Wireless ArtNet-DMX 1.1

User manual

Description

The **Wireless ArtNet-DMX 1.1** is a compact Art-Net (DMX via Ethernet) interface which includes a modern ARM® microcontroller.

Additional the Wireless ArtNet-DMX 1.1 has a certified 2.4GHz 802.11 b/g/n Wi-Fi (FCC, CE, IC, and TELEC) for a direct connection to a Wi-Fi network.

Switchable DMX-line
The DMX-line is switchable according to usage. So Art-Net can be realized to DMX or DMX to Art-Net.

Adjustable DMX-Frame rate
Within the DMX-OUTPUT-MODE the frame rate is adjustable, so this interface is compatible to "slow" DMX-Devices.

Art-Net Merge-Function
Two Art-Net-sources will be joined outputted via LTP (Latest) or http (Highest) to the DMX-Output.

Switched off LED
The LEDs at the Wireless ArtNet-DMX 1.1 are suppressible via ArtNet-Command (AcLedMute) or time-controlled.
This is helpful on stages to avoid disturbing "light points".

Fast launch with WPS
With the WPS-Function the registration to an Access-Point is possible at the touch of a button. Without an additional installation of encodings, controllings can be integrated in existing networks and allows an easy possibility of usage without additional network activities.

Easy Configuration
For an easy IP-Setting we provide free the IP-Configurator as PC-Tool or Android-App.

High-quality and compact performance
The Wireless ArtNet-DMX 1.1 is built in compact aluminium housing.

Firmware-Update-Function
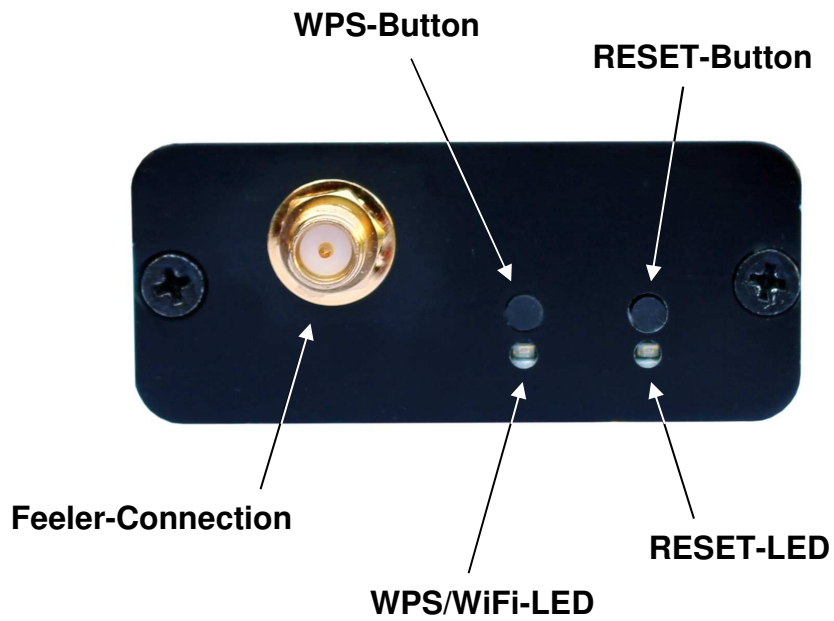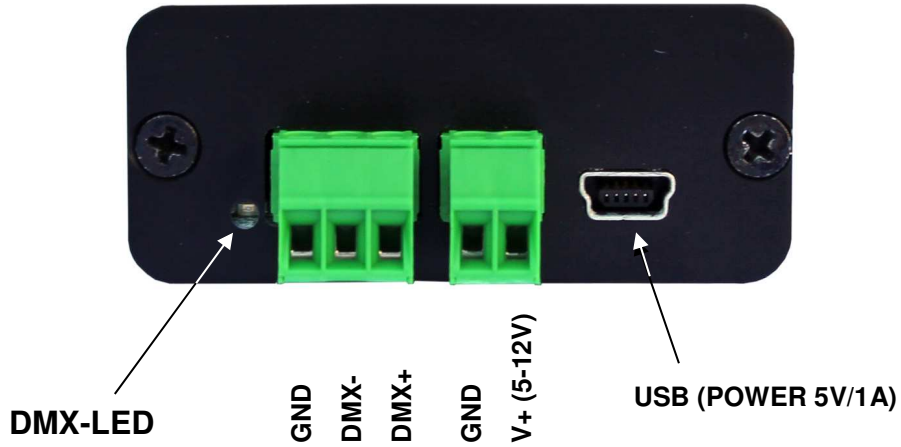To use prospective and further functions the Wireless ArtNet-DMX 1.1 provides an integrated Firmware-Update-Function.

