

Application Note

Control ArtNet Player X 4/8/16/16+ with
ArtNet-DMX MUX16/24

DMX [®]
4
ALL

General

This application note describes the procedure to control an **ArtNet Player X4 / X8 / X16 / X16+** with control elements (e.g. buttons) via an **ArtNet-DMX MUX 16 / 24**.

In this application note the 16 inputs of the **ArtNet-DMX MUX16** are used for the direct call of the first 16 programs in an **ArtNet Player X16+**.

The **ArtNet Player X16+** (in the following only called **ArtNet Player X**) and the **ArtNet-DMX MUX16** (in the following only called **ArtNet-DMX MUX**) can also be exchanged for other versions.

According to the ArtNet specification, the IP range 2.0.0.x with the subnet mask 255.0.0.0 is used in this application note. It is also possible to use other IP ranges such as 192.168.1.x with the corresponding subnet mask 255.255.255.0.

The remote connection between **ArtNet Player X** and **ArtNet-DMX MUX** can be made via ArtNet (Remote via ArtNet) or via DMX (Remote via DMX). Both variants are described below and cannot be combined with one another.



Follow points 1,2,3,4 for remote via ArtNet and points 1,5,6,7 for remote via DMX.

Conditions

- DMX-Configurator
- ArtNet Player X with Firmware V1.02 or higher (use the latest firmware)
- ArtNet-DMX MUX with Firmware V1.22 or higher (use the latest firmware)

1. Create programs for ArtNet Player X

The **ArtNet Player X** requires a MicroSD card for the program which is inserted into the SD card slot.

The program files must be in the main directory of the SD card and have the name Pxxx.prg. Here xxx stands for the consecutive three-digit program number starting with 001.

Create programs

For the **ArtNet Player X** the program files can be created by the software DMX-Configurator, alternatively TPM2 or TMP2.NET files can also be used.

The current version of the DMX configurator is available as a free download on our website.

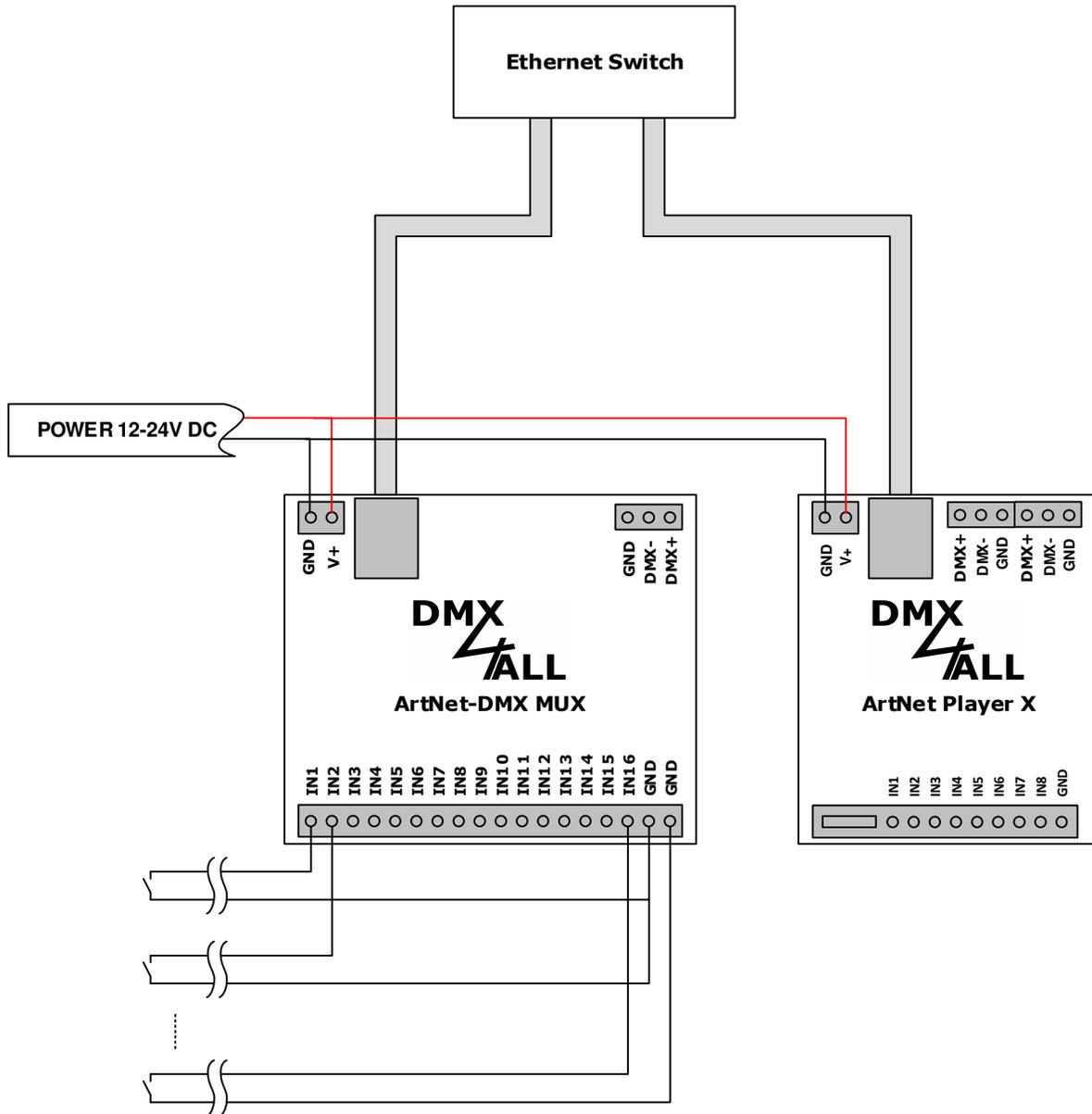
The procedure for creating the programs can be found in the instructions for the DMX configurator.

