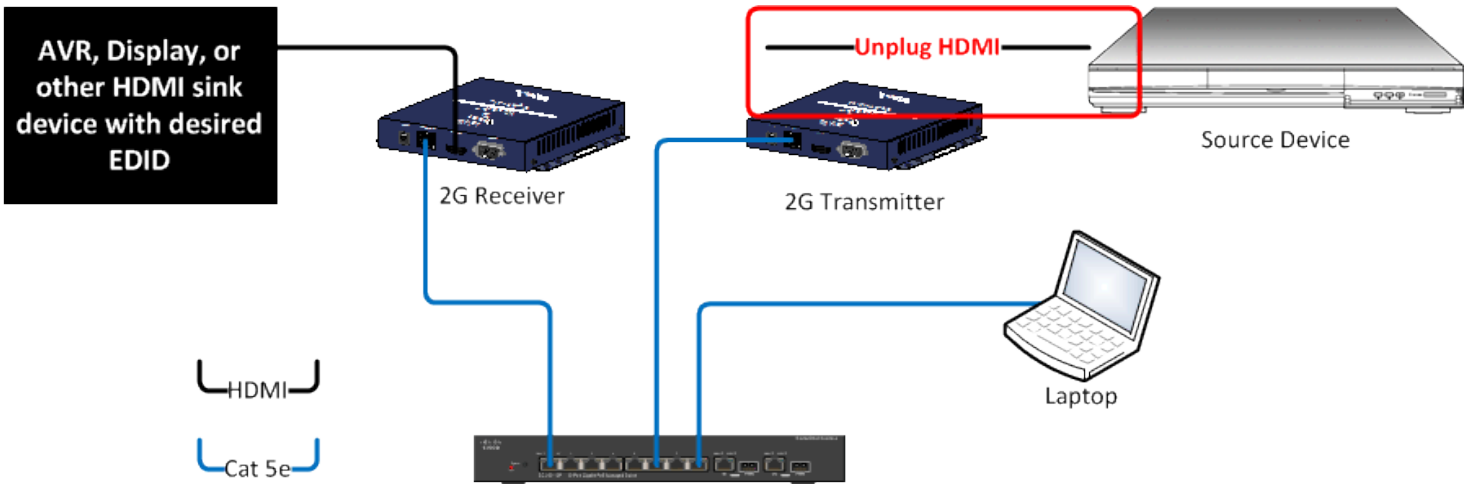
Not Sure How?

Computer Access to JAP Receiver

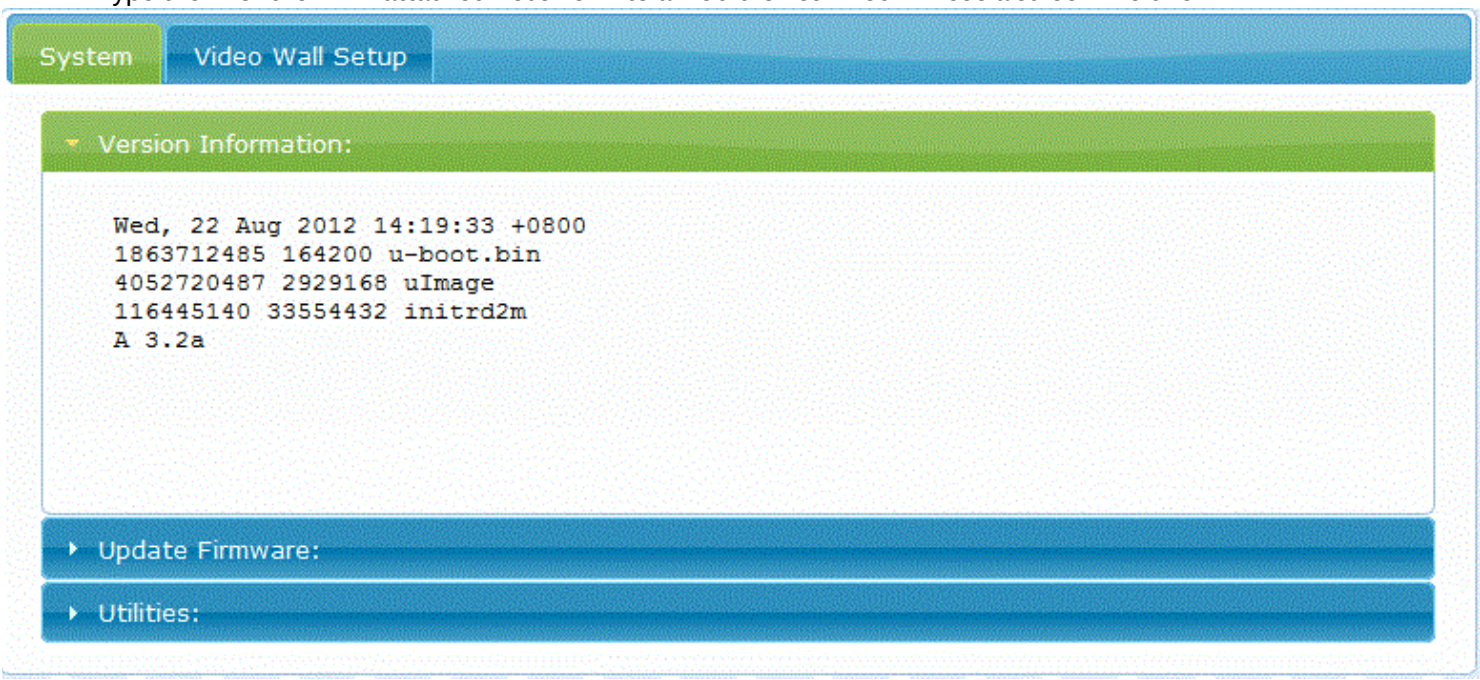
1. If you have not already done so, turn on the Transmitter, Receiver, and HDMI sink.