Data sheet

Power supply: 5V/1A DC via included power supply
                           or 5-12V/1A via screw terminals

Ethernet: 2.4GHz IEEE® 802.11 b/g/n Wi-Fi®

DMX: 3 pin screw connection
                           DMX-line abjustable:
                           - 512 Channels OUT
                           - 512 Channels IN

Protocol: Art-Net™

Dimensions: 100 x 55 x 25 mm (without antenna)

Delivery

- Wireless ArtNet-DMX 1.1
- WiFi antenna
- Terminal block 2pin + 3pin
- Mini USB Cable
- Power supply
- User manual (German)

Connection

DMX-LED

GND DMX- DMX+ GND V+ (5-12V)

USB (POWER 5V/1A)

WPS-Button

RESET-Button

Feeler-Connection

WPS/WiFi-LED

RESET-LED

LED-Display

DMX-LED

DMX-OUTPUT Mode:

    Flashes   DMX-Signal is not outputted
    Shines   DMX-Signal is outputted

DMX- INPUT Mode:

    Flashes   DMX-Signal is not received
    Shines   DMX-Signal is received

WPS/WiFi-LED

    Flashes   Device has no WiFi-Connection
    Shines   Wifi-Connection produced
    Flashes   Waiting for WPS-Answer
    1x short
    Flashes   Power supply incorrect
    3x short   Please check, if the USB-Connection respectively the
                power supply has enough performance !

RESET-LED

    Flashes   Device is not configured
    Shines   Factory-Reset proceeds

Quick Start with WPS

Please proceed as follows to operate the Wirless ArtNet-DMX 1.1 with the WPS-Function:

- Connect the Wireless ArtNet-DMX 1.1 with the attached power supply.

- Start the WPS-Function at your Router/Access-Point.

- Push the WPS-Button at the Wireless ArtNet-DMX 1.1 .
  ⇨ The WPS/WiFi-LED flashes in short pitches.

- As soon as the WPS/WiFi-LED lights permanently the connection is established. The IP is received via DHCP.

- Optionally you can adjust a fixed IP.
  ⇨ See section „*Set a fixed IP with IP-Configurator*"

- Art-Net details which are sent to the ArtNet-DMX 1.1 are outputted via DMX.
  The Default settings are:
  Universe: 0
  SubNet: 0
  Net: 0

⚠ The quick start with WPS instruction assumed that the Wireless ArtNet-DMX 1.1 is located within the default settings at the beginning!

   ⇨ to generate the Default settings see section „*Factory Reset*"

Device configuration

For the configuration you need a USB-connection to PC with the program DMX-Configurator.

Proceed as follows to make the device configuration:

- Connect the Wireless ArtNet-DMX 1.1 via USB to PC
  ⇨ A USB-cable with MiniB-plug is needed
  ⇨ Install the USB-driver if it does not exist so far

- Start the program DMX-Configurator
  ⇨ This is available as download by www.dmx4all.de

- Please built a connection with the Wireless ArtNet-DMX 1.1 within the DMX-Configurator
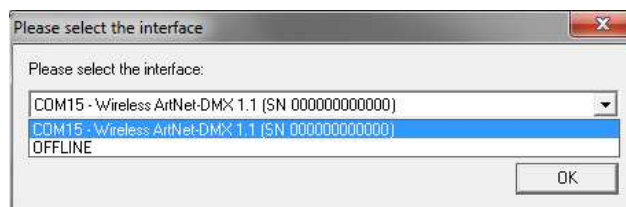
- Please call up under menu *Settings→ Hardware Settings*

- Here the device configuration can be done
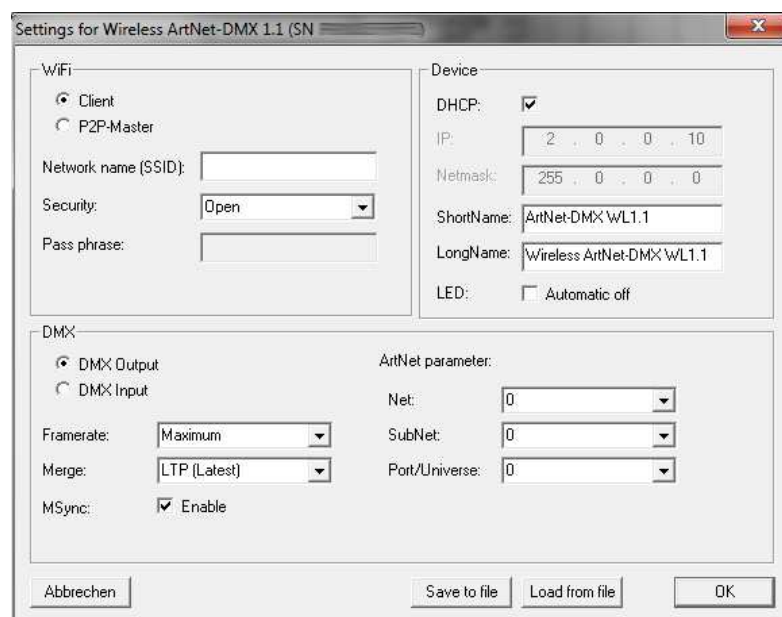
- By clicking OK the settings are transferred and stored to the Wireless ArtNet-DMX 1.1
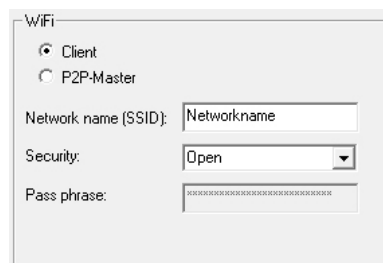
WiFi-Settings

