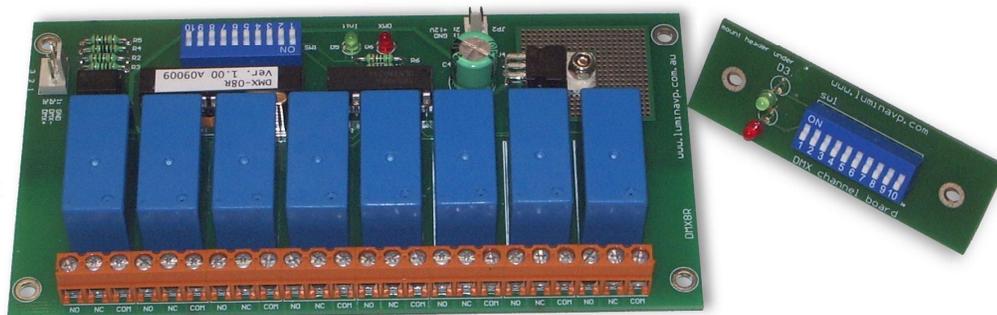


DMX08R

DMX512 – 8 x 10A SPDT Relay Board

User's Manual

Rev 1.0



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APPLICATION

The DMX08R provides a compact and simple means for the conversion of a DMX512 stream into 8 discrete switched relay outputs. The DMX08R provides for two modes of operation:

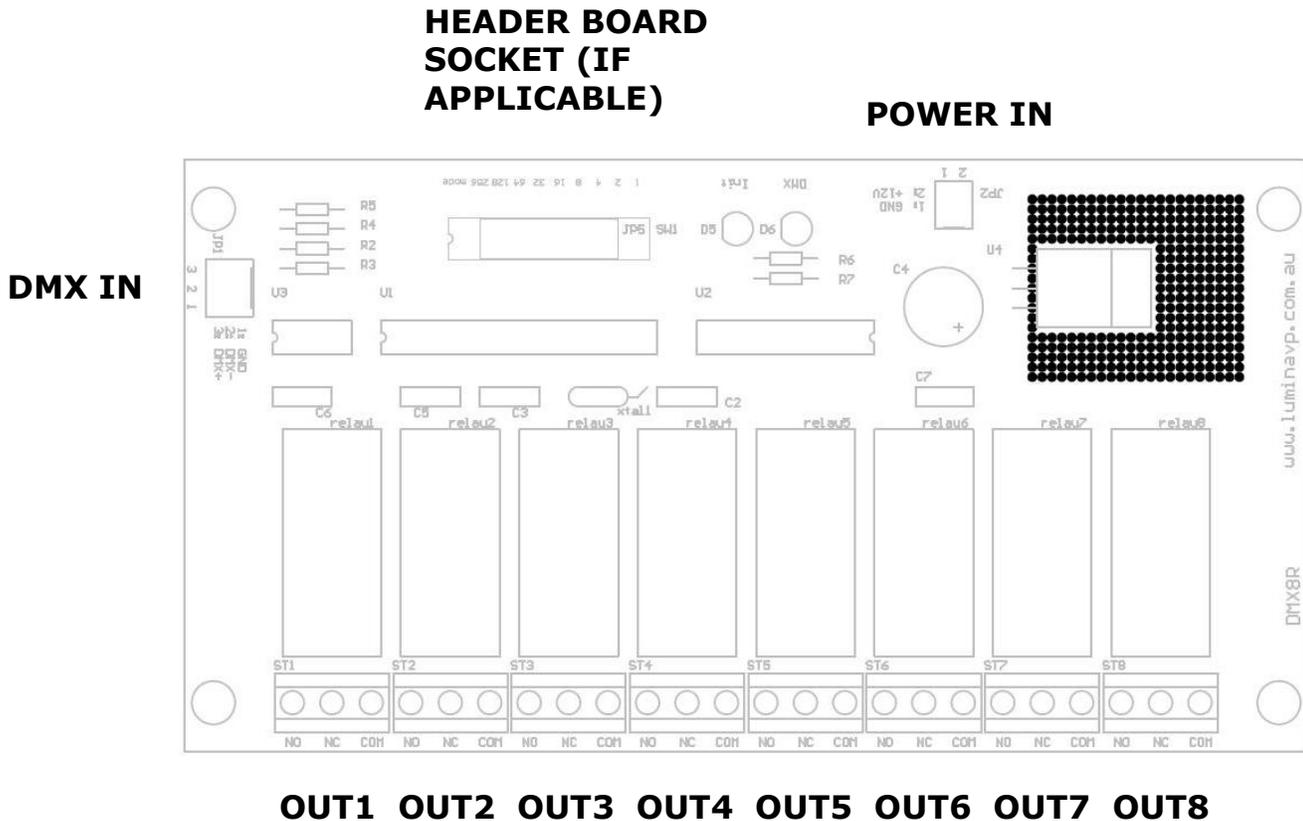
1. Fail-safe mode: If loss of DMX512 is detected, all outputs will fail to their 'off state', until DMX512 is restored.
2. Fail-hold mode: If loss of DMX512 is detected, all outputs will hold their previous state.

