# DMX DECODER

## DIM-DMX1CH(N)
## DMX decoder for LED strip

### Product Description

The Teucer 4 channel DMX decoder can control single colour, tunable white, RGB and RGBW LED Strip. The product is equipped with a digital display allowing users to set manual or automatic signal addresses.
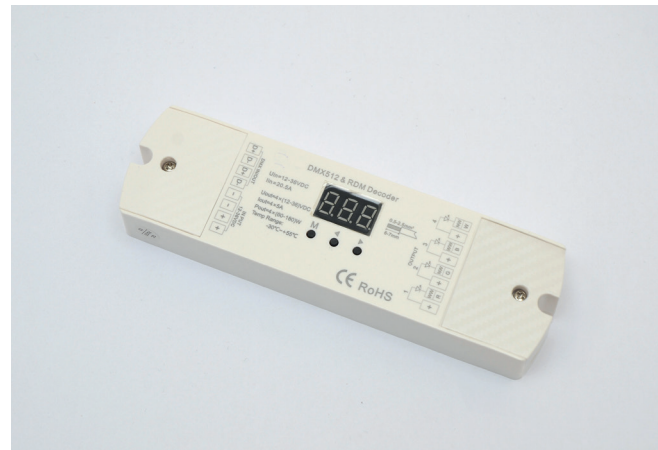
### Features

* 1/2/4 DMX channels.
* DMX512 compliant control interface, DMX address can-be set freely and shown on the digital numeric display
* Control single colour, tunable white, RGB and RGB/W LED Lighting..
* Smooth PWM dimming.
* Can work as a standalone RGB/W controller with 30 dynamic modes, adjustable speed and brightness.

### Technical Specification

| Receiver | |
|---|---|
| Order Code | DIM-DMX1CH(N) |
| Type | DMX decoder |
| Input Voltage | 12-24VDC |
| Current | 4x5A |
| Output | 4x(60-120)W |
| Note | Constant voltage |
| Dimension | 50x170x23mm (WxLxH) |

### Recommendation

DMX is a standard protocol for digital communication which allows control of DMX devices / lighting from a compatible DMX controller. We recommend using the WP-DMX controller when controlling all lighting as a single zone. Please note that without an ON signal from a controller the DIM-DMX1CH(N) will not switch on the connected LED strips.
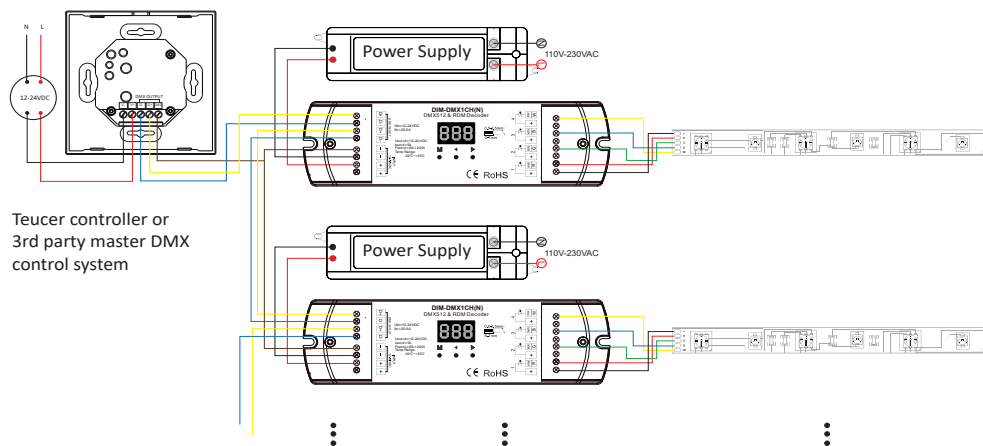
* When expanding your lighting always try and use a signal repeater (PR-RGB(N)) where possible.
* If using DMX over 55mtrs it is recommended to use DIM-DMXAMP (amplifier) for longer distances.
* Can be used with DMX control systems

### Safety

* Products must be installed and serviced by qualified electrician.
* Please ensure the receiver is mounted in a water proof enclosure if installed in an outdoor environment, avoiding metallic enclosures.
* Always ensure products are mounted in areas with adequate ventilation to avoid overheating.
* Please ensure outputs of any power suppliers used in conjuction with this product comply with its working voltage.
* Never install product whilst connected to power and double check connections before switching on to avoid short circuits.

### Warranty

Should this product fail during the 3 year warranty period it will be replaced free of charge, subject to the correct installation of the original product in accordance with applicable and appropriate electrical codes and instructions provided by Teucer, as well as subsequent return of the faulty unit. Teucer does not accept responsibility for any installation costs associated with the replacement of this product and Teucer reserves the right to alter specifications without prior notice. Teucer can offer 5 year warranty upon request. For further information, please see our Terms and Conditions. www.teucerled.co.uk/terms-and-conditions/

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### Decoder wiring diagram



When wiring the decoders, it is important to make sure the total wattage of the LED strips does not exceed the maximum rated wattage per channel of the decoder. Each chanel is rated at 5A, so the maximum wattage per channel is 24x5A=120w.