The **Wireless ArtNet-DMX 1.1** can be configured as WiFi-Client or P2P-Master.

Client

If the Wireless ArtNet-DMX 1.1 is configured as Client, so the device registers itself to an Access-Point.

Therefore the network-name must be created under **Network name (SSID).** The **Security**-Mode must be chosen and if necessary the password (**Pass phrase**) must be entered.
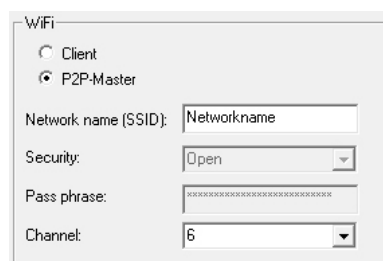
⚠ In this configuration the *Security-Mode Open*, *WPA/WPA2* or *WEP* (40 or 104) can be used.

P2P-Master

If the Wireless ArtNet-DMX 1.1 is configured as P2P-Master so a Client can register itself directly to this per WiFi. So a direct point to point connection is possible and no access point is needed.

For the WiFi-Connection the channel (Channel) is to assign which should be used.

⚠ In this Configuration only the Security-Mode *Open* is given, meaning an insecure connection.

Device-Settings

Each device needs within the network an own IP-address, so the assignment occurs clearly in the network. This can be received via DHCP or can be assigned fixed.

Is **DHCP** active, so the IP is received automatically.

If DHCP is not active the IP and net mask must be assigned manually.

⚠️ Please use according to the ArtNet-Spezification the IP-address 2.x.x.x or 10.x.x.x . In this case the net mask is to adjust to 255.0.0.0 .

Each other IP-address can be used also, e.g. 192.168.1.10 .
In this case the net mask must be adapted to 255.255.255.0 !

For Art-Net devices any names can be assigned, so you can use this assignment for an easier distinction.
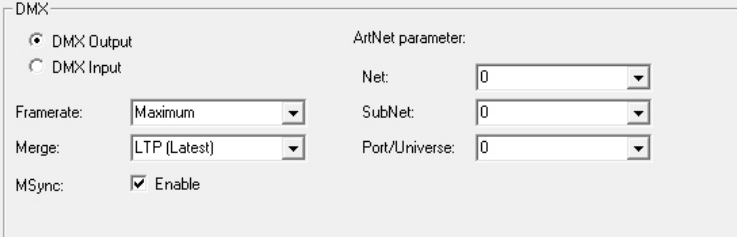The **Short-Name** is limited to 18 signs and the **Long-Name** is limited to 64 signs.

If the option **LED Automatic off** is activated the devices LEDs are switched off after 10 minutes operation mode by permanently net working connection.

DMX-Settings

The **Wireless ArtNet-DMX 1.1** can be configured as DMX-Output (Art-Net to DMX) or DMX-Input (DMX to Art-Net).

DMX-Output (Art-Net to DMX)

To use the **Wireless ArtNet-DMX 1.1** as DMX-Output-Interface, the Interface-Mode *DMX-Output* must be chosen.

The parameters **Net**, **SubNet** and **Port/Universe** specify which DMX-data should be used.

Framerate specifies the maximal DMX-Frame rate.
Maximum complies the maximal frame rate of ca. 44 fps (Frames/second).

The **Merge** setting can be adjusted to LTP (Latest) or HTP (Highest).

Via **ArtSync/MSync** the DMX-output of several Art-Net-devices can be synchronized by using the Software MADRIX®.

DMX-Input (DMX to Art-Net)

To use the **Wireless ArtNet-DMX 1.1** as DMX-Input-Interface, the Interface-Mode *DMX- Input* must be chosen.

The **Update-Rate** can be adjusted with which the DMX-Input data should be outputted via Art-Net.

40Hz … 5Hz	- The DMX-Data will be outputted with the adjusted transfer rate
On change data	- DMX-Data are only transferred if these change
DMX Frame rate	- DMX-Data are transferred as soon as a frame is closed. So the frame rate from the inputted DMX-signal will be used for the Update-rate

Several actions can be chosen for the DMX-Input in the case of a DMX-Signal (**DMX-FAIL**).

