Introduction

AirDMX:Out is a Wi-Fi ArtNet/sACN(E1.31) to DMX512 Interface. It is capable of creating a single universe differential DMX output from Art-Net/sACN over a Wi-Fi network. Device IP, Art-Net/sACN Configuration and DMX Speed Settings are adjustable directly from your Browser interface once the Wireless network has been established. The device is built into a 3-pin DMX barrel plug to connect directly to your target DMX system. Operational Mode is indicated by a simple Red/Blue LED mounted below the Wi-Fi Symbol on the product label. Product Firmware updates can be sent over Wi-Fi connection.

Specifications

Browser Configuration Server and UDP Client modes
Single Universe Art-Net II & III and sACN E1.31 decoding DMX512 data, outputting @ 44Hz/35hz/25Hz (selectable)
Radio Module : Wireless standard 802.11 b/g/n, Frequency range 2.4-2.5 GHz
Power input : 5-24V via the 5.5x2.1 Power connector (center positive)
Modes : ArtNet Unicast – sACN(E1.31) Unicast – sACN(E1.31) Multicast

Status LEDs

Network Select : Slow Single Flash RED=APMode, not connected – Slow Double Flash RED=APMode, connected
Network Connect : Medium Single Flash RED=ClientMode, not connected – Solid BLUE=ClientMode, connected
Data Streaming : Flashing BLUE=ArtNet/sACN data being received that matches universe selection group
Unsuccessful network Connection : Equal On/Off Slow Flashing RED (after 60 seconds of attempts)

Product Connections

Access-Point Connection

On first power-up (when the device has not been set up before), it will appear as an Access Point. If you check your list of wireless network connections you will find the device in the list as 'AirDMXout xxyy' (where xxyy are the last two octets of the device mac). The device will be flashing a slow RED LED. Select the device from the list of wireless network connections and enter 'smartshow' for the password. Once connected the LED will change to a double flash.

`[Laptop/PC] <--- direct wifi connection ---> [AirDMX:Out in APMode : 192.168.4.1]`

'Join A Network' Configuration Page

To access the '*Join A Network*' configuration page, type into the URL bar '192.168.4.1' and press return, the configuration interface should appear as follows:

Network SSID & Password Settings
Network SSID: Enter the name (SSID) of the wireless router for the network you wish to join
Network PASS: Enter the password (PASS) for the above network.
[Save SSID & Password] The above SSID and Password will be saved so that next time the device reboots, the connection will be made automatically (unless the Network/Pass cannot be verified)
[Connect to Network] This will allow the device to connect to the Network as specified above, the device will close down its Access-Point 'join-a-network' connection and restart as a Network Client/Node. The LED will change to a faster flashing RED while the connection is being made, and to Solid BLUE once fully connected.

Device Settings & IP Configuration
Device IP Address: It is possible to set the IP Address of the AirDMX:Out to almost any value. Many ArtNet devices will use standard IP addresses of 10.x.x.x or 2.x.x.x, only values of 0-254 can used, 255 is not allowed.
Note : If you change this IP address, the new IP address will be the one that will allow you access to this configuration page next time you reboot. Also take care to only change to an IP address that you actually have access to.
Device SubNetMask: Normally this should be left at 255.255.255.0, which will cover most applications.
[Save Device Settings] Saving the configuration will write the Device IP and SubNetMask values to the AirDMXOut's internal memory, so on next power-up the new settings will be used.

Resuming Network Connection

Once the device has connected to your chosen Network (Solid BLUE LED), then you should disconnect your Laptop/PC from the AirDMX:Out's AP-Mode (it might automatically do this anyway), and then manually connect your Laptop/PC back to your existing Network (Save SSID as above)

`[Laptop/PC] <--- Wi-Fi ---> [ROUTER] <--- Wi-Fi ---> [AirDMX:Out in ClientMode : 192.168.1.204]`

Note : *If the LED stays a medium speed flashing RED then you have not been able to connect to your desired network (you may have entered the SSID & PASS incorrectly, or it just not possible to connect at the time). If you cycle the power to the device you will start in AP mode once again, the device will do this until a confirmed network connection has been made.*

Browser Configuration Mode

Note : Access to the Browser Configuration page is only available when ArtNet/sACN data is NOT streaming to the device over the network, therefore access can only be granted when the LED is SOLID BLUE.

To access the browser configuration page, type into the URL bar the Network IP Address (this will be default value '192.168.1.204' unless you have changed it from within the 'Join-a-Network' page) and press return. The configuration interface should appear as follows:

Device Settings & IP Configuration

Network: The page should announce the currently connected network name as 'Connected to..'