2. Set the EDID-attached Receiver to watch the target Transmitter, and connect a computer to the system so that it can access the EDID-attached Receiver.

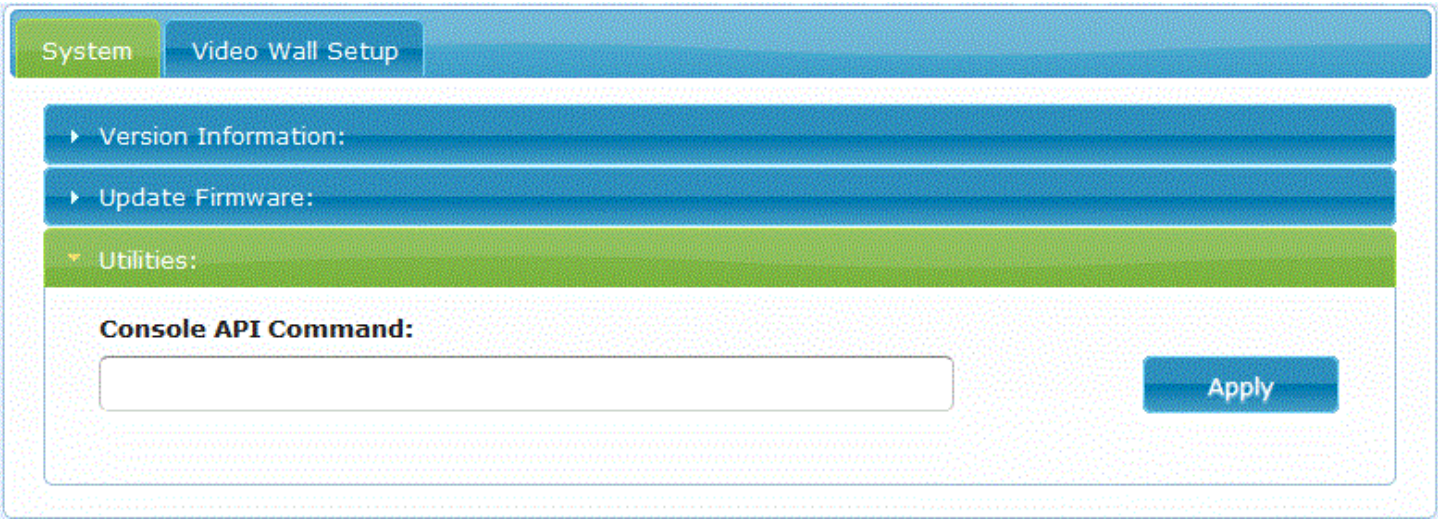
3. **Unplug the HDMI cable between the Transmitter and Source Device. EXTREMELY IMPORTANT!**