NO DATA	- via Art-Net is no DMX-Input received
HOLD last DMX data	- the last data are retained
CLEAR all channels to 0%	- all DMX-Channels are set to 0
SET all channels to 100%	- all DMX-Channels are set to 255

The Art-Net-Parameters **Net**, **SubNet** and **Port/Universe** specify the DMX-Data source.

Via Art-Net the DMX-Data are sent to the **Dest. IP** (Destination IP). This is to adjust in the same way as the Device-IP.

If **Broadcast** is activated, like in the image, so the DMX-Data are sent per Art-Net in the whole net work to ALL devices.

⚠ Each Art-Net-Device, which has the consistent settings for Net, Subnet and Port/Universe, accept the DMX-Data!

Adjust a fixed IP with the IP-Configurator

The **IP-Configurator** allows the IP-address setting and the net mask setting of the Wireless ArtNet-DMX 1.1 .

- Install the program IP-Configurator

- Connect the Wireless ArtNet-DMX with the net work

- Start the program IP-Configurator
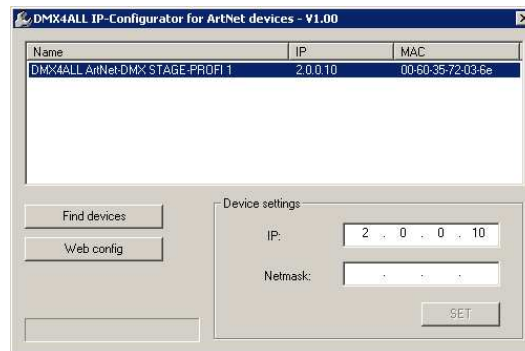
- A Wireless ArtNet-DMX 1.1 is shown in the list

- Choose the entry (by clicking)

- Please enter a new IP and net mask

- Click to SET

# Register in WiFi/WLAN via Webinterface with Smartphone

The entry of the WiFi/WLAN-access data can occur via Webinterface too.
Therefore access data must not be available. If necessary proceed a Factory-Reset.

Please proceed as follows:

- Connect the Wireless ArtNet-DMX 1.1 with the attached power supply.

- Activate WiFi/WLAN within your Smartphone.

- Select the **WLAN ArtNet 1.1** from the list of the available devices and occur *Connection:*
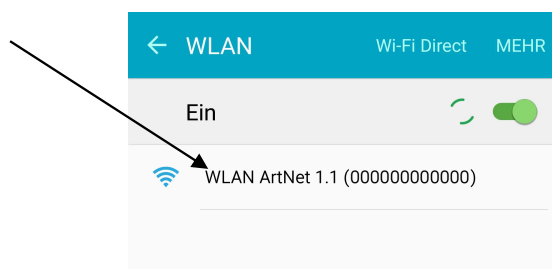
- According to the Smartphone respectively the operating systems version the following note appears. Click the note:
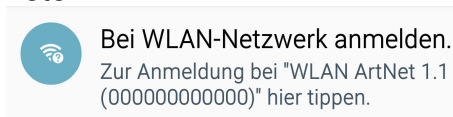
    Alternatively you can open the web browser and open the site **dmx4allconfig.com**

- An entry field appears in which you can enter the WiFi/WLAN access data:

- Click to connect. The Wireless ArtNet-DMX 1.1 closes now the connection to the Smartphone and creates a connection to the WiFi/WLAN-network.

Factory Reset

The **Wireless ArtNet-DMX 1.1** can be set back into the delivery status.

Please proceed as follows:

- Press RESET ca. 5 seconds until the RESET-LED shines
- Release the RESET and the Wireless ArtNet-DMX 1.1 will be set back into the delivery status.

Execute the Firmware Update

The **Wireless ArtNet-DMX 1.1** has an Update-Function, which allows transferring prospective firmware-versions.

Please proceed as follows:

- Turn off the device
- Establish a USB-Connection to PC
- Press RESET and turn on the Wireless ArtNet-DMX 1.1
- The WPS-LED and RESET-LED flashes alternate
- Install the USB-Driver if necessary
- Start the Update-Software **DMX4ALL USB- Updater**
- Select the **Wireless ArtNet-DMX 1.1** from the list
- Click *Firmware-Update*
- Select the Firmware-Datei (.bin) and confirm
- Wait until the Update has finished

⚠ If an error occurs during the update you can start at the beginning at any time.

Risk-Notes

You purchased a technical product. Conformable to the best available technology the following risks should not excluded:

Failure risk: The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

Initiation risk: For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

Operating risk: The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

Misusage risk: Any nonstandard use could cause incalculable risks and is not allowed.

Warning: It is not allowed to use the device in an operation, where the safety of persons depend on this device.

DMX4ALL

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