After the programs have been created, the export must be carried out in the **Project**→**Export**→**ArtNet Player X** menu.

- ➔ See the instructions for the **ArtNet Player X** and the **DMX configurator** for further details

2. Connect ArtNet-Player X with ArtNet-DMX MUX via ethernet cable via an ethernet switch

(Remote via ArtNet)



3. Configure ArtNet-Player X for ArtNet remote (Remote via ArtNet)

The following settings must be made on the **ArtNet Player X** website:

Here in the example, the ArtNet player X is configured to IP 2.0.0.6.

Activate ArtNet Remote and define the target parameters for Net, SubNet and Port. Set Personality to Config 1 (3 Ch.).

The screenshot shows the 'ArtNet Player X16+' web interface. The 'Main Settings' section is expanded, showing the following configurations:

- Device Parameter:** IP Address: 2.0.0.6, Netmask: 255.0.0.0, Gateway: 2.0.0.254, Short Name: ArtNet Player X, Long Name: DMX4ALL ArtNet Player X.
- PowerOn Settings:** Run: Last program, Brightness: Last brightness.
- Remote options:** Source: ArtNet, Personality: Config 1 (3 Ch.), Port / SubNet / Net: 0 / 0 / 1, Channel: 1.
- DMX4ALL Command Options:** Protocol: TCP, Port: 10001.
- Master/Slave Sync:** StandAlone (selected), Master, Slave, SyncDevice-ID: 1, UniverseOffset: 0.
- LED-Indicator:** LED auto off (checkbox).

Arrows from the text above point to the IP Address field and the Remote options section. A 'Save' button is visible at the bottom right of the settings panel.

To control the ArtNet Player X from the ArtNet-DMX MUX, the IP and the ArtNet Remote option must be activated (Source → ArtNet).



Use a different Net setting for the ArtNet-Remote setting in order to avoid a data conflict. (in the example Net = 1)

4. Configure ArtNet-DMX MUX (Remote via ArtNet)

The **ArtNet-DMX MUX** is set to the IP 2.0.0.5.

Under ArtNet Output Parameters the settings for the IP, Net, Subnet and Universe must be set so that they match the remote settings of ArtNet Player X.

→ See also point 3 in this application note

DMX4ALL ArtNet-DMX Mux16

Main Settings

Device Parameter

IP Address: 2.0.0.5

Subnet Mask: 255.0.0.0

Short Name: ArtNet-DMX Mux16

Long Name: DMX4ALL ArtNet-DMX Mux16

ArtNet Output Parameter

Net: 1

SubNet: 0

Universe: 0

Transmit Mode: No Output Broadcast Unicast

Destination IP: 2.0.0.6 ⓘ

Send Data only on change

Save

User Information

The DMX4ALL ArtNet-DMX Mux16 is a multiplexer with 16 digital inputs.

