

Just Add **Power**

CONTROL4 MULTICAST DRIVER

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Overview

A Just Add Power Multicast switching system puts all devices into a single VLAN and assigns a unique Multicast IP to each Transmitter. For a Receiver to switch sources, the Multicast IP of the Receiver is changed to match the Multicast IP of the Transmitter to be watched.

There are two drivers used to control a Multicast switching system:

1. Multicast Switching driver
 - Provides Matrix Control – switch any display to watch any source
2. Endpoint & Device Control
 - Provides Endpoint Control – control sources and displays via CEC or RS232
 - Provides Device Control – control Just Add Power features

AMP

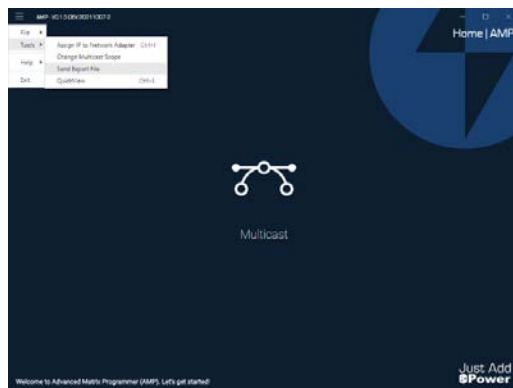
Advanced Matrix Programmer (AMP) is a software created by Just Add Power that configures Just Add Power devices to work in a Multicast Switching system.

Once the system is configured, AMP outputs a **.JSON file** that will later be loaded into the Control4 driver as part of setup. Save the .JSON file to the same location as other important files for the jobsite.

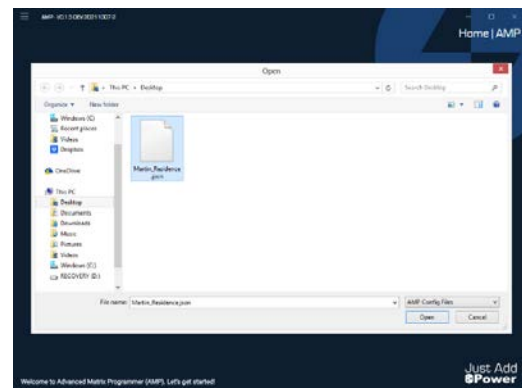
Setup Switching Driver

System Design

1. Download the driver and move it to the Control4 drivers folder on your PC.
2. In **System Design**: go to the **Items** window, check **Local**, and search for **Just Add Power**.
3. Load **ONE Just Add Power MultiCast Switching** driver
 - Load one (32x32) driver for a system with less than 32 sources and 32 displays
 - Load one (64x64) driver for a system with between 32 and 64 sources and displays.
4. In the **Properties** tab, note the **Server Address** (10.4.31.174:38568 in the picture below). This is the IP address of the Control4 processor, followed by a port number.
5. Open Just Add Power's **AMP Software**.
6. In **AMP**, go to the top-left menu → Tools → Send Export File
7. Navigate to the .JSON file that was created by AMP when the system was configured (you saved it in the same location as other important files for the jobsite...right?)

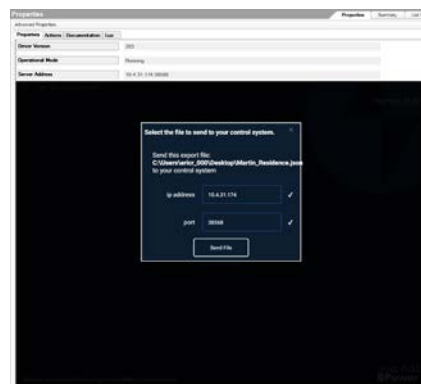


Step 6



Step 7

8. Enter the IP address of the Control4 processor in the **ip address** box.
9. Enter the port number (number after the colon) in the **port** box.
10. Click **Send File**



Steps 8, 9, 10, and 4

11. The success message indicates that the file has been uploaded properly. Go back to **Composer**.

12. (Optional) On the **Actions** tab, select **List Devices**.

- On the **Lua** tab, the **Lua Output** section shows the details about Transmitters and Receivers in the system. This information was imported from the .JSON file.

The screenshot shows a software window titled "Lua Output" with a tabbed interface. The "Lua" tab is selected. The window contains two sections: "Transmitters:" and "Receivers:". Each section lists devices with columns for Port, IP, MAC, and Name [Channel].

Transmitters:			
Port	IP	MAC	Name [Channel]
1	192.168.27.1	C2:00:00:02:8D:F9	Bluray [1]
2	192.168.27.2	C2:00:00:02:8E:0A	Security NVR [2]
3	192.168.27.3	C2:00:00:02:8E:0B	Roku [3]
4	192.168.27.4	C2:00:00:02:80:AE	AppleTV [4]
5	192.168.27.5	C2:00:00:02:81:3E	BrightSign [5]
6	192.168.27.6	C2:00:00:02:80:AF	DirecTV [6]
7	192.168.27.7	C2:00:00:01:96:7B	NVidia Shield [7]
8	192.168.27.8	C2:00:00:01:96:7D	Kaleidescape [8]
9	192.168.27.9	C2:00:00:01:96:86	Spectrum [9]
10	192.168.27.10	C2:00:00:02:AD:2F	Presentation PC [10]
11	192.168.27.11	C2:00:00:02:87:E6	A Fish [11]
12	192.168.27.12	C2:00:00:02:87:E3	TX12 [12]