RSSI Value: Received signal strength indication as received at the AirDMX:Out

Device IP Address: It is possible to set the IP Address of the AirDMX:Out to almost any value. Many ArtNet devices will use standard IP addresses of 10.x.x.x or 2.x.x.x, only values of 0-254 can used, 255 is not allowed. *Note : If you change this IP address, the new IP address will be the one that will allow you access to this configuration page next time you reboot. Also take care to only change to an IP address that you actually have access to.*

Device SubNetMask: Normally this should be left at 255.255.255.0, which will cover most applications.

MAC Address: This is not adjustable and is a unique number created when the device was manufactured.

[SAVE] New IP configuration will not take place until the AirDMX:Out has its power cycled (or by pressing [Reboot]). Saving the configuration will write the Device IP and SubNetMask values to the AirDMX:Out's internal memory. On the next power-up the new settings will be used.

DMX Protocol

Select either ArtNet or sACN (E1.31) to match the DMX Data Protocol coming from the host application

[SAVE] New DMX Protocol settings will take immediate effect after they are saved to the AirDMX:Out.

Art-Net/sACN Starting Universe

These values can be configured to match the requirements of your system. There are a total of 256 Universe values for ArtNet II and 32,768 for ArtNet III, and 63,999 for sACN

ArtNet Mode: Net: Range 0-127 **SubNet:** Range 0-15 **Universe:** Range 0-15

sACN Mode: Range 1-32767: **Multicast:** Ticking this box will enable sACN Multicast reception

Art-Net Node Name *(Art-net mode only)*: each AirDMX:Out can be numbered (0-255) so it can be identified easily on a Network with ArtPoll

[SAVE]: New ArtNet/sACN settings will take immediate effect after they are saved.

DMX Speed

Select between 44Hz (fastest), 35Hz and 25Hz (slowest) to adjust for your fixture needs

[SAVE] Saves this setting which will take immediate effect

Reboot

Pressing [Reboot] will restart the AirDMX:Out Device (a bit like cycling the power). All newly saved settings (including IP values) will be used after reboot.

Delete Connection

Pressing [Delete Connection] will remove the details of the currently connected network from the device, this may be required if you want to move from one wireless router to another. The next time you power up the device it will go into Access-Point mode again which will allow a new SSID & PASS to be entered (see Join-A-Network)

Recovery Mode : Resetting Network Connection

If you have previously connected to a network (wireless router) and you want to delete the network connection so you can join a different network, you can do this in one of two ways:

A. Follow the instructions in the Browser configuration Mode, by accessing the page and press the [DELETE CONNECTION] button, this will instantly remove the current network SSID and Password, and the device will reboot automatically in AP mode waiting for you to connect to it directly and Join-a-Network

B. If the previous router doesn't exist anymore (it has been removed, the device has been moved to another location, or perhaps the router has died) then you won't be able to access the Browser Configuration Mode (above), instead you will have to use the special RECOVERY MODE. Once the Recovery Mode procedure is complete, the device will have removed its previous SSID and Password and will reboot in AP mode.

Here are the steps :

1. *Without the original wireless router switched on (or visible on networks), power up the AirDMX:Out*
2. *The LED will be flashing a medium speed single RED*
3. *Allow 60 seconds to elapse*
4. *The LED will now be flashing RED with Equal on and off times*
5. *Disconnect the power to the AirDMX:Out*
6. *Repeat the steps from 1 to 5* <u>*TEN TIMES*</u>
7. *Once the TENTH unsuccessful connection elapses over 60-seconds the device will reset*

If at any time during the 10 power-up cycles the device happens to find the old wireless connection, this whole procedure will be ignored and the device will reconnect to the existing network as usual.

ArtNet/sACN Unicast, Multicast & Broadcast mode

It is recommended that Unicast mode is used when sending ArtNet data to AirDMX:Out.

ArtNet Broadcast mode should be avoided if possible, although can be used on low-universe-count networks

sACN Unicast or Multicast modes can be used – to receive Multicast it must be set within the Browser configuration

ArtNet Device Discovery & DHCP

There is limited ability to discover IP addressing and device Information using ArtNetPoll, IP Scan is available on most software. If unavailable, addressing can be done manually as described above. There is no DHCP function as IP addressing is Static, utilising client port 6454 for Art-Net and 5568 for sACN.

Dimensions

Length : 90mm (plus cable) – Width 22mm

Software Compatibility

AirDMX:Out works with all free and commercial Art-Net/sACN compatible software.

Technical Support

email : sales@smartshow.lighting

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