The device send the input values to DMX and ArtNet.

You can give the ArtNet node an own IP address, shortname and longname to differ the node in the network. Please use in ArtNet network the IP address 2.x.x.x or 10.x.x.x

The DMX output allows you to control DMX devices direct with the ArtNet-DMX Mux16.

The destination settings are used to define the ArtNet destination device.

Please set Net always to 0 if you don't use ArtNet3!

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Here in the example the destination IP is 2.0.0.6 corresponding to the IP from **ArtNet-Player X**.



If the option **Send Data only on change** is activated, a data package is sent one time by activation the input to the ArtNet Player X.

If several ArtNet-DMX MUX are used to increase the number of inputs this option must be activated!

For the inputs, **Button** is set as mode and under Parameter for each input is defined which DMX values should be output:

DMX channel 1 corresponds to the program, DMX channel 2 to the speed (here all 255/100%) and DMX channel 3 to the brightness (here all 255/100%).

→ See user manual **ArtNet Player X**

Inputs 1-8:

The screenshot shows the 'ArtNet-DMX Mux16' web interface. The left sidebar is titled 'Input 1-8 Settings' and contains configuration for eight inputs. Each input has a 'Mode' dropdown set to 'Button' and a 'Parameter' field with a value like '1=0,2=255,3=255'. A 'Status Output' checkbox is checked for each. The right sidebar is titled 'User Information' and contains text about input modes and WOL support. At the bottom right, there is a copyright notice: 'Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd © Copyright DMX4ALL GmbH - All rights reserved'. A green 'Save' button is located at the bottom center of the main settings area.

Input	Mode	Parameter	Status Output
Input 1	Button	1=0,2=255,3=255	Checked
Input 2	Button	1=16,2=255,3=255	Checked
Input 3	Button	1=32,2=255,3=255	Checked
Input 4	Button	1=48,2=255,3=255	Checked
Input 5	Button	1=64,2=255,3=255	Checked
Input 6	Button	1=80,2=255,3=255	Checked
Input 7	Button	1=96,2=255,3=255	Checked
Input 8	Button	1=112,2=255,3=255	Checked

Inputs 9-16:

