

# *dmxLAN node2*

## Users Manual



version 08-2002

### **dmxLAN node2**

#### **Introduction:**

The dmxLAN **node2** is a DMX to Ethernet or Ethernet to DMX converter, compatible with the Artnet protocol. The unit can be used PnP (Plug and Play) or in a network mode using a PC for configuration, monitoring and fixture management.

The PC is only used for these functions, not for the regular operation of the unit. A system works fully without a connected PC, all processing like distribution, merging etc. is done inside the **node2**.

The **node2** can be used as a tabletop or trussmount unit. An M10 fixing nut on the bottom and a safety eye is provided for trussmounting.

#### **Connections:**

The **node2** has 2 DMX ports, a 10MB UTP Ethernet connection on Ethercon and a fixed mains lead.

Both ports are optically isolated and hardwarewise prepared for RDM (Remote Device Management)

Ports are terminated with 120 Ohm.

Also available is the option for 'POWER OVER LAN', supplying the **node2** with power via the Ethernet wiring. This will be according to the IEEE802.3 standard. For this feature a powered hub or switch will be required like the powered version of the ELC dmxLAN switch8.

For normal network operation an Ethernet **hub** or preferably a **switch** is required.

A simple 2 unit point to point connection can also be made using a crossover cable between the units.

## Operation:

The type of operation can be set by the dipswitches on the back and the 3 encoders on the front.

**Switch 1 and 2** determine the type of the DMX ports 1 and 2. With the switch in the up position the port functions as an OUTPUT. When the switch is down then the DMX port is hardware configured as an input. In this case a special male/male cable is required. The input is terminated with an internal 120 Ohm resistor

**Switch 3** will set the operating mode: network or plug and play.

With the switch up the unit is in **network** mode. This means that all programming is done externally by a PC, running the dmXLAN control software.

The 3 encoders on the frontpanel will then be used for setting ID number for recognition and preparation in the PC.

With the switch down the unit functions **plug and play**.

The configuration is then done by the encoders on the front.

The encoders select the DMX universe to be used by the DMX ports. The universe numbers are made up of 2 hexadecimal numbers (0-9,A-F). The subnet encoder is the high number for both ports, the 2 other encoders are for the individual ports.

**Switch 4** is only used for firmware upgrades. This switch should always be up.

## Examples:

Dipswitches				Encoders			Description
1	2	3	4	S u b	P 1	P 2	
U	U	U	U	0	0	0	Network mode with no ID (---), both ports are outputs, configuration on the ports is done by the PC
D	U	U	U	0	3	2	Network mode with ID (032), port 1 in set as input, port 2 as output, configuration on the ports is done by the PC
U	U	D	U	2	3	A	PnP mode, port 1 is outputting universe 23, port 2 is outputting universe 2A.
U	D	D	U	4	0	0	PnP mode, port 2 is set as in put and converts the DMX data to the network on universe 40, port 1 is outputting universe 40 (the same data that is coming from port 2

*Please notice that the **dipswitches** are only read at power on, so changing them should be followed by powering the unit off and back on.*

*For normal network mode, all switches should be UP.*

*The **encoder settings** are updated each time 4 seconds after the last change.*

### LED's on the front:

LED	Description
On (green)	On: the unit is up and running
Link (yellow)	Network indicator, Off: no network connection On: network connection OK Blink: data on the network
Recv (yellow)	Off: no data On/Blink: data received to be used (DMX data for in/output or heartbeat)
Port 1 (yellow)	port is output, on → receiving data for the DMX output port is input on → DMX input signal is present and valid
Port 2 (yellow)	See Port 1

### Controlling the unit with the dmXLAN software:

To fully use all the possibilities of the dmXLAN system, please download the latest version of the **dmXLAN control software** from [www.dmxlan.net](http://www.dmxlan.net).

A registration key can be obtained for free by sending an email to [key@dmxlan.net](mailto:key@dmxlan.net).

Required details are your name, company name and email address.

Some functions of the software are:

- monitoring and viewing of all the DMX universes on the network
- monitoring and configuring the nodes on the network
- managing fixtures in the rig.

This is done by isolating the fixtures from the control console.

Example: the technician can takeover the controls of a single fixture or group of fixtures to test, reset, shutdown or disable the light. This can be done without interfering with any of the other fixtures.

**Specifications:**

DMX ports: compliant to DMX512(1990) on 5 pin female XLR connected to an optically isolated transceiver for RDM functionality

Ethernet port: 10BaseT port on RJ45 (Neutrik Ethercon) with provisions for powering per IEEE802.3

DC power: via Ethernet connection 9 to 48 Volt + 9-48V: pin 4 and 5  
common: pin 7 and 8  
Can be dis/enabled via internal jumpers

AC power: Switchable 115 or 230 Volt. Power requirement: < 10 VA

Dimensions: 200 x 150 x 44 mm

Weight : 1,5 kg

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Distributed by:



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