Receivers:			
Port	IP	MAC	Name [Channel]
1	192.168.27.101	C2:00:00:01:A5:F4	Sony Outer Left [5]
2	192.168.27.102	C2:00:00:02:00:31	Sony Outer Right [4]
3	192.168.27.103	48:5D:EB:03:8D:63	Spinning Vizio [7]
4	192.168.27.104	48:5D:EB:03:8E:97	Desktop Left [2]
5	192.168.27.105	C2:00:00:02:8A:97	Desktop Right [6]
6	192.168.27.106	C2:00:00:02:1A:6C	Wall Vizio Left [3]
7	192.168.27.107	C2:00:00:02:4B:E8	Wall Samsung Right [1]
8	192.168.27.108	C2:00:00:D3:01:96	Denon AVR [3]

Connections

1. Select **Connections** in the bottom-left corner and choose the **Control/AV** tab.
2. Select the **JAD MultiCast Switch** driver.
3. Assign Audio/Video Inputs. Match Input numbering to the Matrix RX ID assigned by AMP.
 - Video Input 1 = Matrix TX ID 1
 - Video Input 2 = Matrix TX ID 2
 - ...

The screenshot shows the 'Connections' window with the 'Control/AV' tab selected. The left sidebar shows a tree view of the system, with 'JAD MultiCast Switch' selected under the 'Multicast System' folder. The main window displays a table of 'Audio/Video Connections' for the 'JAD MultiCast Switch'.

Name	Type	Connection	Input/Output	Connected To
Audio/Video Inputs				
Video Input 1	Video	HDMI	Input	Blu-Ray->AV Out
Video Input 2	Video	HDMI	Input	Security NVR->HDMI
Video Input 3	Video	HDMI	Input	Roku Apps->AV Out
Video Input 4	Video	HDMI	Input	AppleTV->Video
Video Input 5	Video	HDMI	Input	BrightSign->AV Out
Video Input 6	Video	HDMI	Input	DIRECTV->AV Out
Video Input 7	Video	HDMI	Input	NVidia Shield->Output Main
Video Input 8	Video	HDMI	Input	Kaleidescape Cinema One Movie Zone->Video - Zon...
Video Input 9	Video	HDMI	Input	Spectrum Cable->HDMI
Video Input 10	Video	HDMI	Input	Spectrum Cable->HDMI
Video Input 11	Video	HDMI	Input	
Video Input 12	Video	HDMI	Input	
Video Input 13	Video	HDMI	Input	
Video Input 14	Video	HDMI	Input	
Video Input 15	Video	HDMI	Input	
Video Input 16	Video	HDMI	Input	
Video Input 17	Video	HDMI	Input	
Video Input 18	Video	HDMI	Input	
Video Input 19	Video	HDMI	Input	
Video Input 20	Video	HDMI	Input	
Video Input 21	Video	HDMI	Input	
Video Input 22	Video	HDMI	Input	

4. Assign Audio/Video Outputs. Match Output numbering to the Matrix RX ID assigned by AMP.
 - HDMI Output 1 = Matrix RX ID 1
 - HDMI Output 2 = Matrix RX ID 2
 - ...

The screenshot shows the 'Connections' window with the 'Control/AV' tab selected. The left sidebar shows the same system tree as the previous screenshot. The main window displays a table of 'Audio/Video Connections' for the 'JAD MultiCast Switch', showing the configuration for outputs.

Name	Type	Connection	Input/Output	Connected To
Audio/Video Inputs				
Video Input 61	Video	HDMI	Input	
Video Input 62	Video	HDMI	Input	
Video Input 63	Video	HDMI	Input	
Video Input 64	Video	HDMI	Input	
Audio/Video Outputs				
HDMI Output 1	Video	HDMI	Output	Sony Outer Left->HDMI 1
HDMI Output 2	Video	HDMI	Output	Sony Outer Right->HDMI 1
HDMI Output 3	Video	HDMI	Output	Spinning Vizio->HDMI 1
HDMI Output 4	Video	HDMI	Output	Desktop Left->HDMI 1
HDMI Output 5	Video	HDMI	Output	Desktop Right->HDMI 1
HDMI Output 6	Video	HDMI	Output	Wall Vizio Left->HDMI 1
HDMI Output 7	Video	HDMI	Output	Wall Samsung Right->HDMI 1
HDMI Output 8	Video	HDMI	Output	Denon AVR->INPUT Game
HDMI Output 9	Video	HDMI	Output	
HDMI Output 10	Video	HDMI	Output	
HDMI Output 11	Video	HDMI	Output	
HDMI Output 12	Video	HDMI	Output	
HDMI Output 13	Video	HDMI	Output	
HDMI Output 14	Video	HDMI	Output	
HDMI Output 15	Video	HDMI	Output	

At the bottom of the window, there is a section for 'HDMI Input Devices' with filters set to 'Multicast System' and 'All Connections'.

- Switching control can be tested by double-clicking on the switching driver. A popup grid will appear that allows switching of displays based on Matrix TX ID and Matrix RX ID.