DMX 4ALL ArtNet-DMX Mux16

Input 9-16 Settings

▶ Main ▶ IN 1-8 ▶ **IN 9-16** ▶ Service

User Information

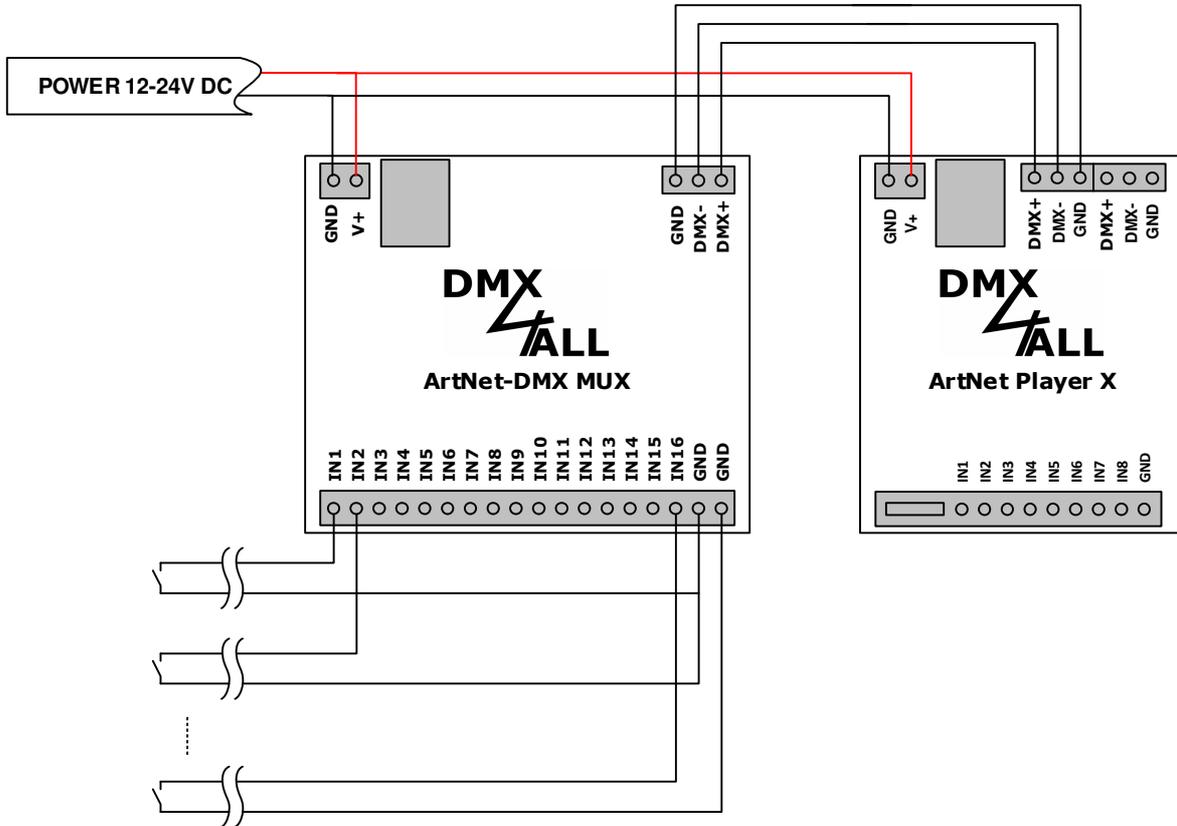
The inputs 9-16 of the ArtNet-DMX Mux16 can be used in different modes.
For each input the mode and channels can set independent from the other inputs.
Use a comma separated channel list with up to 30 chars to select the channels for the given input.
E.g. "1,4,7" to control channel 1 and 4 and 7 with the input.
Use the character = to specify the value for the channels in activated state.
E.g. "1=123" to set channel 1 to value 123 if activated
or "1,4,7=123" to set channel 1 and 4 and 7 to value 123.
Wakeup on LAN (WOL) support.
The BUTTON mode can used for wakeup devices via WOL.
Use "WOL(xx-xx-xx-xx-xx-xx)" to send a WOL packet to the MAC address xx-xx-xx-xx-xx-xx.

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It is possible to enter the parameter input in short form „1=0/255/255“ by entering the DMX values sequential with a / separately.
(Firmware 1.20 or higher necessary)

5. Connect DMX-Player X with ArtNet-DMX MUX per DMX (Remote via DMX)



6. Configure ArtNet-Player X for DMX remote (Remote via DMX)

The following settings must be made on the **ArtNet Player X** website:

Here in the example the ArtNet Player X is configured to the IP 2.0.0.6. This information is necessary but will not be used in the following.

Activate DMX Remote.
Set Personality to Config 1 (3 Ch.).

The screenshot shows the 'Main Settings' page of the ArtNet Player X16+ web interface. The interface is dark blue with white text and a green 'Save' button at the bottom. The 'Device Parameter' section includes fields for IP Address (2.0.0.6), Netmask (255.0.0.0), Gateway (2.0.0.254), Short Name (ArtNet Player X), and Long Name (DMX4ALL ArtNet Player X). The 'PowerOn Settings' section has dropdowns for Run (Last program) and Brightness (Last brightness). The 'Remote options' section has a Source dropdown set to 'DMX', a Personality dropdown set to 'Config 1 (3 Ch.)', and a Channel spinner set to '1'. The 'DMX4ALL Command Options' section has a Protocol dropdown set to 'TCP' and a Port spinner set to '10001'. The 'Master/Slave Sync' section has radio buttons for StandAlone, Master (selected), and Slave, with a SyncDevice-ID spinner set to '1' and a UniverseOffset spinner set to '0'. The 'LED-Indicator' section has a checkbox for 'LED auto off' which is unchecked. A 'Save' button is located at the bottom right of the settings area. The top right of the interface has navigation tabs for Main, Output, DMX, Input, and Service. The bottom right corner contains copyright information: 'Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd © Copyright DMX4ALL GmbH - All rights reserved'.

