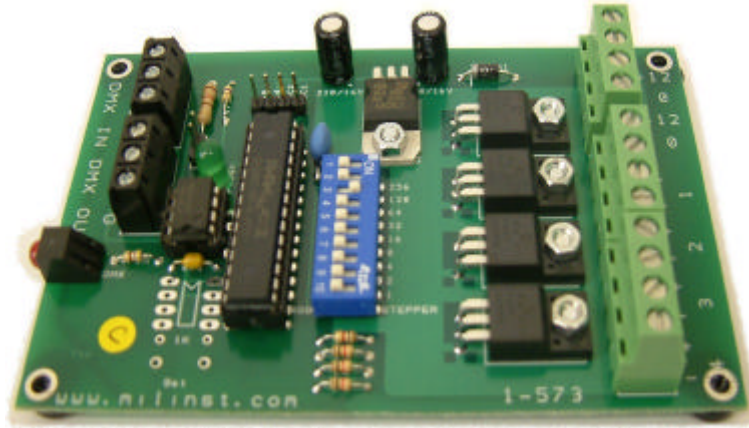# MILFORD INSTRUMENTS Limited

DMX- 4 Channel LED Driver Board, Part # 1-573

The DMX-LED driver board allows up to 4 LED arrays to be driven and controlled directly from a DMX512 network. The board provides 4 output channels of Linear or Phased PWM running at 2kHz.
The base address may be set anywhere between 1 and 509.

Connections:

DMX : Dual 3-pin terminal connections

Power: Dual Ganged Terminal connections 0/12V, Board power requirements are 9-12V DC at 0.5 Amps + LEDs load current: Maximum 8 amps if using terminal connectors as Figure 1

Outputs: 4 +/- voltage outputs via screw terminals at up to 5 amps per channel @ 24 Vdc if wired as Figure 2

Command Syntax:

The DMX-PWM board may be set to operate in **Linear PWM mode** (DIP switch #10 set to OFF/RGB) or **Phased output mode** (DIP switch #10 set to ON/Stepper)

LED Linear PWM mode: *All outputs are triggered at the same time*
LED Phased PWM Mode: *Outputs are triggered at 128us intervals*

The value in the base address channel controls the PWM stream on channel 1 a DMX value of 0 will switch the load permanently OFF and a value of 255 will switch the load permanently ON. 128 will generate a 50% duty PWM signal running at 2kHz. The resolution of the PWM stream is 8-bit.
The value of the base address+1 channel controls output channel 2 etc
The PWM signal is suspended if a valid DMX signal is not being received.

Base Address Selection:
The base address may be set between 1 and 509 using the DIP switches. Calculate the setting by adding the value of the switches that are set to the ON position.
The Base Address is continuously read.
The Base address may be set between 1 and 509
Addresses greater than 509 are treated as being 509
Address 0 is treated as being 1.

Outputs:
The 4 output channels are rated at 5 Amps/ 24VDC and are arranged as open collector devices.

Connections:
The LEDs should be wired in common anode format to the "**+**" input and the cathodes routed via a suitable current limiting resistor to the relevant "**-**" input on the board **Figure 1**.
N.B. Max 2 amps per channel @ 12Vdc, If LED strings require 24Vdc or >2 amps per channel connect as Figure 2.

Indicators:
Power LED
Correct power applied
DMX Status LED
Valid DMX signal being received- solid red LED. No DMX signal, flashing red LED.

Mechanical:
PCB size: 112mmx70mm.

Connection Diagrams:
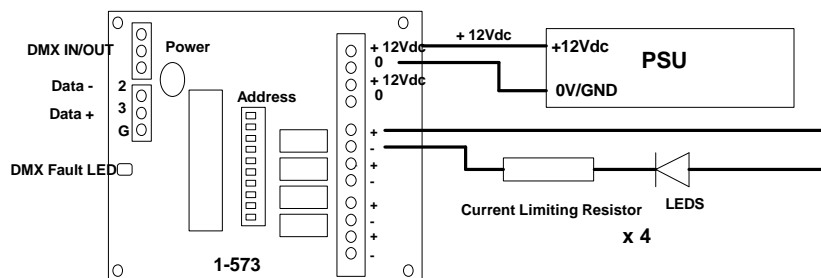
Figure 1: 4 x LED Strips 12V Dc @ 2 Amps Per Channel Max

Figure 2: 4 x LED Strips 12/24V Dc @ 5 Amps per Channel Max