If being used as part of a laser show setup, it may be desirable to use the DMX08R in Fail-safe mode. The detection window for loss of DMX512 is approximately 150ms. This was set at 150ms to allow for a wider variety of DMX512 controllers to be used. If your application requires a shorter detection window, we can re-flash the microprocessor to provide for this.

The DMX08R ships to recognize a start code of '0' as being valid. If you wish to use this device with a start code of something other than '0', please advise us as we can also re-flash the microprocessor to provide for this.

CONNECTIONS

The DMX08R has 3 headers for interfacing to your equipment. These are as follows:



HEADER BOARD

The DMX08R can be ordered with a separate board that plugs into the relay board via a flat IDC cable. This board is pictured on the front page, and holds the DIP switch, and status LEDs

Power Input

The DMX08R requires a DC supply of +12v. Its current draw is less than 700ma when fully driven. The power is connected as follows:

Pin 1: Ground
Pin 2: +12v

DMX512 In

The DMX08R receives DMX512 via this header. It is wired as follows:

Pin 1: Ground
Pin 2: Cold (Signal -ve)
Pin 3: Hot (Signal +ve)

This connector shares the same pin out as the DMX512 jack for easy reference.

Relay Outputs

The DMX08R has eight 3 way screw type terminal block connectors to interface to your equipment. These are directly connected to the dry contacts of the respective relays.

Pin 1: Normally Open (NO)
Pin 2: Normally Closed (NC)
Pin 3: Common (COM)

Outputs are arranged so that the channel set by the DIP switch is the left most output, the relay to the right is the next channel, and so on.

Note:

Whilst the relays used in the DMX08R can switch 10A @ 240VAC, you must be certain that in using the DMX08R to switch mains voltages you are complying with the relevant local laws and regulations in your region.

INDICATORS

The DMX08R provides two LED indicators that highlight normal operation:

Green (Board power): This LED lights to indicate the board has power.

Red (DMX State): This LED indicates the state of the DMX input.

- With no DMX present, the LED flashes about once per second.
- When the board is receiving valid DMX packets, the LED flashes at a much faster rate, many times per second.
- The LED will stay on whilst data is updating on channels within the range set by the DIP switches

If a valid DMX512 stream is not sensed after a period of $\sim 150\text{ms}$, the LED will revert to a slow 1 second flash, and the device will fail to the mode set by DIP Switch 10.

DIP SWITCHES/JUMPERS

Channel & Fail mode Select

10 DIP switches are provided to adjust settings. Switches 1 through 9 are used to set the offset/starting DMX512 address. Switch 10 is used to set the fail-mode. With the switch set to the on position, the board will be in fail safe mode, and loss of DMX will drop all outputs to the off state.

Note: Switch 1 has no effect unless it is used in conjunction with other switches. Ie, if switches 2 through 9 are off, the DMX08R will receive on channel 1 through 8 regardless of the position of switch 1.