To control the ArtNet Player X from the ArtNet-DMX MUX via DMX, the DMX Remote option must be activated (Source → DMX).

7. Configure ArtNet-DMX MUX

(Remote via DMX)

The network settings are not used in case of Remote via DMX.

For the inputs, **Button** is set as mode and under Parameter for each input is defined which DMX values should be output:

DMX channel 1 corresponds to the program, DMX channel 2 to the speed (here all 255/100%) and DMX channel 3 to the brightness (here all 255/100%).

→ See user manual **ArtNet Player X**

Inputs 1-8:

The screenshot displays the 'ArtNet-DMX Mux16' configuration interface. The left panel, titled 'Input 1-8 Settings', shows configurations for eight inputs. Each input has a 'Mode' dropdown set to 'Button', a 'Parameter' field with a value (e.g., '1=0,2=255,3=255' for Input 1), and a checked 'Status Output' checkbox. The right panel, titled 'User Information', provides instructions on channel selection and WOL support. At the bottom right, there is a 'Save' button.

Input	Mode	Parameter	Status Output
Input 1	Button	1=0,2=255,3=255	<input checked="" type="checkbox"/>
Input 2	Button	1=16,2=255,3=255	<input checked="" type="checkbox"/>
Input 3	Button	1=32,2=255,3=255	<input checked="" type="checkbox"/>
Input 4	Button	1=48,2=255,3=255	<input checked="" type="checkbox"/>
Input 5	Button	1=64,2=255,3=255	<input checked="" type="checkbox"/>
Input 6	Button	1=80,2=255,3=255	<input checked="" type="checkbox"/>
Input 7	Button	1=96,2=255,3=255	<input checked="" type="checkbox"/>
Input 8	Button	1=112,2=255,3=255	<input checked="" type="checkbox"/>

User Information

The inputs 1-8 of the ArtNet-DMX Mux16 can be used in different modes.
For each input the mode and channels can set independent from the other inputs.
Use a comma separated channel list with up to 30 chars to select the channels for the given input.
E.g. "1,4,7" to control channel 1 and 4 and 7 with the input.
Use the character = to specify the value for the channels in activated state.
E.g. "1=123" to set channel 1 to value 123 if activated
or "1,4,7=123" to set channel 1 and 4 and 7 to value 123.
Wakeup on LAN (WOL) support
The BUTTON mode can used for wakeup devices via WOL.
Use "WOL(xx-xx-xx-xx-xx-xx)" to send a WOL packet to the MAC address xx-xx-xx-xx-xx-xx.

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Input 9-16:

DMX 4ALL ArtNet-DMX Mux16

Input 9-16 Settings

User Information

The inputs 9-16 of the ArtNet-DMX Mux16 can be used in different modes.

For each input the mode and channels can set independent from the other inputs.

Use a comma separated channel list with up to 30 chars to select the channels for the given input.
E.g. "1,4,7" to control channel 1 and 4 and 7 with the input.

Use the character = to specify the value for the channels in activated state.
E.g. "1=123" to set channel 1 to value 123 if activated
or "1,4,7=123" to set channel 1 and 4 and 7 to value 123.

Wakeup on LAN (WOL) support.
The BUTTON mode can used for wakeup devices via WOL.
Use "WOL(xx-xx-xx-xx-xx-xx)" to send a WOL packet to the MAC address xx-xx-xx-xx-xx-xx.

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Input 9: Mode: Button, Parameter: 1=128,2=255,3=255, Status Output:

Input 10: Mode: Button, Parameter: 1=144,2=255,3=255, Status Output:

Input 11: Mode: Button, Parameter: 1=160,2=255,3=255, Status Output:

Input 12: Mode: Button, Parameter: 1=176,2=255,3=255, Status Output:

Input 13: Mode: Button, Parameter: 1=192,2=255,3=255, Status Output:

Input 14: Mode: Button, Parameter: 1=208,2=255,3=255, Status Output:

Input 15: Mode: Button, Parameter: 1=224,2=255,3=255, Status Output:

Input 16: Mode: Button, Parameter: 1=240,2=255,3=255, Status Output:



It is possible to enter the parameter input in short form „1=0/255/255“ by entering the DMX values sequential with a / separately.



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