4. Type the IP of the EDID-attached Receiver into a web browser. You will see a screen like this:

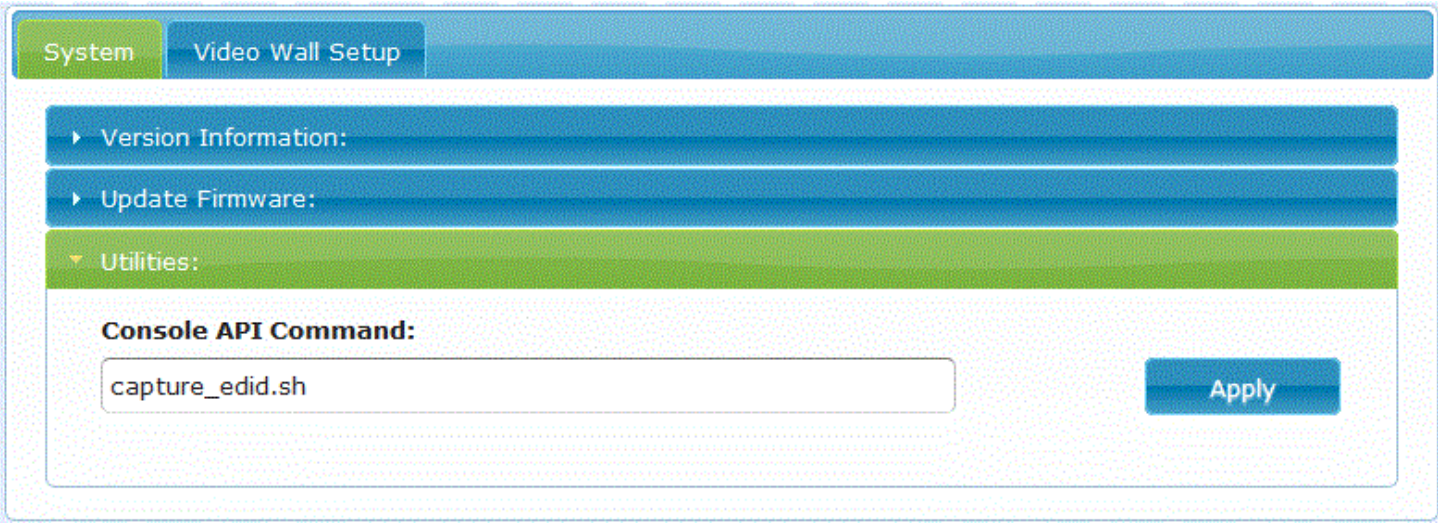


5. Click on the Utilities tab at the bottom of the menu. You will see a screen like this:



6. Enter the following command in the Console API Command box (OK to copy/paste this command), then click 'Apply':

capture_edid.sh



7. Done! The TV or AVR EDID is now stored in the Transmitter. Reboot the Transmitter and the attached source to activate the new EDID.

8. If you need to apply this EDID to other Transmitters, wait for the Receiver to reboot, refresh the web page, and repeat the process.

Note: If in a non-Just Add Drivers installation, you may have to switch the port that the computer is connected to in order to retain connection to the Receiver.

Not Sure How?

