2G EDID Management – Just Add Power HD over IP – Page1

Just Add Power 2G EDID MANAGEMENT

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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

EDID Used:	
00 ff ff ff ff ff ff 00 59 24 00 15 02 00 00 0	0
11 15 01 03 80 34 1d 78 2a c7 20 a4 55 49 99 2	7
13 50 54 bf ef 00 71 4f 81 40 81 80 95 00 b3 0	D
d1 c0 01 01 01 01 02 3a 80 18 71 38 2d 40 58 2	c
45 00 09 25 21 00 00 1e 00 00 00 ff 00 31 0a 20	D
20 20 20 20 20 20 20 20 20 20 20 00 00 00 fd 00 3	7
4b 1e 55 10 00 0a 20 20 20 20 20 20 00 00 00 f	c
00 47 65 6e 65 72 69 63 5f 48 44 4d 49 0a 01 5	d
02 03 20 41 4d 01 02 03 11 12 13 04 90 1f 0e 0	f
1d 1e 23 09 07 07 83 01 00 00 65 03 0c 00 10 0	D
8c 0a d0 8a 20 e0 2d 10 10 3e 96 00 09 25 21 0	0
00 18 01 1d 00 72 51 d0 1e 20 6e 28 55 00 09 2	5
21 00 00 1e 01 1d 00 bc 52 d0 1e 20 b8 28 55 4	0
09 25 21 00 00 1e 8c 0a d0 90 20 40 31 20 0c 4	0
55 00 09 25 21 00 00 18 00 00 00 00 00 00 00	0

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 <u>ONLY</u> 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 <u>TRANSMITTER</u>.

Why Change the EDID?

<u>2G Transmitters</u> 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 email <u>support@justaddpower.com</u> to request more information.

Three Ways to Change EDID

- 1. Pre-Loaded EDIDs –3 EDIDs are loaded in every Just Add Power Transmitter
 - o HDMI (default)
 - o DVI
 - o VGA
- 2. <u>EDIDUpdate software</u> contains EDIDs for 5.1 multichannel audio, locked-resolutions, etc
- 3. <u>Capture EDID</u> 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:

- 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.
- Not Sure How? Direct Connection to Just Add Power device
- 3. Go to the 'Functions' tab, check the box for 'Reset EDID to Default Value', select the default EDID to load, and click 'Apply'.

System Video Wall Network Fu	Inctions
Video over IP	
🗷 Enable Video over IP	
🗷 Enable Video Wall	
Reset EDID to Default Value:	
Oefault HDMI EDID	
© Default DVI EDID	
Default VGA EDID	
	Арріу

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

System	Video Wall	Network	Functions	
► Version	on Information:			
→ Updat	te Firmware:			
• Utilitie	es:			
-Ce	ommands			
	Factory Default		Reboot	

Firmware A5.13

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

- 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'.

	System Video Wall Network Functions	
	Version Information:	
	an all and the factors and	
2	C Utilies	
	Commands	
	Factory Default Reboot	
	Reset EDID to Default Value: Default HDMI EDID	
	Default DVI EDID Default VGA EDID	
	Apply	
	Console API Command	
	Apply	•
	Output	

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 <u>www.justaddpower.com</u>.

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	Patched_YAHMHA_amp
(recommended)	
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	Denon-AVAMP_AVR-890
(untested)	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 <u>LOAD</u>, and choose the proper EDID.



4. Click <u>SEARCH</u> 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.

EdidUpdate		×
jap-gateway00	00	
LOAD	SEARCH	UPDATE

5. Click <u>UPDATE</u> to load the EDID.

EdidUpdate								
	EDID Update Do	one!						
		ок						
	SEARCH	UPDATE						

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 <u>capturing</u> 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 <u>Receiver</u>. It is through the Receiver that the capture function is run.



When the capture function is executed, the <u>Receiver</u> copies the EDID from the display, passes it through the switch to the <u>Transmitter</u>, 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.

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.