The power supply has to match the rated voltage and be superior to the total LED strip wattage by a remcommended 10%.
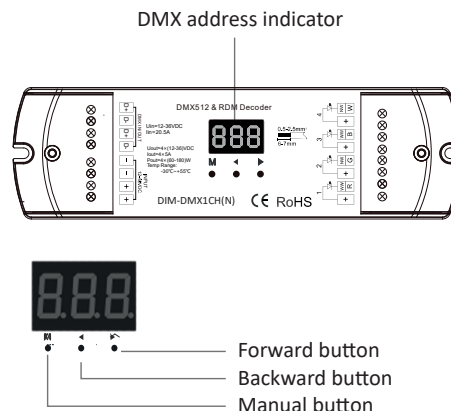
### System parameter setting

Press the M button and ◄(backwards button) together for 2s. This will enable initial system parameter setup.
To scroll through each of the 4 parameters below short press the M button each time:

- Parameter 1) Decoder mode: This is set to D-4 (4 channel) output as standard and can be changed to, D-1 (1 Channel), D-2 (2 Channel) or D-4 (4 channel) output by pressing the backwards and forwards scroll button.
- Parameter 2) Output PWM frequency: Short press◄ or ►buttons to switch between 500Hz("F-L") or 2KHz("F-H").
- Parameter 3) Output Brightness Curve and Automatic blank screen: Short press ◄ or ► buttons to switch between linear curve("C-L") or logarithmic curve ("C-E").
- Parameter 4) Automatic blank screen: Short press◄ or ►buttons to switch enable ("bon") or disable("boF") automatic blank screen.

*Note  On "bon" mode the screen will go blank after 10 seconds. To activate the screen short press any button.

Finally: To exit the Parameter settings long press the M button for 2s or timeout will trigger after 10s of inactivity to quit system parameter settings.



DMX address indicator

Forward button
Backward button
Manual button

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Teucer
LED

*Brighter for longer*

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### DMX Mode

- Short press the M button, until the address numbering 001~999 is displayed to enter DMX mode

- Press ◄ or ► buttons to change the DMX decoder address (001~999), long press for fast adjustment.

**001**

DMX mode
(001-999)

### Stand-alone RGB/RGBW mode

**(Follow these instructions only if the decoder is used as a standalone product)**

- Short press the M button and this will display P01~P30 (programme 1-30), which is a stand-alone RGB/RGBW mode
- Press ◄ or ► buttons to change to the desired dynamic mode programme number(P01~P30).

**P01**

Stand - alone RGB/RGBW mode
(P01~P030)

- Each mode enables adjustment of speed and brightness.
- Long press M button for 2s, prepare for setup mode speed, brightness and W channel brightness adjustments.
- Short press M button to switch between the three parameters.
- Press ◄ or ► button to setup value of each item.

    Parameter 1) Speed Mode : 1-10 level speed adjustment( S-1,  S-9, S-F).
    Parameter 2) Brightness Mode : 1-10 level brightness (b-1, b-9, b-F).
    Parameter 3) W channel brightness: 0-255 level brightness (400-4FF).

**S-8**  **b-F**

Speed    Brightness
(8 levels)    (10 levels, 100%)

### Stand – alone Dimmer mode

- Short press the M button until the display shows L-1~L-8 (Level 1-8), which is the stand-alone dimmer mode.
- Press ◄ or ► buttons to change dimmer mode number(L-1~L-8).
- Each dimmer mode enables adjustment of each channel brightness independently.
- Long press M button for 2s, prepare for setup of the four channels brightness.
- Short press M button to switch between the four channels.
- Press ◄ or ► button to setup brightness value of each channel.
- Once selection is confirmed long press M button for 2s to quit settings or alternatively timeout is set to 10 seconds.

**L-1**

Stand-alone
dimmer mode
(L-1 ~L-8)

### Restore factory default parameter

- Long press ◄ and ►key for 2s, restore factory default parameter, display"RES".
- These are the factory default parameters: DMX decoder mode, DMX first address is 001, four channel decoder, high frequency PWM output, logarithmic brightness curve, RGB mode number is 1, dimmer mode number is 1, automatic blank screen is disabled.

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LED

Brighter for longer

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### RGB change mode list

| No | Name | No | Name | No | Name |
|----|------|----|------|----|------|
| P01 | Static red | P11 | Green strobe | P21 | Red yellow smooth |
| P02 | Static green | P12 | Blue strobe | P22 | Green cyan smooth |
| P03 | Static blue | P13 | White strobe | P23 | Blue purple smooth |
| P04 | Static yellow | P14 | RGB strobe | P24 | Blue white smooth |
| P05 | Static cyan | P15 | 7 colour strobe | P25 | RGB+W smooth |
| P06 | Static purple | P16 | Red fade in and out | P26 | RGBW smooth |
| P07 | Static white | P17 | Green fade in and out | P27 | RGBY smooth |
| P08 | RGB jump | P18 | Blue fade in and out | P28 | Yellow cyan purple smooth |
| P09 | 7 colour jump | P19 | White fade in and out | P29 | RGB smooth |
| P10 | Red strobe | P20 | RGBW fade in and out | P30 | 6 colour smooth |

### Troubleshoot

| Problem | Cause | Corrective |
|---------|-------|------------|
| No light | • No power. <br> • Wrong connection or unsecure connection. | • Check the power. <br> • Check the connection. |
| Wrong Colour | • Wrong connection of tunable, RGB/W wires. | • Retrace and reconnect tunable, RGB/W wires. |
| Uneven intensity between front and rear of the strip, with voltage drop | • Output cable is too long. <br> • Cable diameter is too small. <br> • Overload beyond driver capability. <br> • Overload beyond receiver capability. | • Reduce cable or loop supply. <br> • Change to a thicker cable. <br> • Replace with a suitable higher power driver. <br> • Add a power repeater. |

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