Computer Access to JAP Receiver

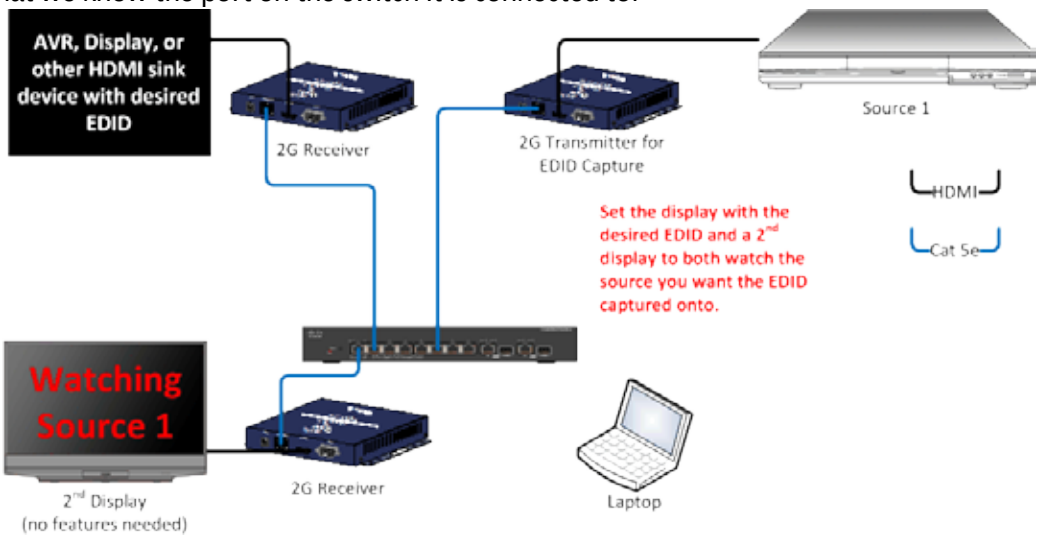
Just Add Drivers Installations

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

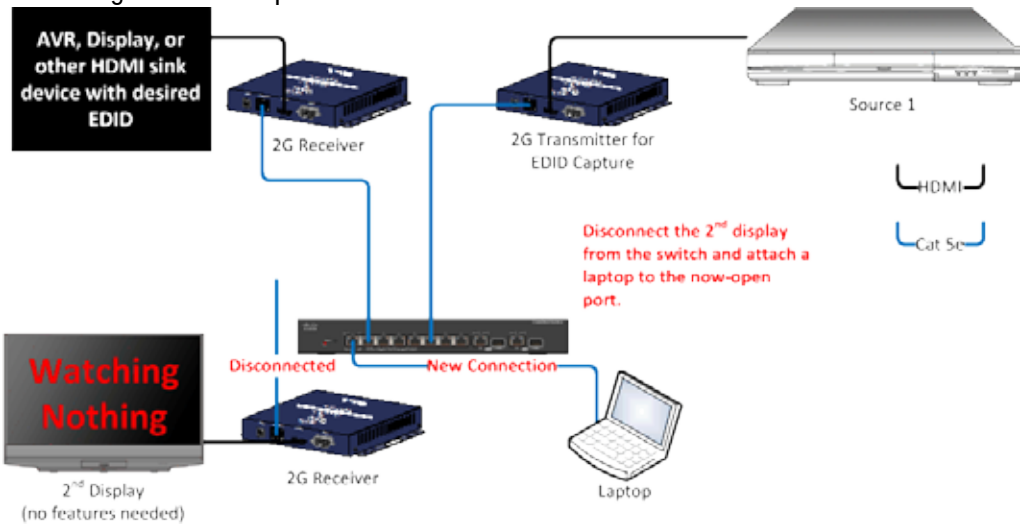
1. Use the connected control system to set the EDID-attached Receiver to watch the target Transmitter.
2. Use the notepad document containing device IPs to identify the IP of the EDID-attached Receiver.
3. Connect a computer to the Local Area Network (LAN) or to any open port on the switch with an Ethernet cable. Be sure that DHCP is enabled on your computer.

Non-Just Add Drivers Installations

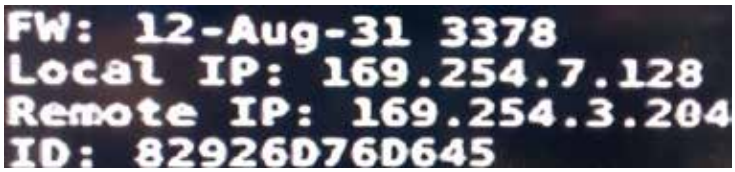
1. Use the control system to set ***2*** displays to watch the Transmitter: 1) display with the EDID we want; 2) a second display that we know the port on the switch it is connected to.

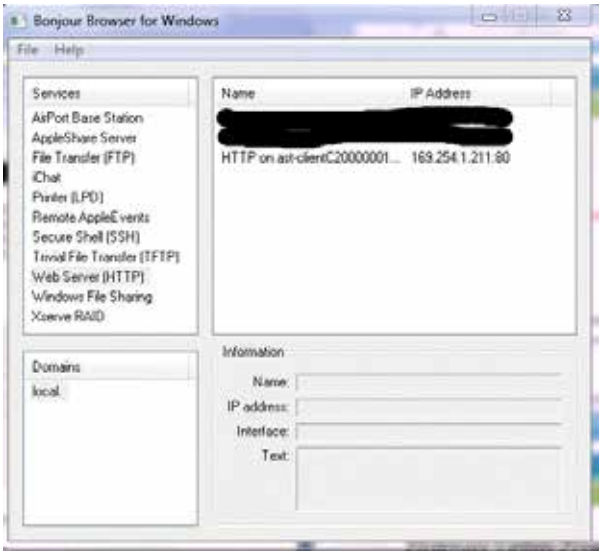


2. Disconnect the Ethernet cable for the second display from the switch and connect a computer to the same port of the switch. This gives the computer access to both the Receiver and Transmitter.