System	Video Wall	Network	Functions		
Tue, 103- 3420 4221 A3.5	m information: . 05 Mar 2013 1136600 1410 0599397 23670 7551586 17825 56c	16:50:24 8 u-boot.b 72 uImage 792 initrd	+0800 in 2m		
+ Updal	te Firmware:				
 Ubits Statis 	is: itics:				

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.

Video	over IP						
🗹 Enal	ble Video ove	r IP					
🕅 Enal	ble Video Wal	l.					
Cop	y EDID from t	his Video Ou	tput (Default d	isabled under	multicast mod	±)	
						-	Apply

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 <u>ALL</u> Transmitters.

System	Video Walt	Network	Functions			
• Versio	on Information:					
+ Updat	te Firmware:				_	
- Utilitie	•s)					
C	ommands					
	Factory Default		Reboot			

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.

Enabl	e Video ovo	er IP				
Enabl	e Video Wa	all i				
Сору	EDID from	this Video Ou	tput (Default dis	abled under mu	tticast mode	1)

- 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.

- 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. <u>Unplug the HDMI cable between the Transmitter and Source Device. EXTREMELY IMPORTANT!</u>



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

/stem	Video Wall Setup			
 Version 	on Information:			
Wed, 1863 4052 1164 A 3	, 22 Aug 2012 14:19: 3712485 164200 u-boo 2720487 2929168 uIma 445140 33554432 init .2a	33 +0800 t.bin ge rd2m		
 Updat 	te Firmware:			
 Utilitie 	es:			

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

stem Video Wall Setup		
Version Information:		
Update Firmware:		
Utilities:		
Console API Command:		
		Apply
	aurauraurauraurauraur	

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

capture_edid.sh

Version Information:		
Update Firmware:		
Utilities:		
Console API Command:		
capture_edid.sh	Apply	

- 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.

<u>Note:</u> 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

<u>Note:</u> EDID capture should be done <u>AFTER</u> 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 <u>2</u> 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.



 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 <u>www.justaddpower.com</u> 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.

IPv4) Properties	Network	(
1	Show All Network	
automatically if your network supports eed to ask your network administrator	Location: Automatic	
natically	Show: Built-in Ethernet	
s:	TCP/IP PPD6E AnnieTalk Provies Ethernet	
169 . 254 . 100 . 200	Appendix Houes Edichic	
255.255.0.0	Configure IPv4: Manually	
· · ·	IP Address:	
automatically	Subnet Mask:	
er addresses:	Router:	
	DNS Servers:	
· · ·		
	Search Domains:	(Optional)
Advanced	IPv6 Address: fe80:0000:0000:0000:0230:65ff:fe52:4de8	
OK Cancel	Configure IPv6	?
	Properties Properties automatically if your network supports seed to ask your network administrator natically s: 169 . 254 . 100 . 200 255 . 255 . 0 . 0 automatically er addresses: Advanced	IPv4) Properties Image: State of the second s

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 <u>www.justaddpower.com</u> 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).

e Hiely		
Services	Name	IP Address
AaPost Base Station AppleShaes Server File Transfer (FTP) Chat Printe (JPD) Remote AppleS vents Secure Shell (SSH) Trivial File Transfer (FTTP) Walt Server (HTTP) Windows File Sharing Xierve RAD	HTTP on an clenif.2	0000007 160-254.1 211-00
Domaine	Information Name:	
tera.	IP address:	
	Tet	

- 3. 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.

Properties 8 23	Network
	Show All Network
matically if your network supports o ask your network administrator	Location: Automatic
lly	Show: Built-in Ethernet
	TCP/ID PDDoE AppleTalk Provies Ethernet
169 . 254 . 100 . 200	TCP/IP PProc Appletaix Proxies Ellietter
255.255.0.0	Configure IPv4: Manually
· · · ·	IP Address: 128 128 128 128
matically	Subnet Mask: 200 200 200 200 200
dresses:	Router: 128 128 128 128
	DNE Summer Comment
· · ·	
	Search Domains: (Opr
Advanced	IPv6 Address: fe80:0000:0000:0000:0230:65ff:fe52:4de8
OK Cancel	(Configure IPv6)
	Properties 2 2

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