



# AL-DMX-DR1-30w DMX512 universe consolidator with LED driver



## Product Description - AL-DR-1-30w – 30 watts driver with DMX control universe interface

This LED driver with UL listed power supply in a wall mount brick can be installed 100 ft away from the LED fixtures, just one pair of AWG18 wire connect it to up to 30 watts of LED light. Combined with the AL-DMX-Switch it allows new and remodel installation with no licensed electrician required. The AL-DR series has low standby power, and is configurable for 200ma up to 1000 ma LED current requirements. The wide output voltage range of 5 to 50 volts fits the NEC codes for low voltage wiring and allows any LED fixture to be used.

Note – this model has no hot-swap, so please connect all LEDs before turning power on. 300 MA LED fixtures can be connected in serial for 15 watts total power, or 600 ma LEDs can be used for 30 watts. For example, 10, 3 watt LED fixtures in series / parallel can be driven by one device.

Installation is scalable and simple dip switches are used to set up 16 drivers. One or more AL-DMX switches can be used in 2-Way or N-Way configurations for each driver. Advanced programming allows 64 drivers in one DMX universe. 10 AL-DMX switches can be connected to each AL-DR1.

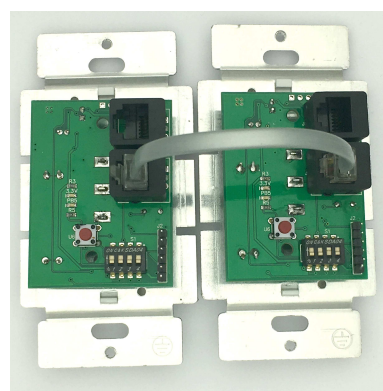
The device consolidates DMX512 with AL-DMX controls. It outputs standard DMX packets. It can receive Standard DMX512, merge the DMX512 packet with the state of the AL-DMX switches, and output a complete DMX512 packet. This allows a DMX console to override the manual switch settings, or manual switches to override console settings.

It supports single switch or N-way light control, with smooth dimming to very low levels. The AL-DMX-Switch operates just like any standard residential light switch – however it uses DMX512 for communication with other devices. It is the easiest to install indoor lighting solution. The AL-DMX-Switch takes power from the any AL series LED driver, up to 1000 ft over standard CAT-3 2 pair telephone wire. The AL-DMX can be daisy chained with up to 8 on one telephone type wire connection. Each one has 16 addresses for controlling 16 AL-Drivers individually.

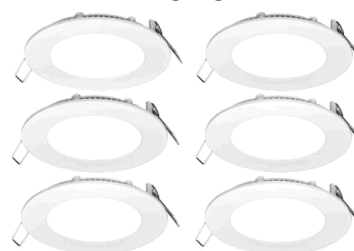
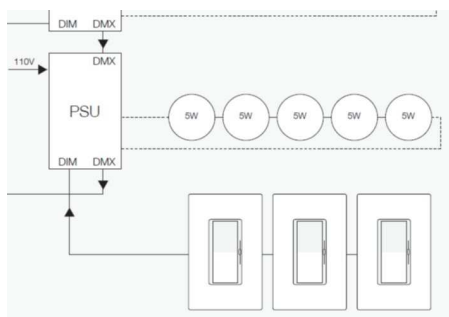
A typical AL-Driver and AL-Dimmer installation allows N-way lighting controls for long hallways or stairways with multiple stories and a switch on each floor.

### Specifications

Power input	100-240 VAC 50/60 Hz class II isolated
Power output	9v to 50 volts 30 watts max
Output current to LED fixture (1)	Programmable from 200 ma to 975 ma
DMX in	4 pin DMX input from next AL-Driver or DMX console
DMX out	4 pin DMX output to next AL-Driver or DMX universe
AL-DMX-Switch connection	One RJ11 for up to 8 AL-DMX-switches
Custom XLR jumper cable	1= Ground, 2= XLR3, 3= XLR2
LED output connector	ideal 30-083
Addressing	512 unit addresses in DMX format
Protection	Reverse, short and static protection No Hot Swap support
Operating Temperature	0°C ~ 50°C
Size	165 x 78 x 42 mm



AL-DMX-Switch back side and gang mode



LED lights

## AL-DMX internal DMX Packet: Special DMX packet header for switching

DMX address	1	2	3	4	5	6	7	DMX	DMX+1
Content	100	DMX bit 8	DMX 0-7	Random H	Random L	Antiloop H	Antiloop L	0 if off else DIM	DIM Level

### AL-DMX Switch interface options:

- See switch data sheet for configurations
- Daisy chain up to 8 switches in series using the RJ11 connector with internal power supply. If the distance between switches is over 2 feet – terminate the last switch furthest from the LED driver with a 120 ohm resistor.
- If an external power supply is used, the USB input connector can be as an input for additional switches

### Native operation – non consolidated:

This mode supports:

- N-Way light control – multiple switches on the same DMX address will be XOR'd to control the light on/off and dimming. Last switch moved sets the dim level and On/Off
- Loop prevention. Packets loop thru up to 12 AL-DRX devices and stop after one loop
- Connect the USB connectors Top to Bottom to form a complete loop
- Connect any loop USB output to a Consolidator to convert the entire loop to Standard DMX

### Consolidated operation:

This mode supports:

- N-Way light control – multiple switches on the same DMX address will be XOR'd to control the light on/off and dimming. Last switch moved sets the dim level and On/Off
- TOP USB connector is data FROM the DRX to the DMZ Universe
- Mode A and B support the ratio of RGB to be programmed by a AL-DMX switch set to RGB mode at address 488
- Output packet is standard DMX512 – do not assign any fixture to address 1 thru 8

## 4 pole Address switch sets Consolidation modes

Address setting	Function	Internal LED Driver	Note
0 thru 11	Non consolidation mode	Internal LED address is 8 thru 96 ( switch +1 ) * 8	Loop up to 12 devices
12	Undefined		
13	DMX mode A – for LP703 type RGB flood	Address 8	On/Off on DMX address Brightness on DMX address +1, +2, +3
14	DMX mode B	Address 8	On/Off on DMX address Brightness on DMX address +5, +6, +7
15	DMX mode C sequential – for Chinly 12 channel DMX	Address 8	AL-DMX switch address is divided by 8, plus 7. Therefore DMX channels 8 thru 512 are supported.

## Operation with a DMX console

Connect the DMX console to the input connector on the AL-DR-1-30w – you will need a XLR to USB cable – contact us for this cable if you prefer, otherwise it is easy to make

Connect one or more AL-DMX-Switches to the RJ11 switch input – these are powered by the AL-DR-1

Connect our DMX output to your DMX universe via a USB to XLR cable.

- DMX console packets will flow thru
- Control from our AL-DMX switches will be merged with the Console packets
- Set DMX channel 1 thru 8 to zero.

In the case of address conflict – the output will be a OR function of the Console setting with the DMX switch setting. Therefore, the brighter of the two will be the brightness of the DMX device at that address.

## USB connector pinout

TOP USB connector is data FROM the DR1 to the DMZ Universe

BOTTOM USB Connector is data from a 2<sup>nd</sup> chain of AL-DMX switches. External power is required if this is used.



Pinout of Male USB connector