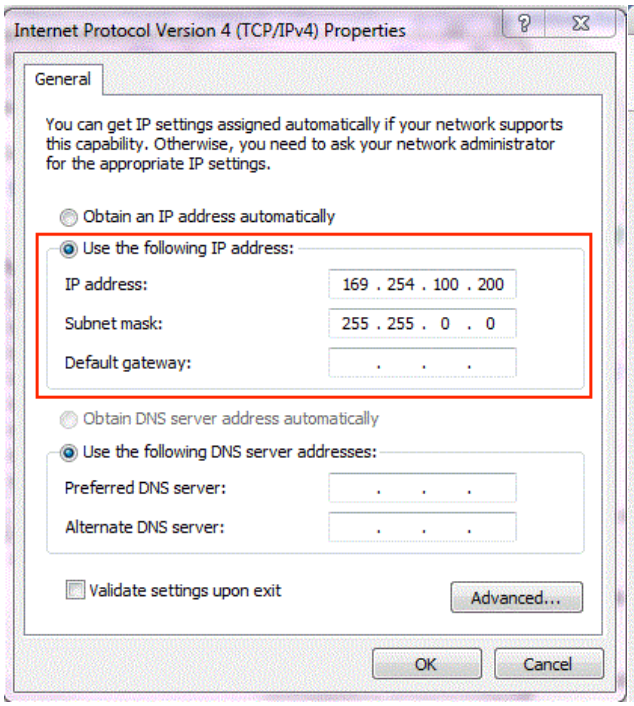


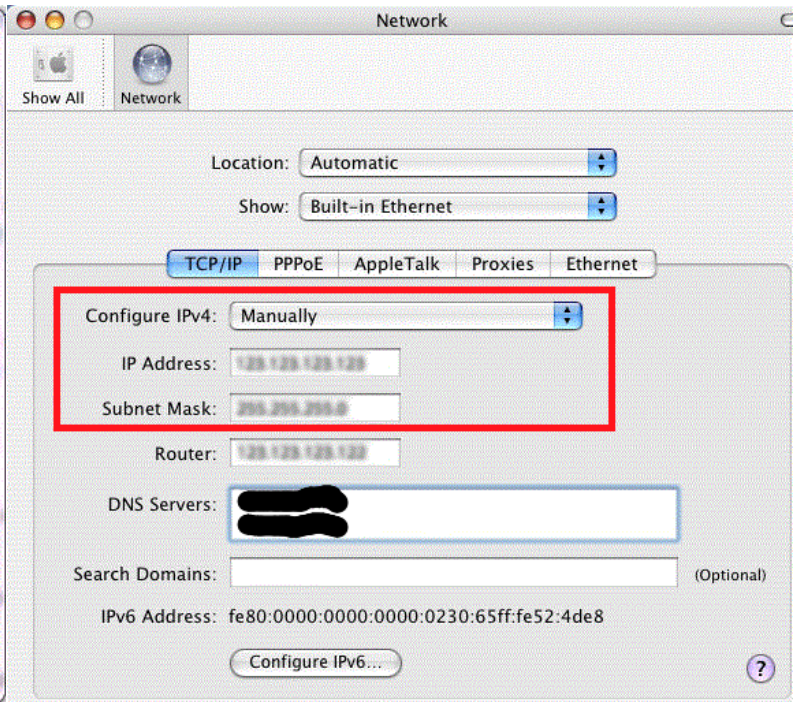
3. Notice the Local IP on the TV screen when the Receiver powers up. This is the IP of the Receiver. It can also be discovered by using Bonjour Browser (available for download at www.justaddpower.com in any of the Firmware folders) to find the IP of the Receiver. It will show up under the Web Server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





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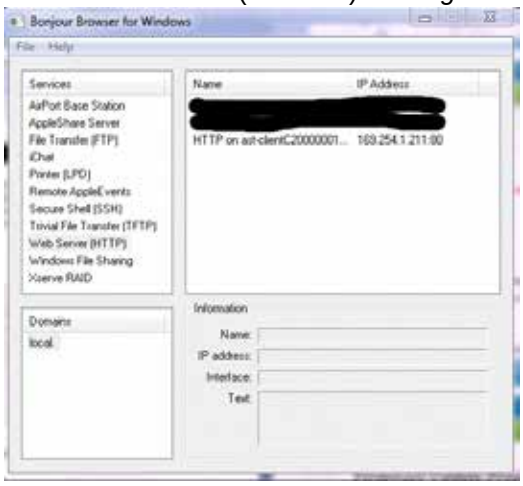
Direct Connection to Just Add Power Device

1. Connect a computer to the 1000BT port of the Just Add Power device with a network cable. Cable termination can be crossover or straight-through.

2. If the IP of the device is known, skip to the next step. Otherwise, use Bonjour Browser (available for download at www.justaddpower.com in any of the Firmware folders) to find the IP of the Receiver. It will show up under the Web Server (HTTP) section as either *ast-client* (Receiver) or *ast-gateway* (Transmitter).



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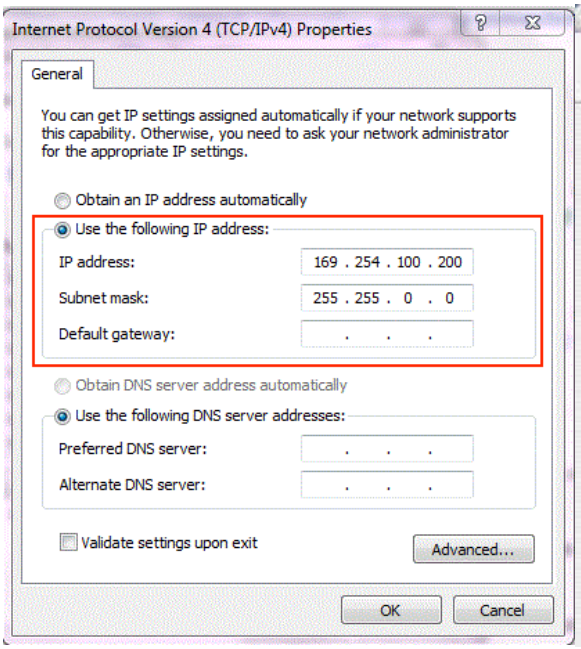

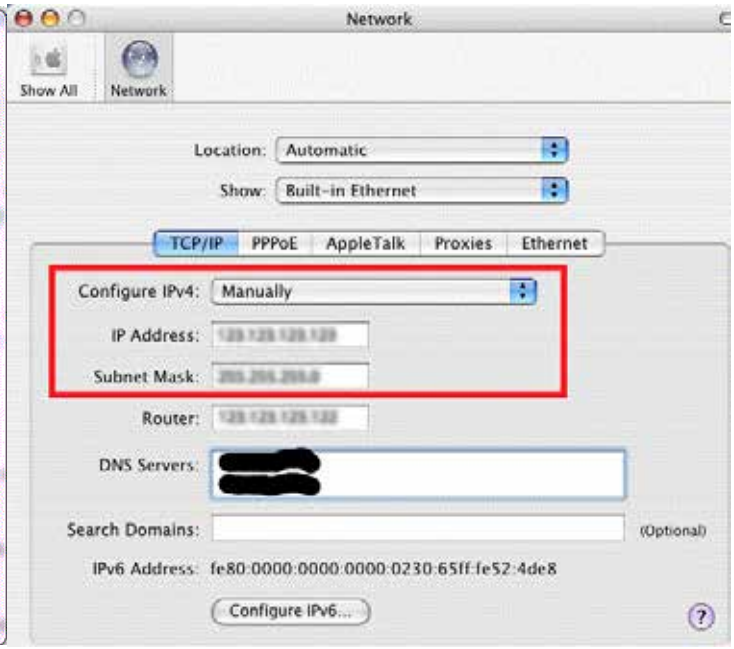

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Change Log

2013-06-25

- Added Change Log
- Added A3.54c information
- Added “Not Sure How?” section to re-format for common useful skills
- General reformatting and rearrangement for easier navigation
- Changed title to “EDID Management”

2013-11-27

- Changed EDID procedure for A3.54c to make more consistent
- Updated for firmware A5.13d
- Added section on pre-loaded EDIDs in A3.54c and above

2014-01-02

- Added EDID Update Tool
- Removed older firmware instructions