

LightSync DMX Driver Module Installation and Configuration

Overview

The LightSync DMX Driver Module is designed to drive DMX512 levels from a LightLEEDer lighting controller using RS-485 communications. Each LS DMX Driver Module is capable of controlling up to 64 channels per module, per panel in the LightLEEDer system. Each dimming output channel can be mapped to control from 1 to all of the 512 DMX channels. This module connects to the local LightSync port on the LightLEEDer controller and can be mounted in the panel or remotely. The DMX output control channels are controlled from 0 – 100% using the dimming controls in the lighting controller. Figure 1 shows the module.

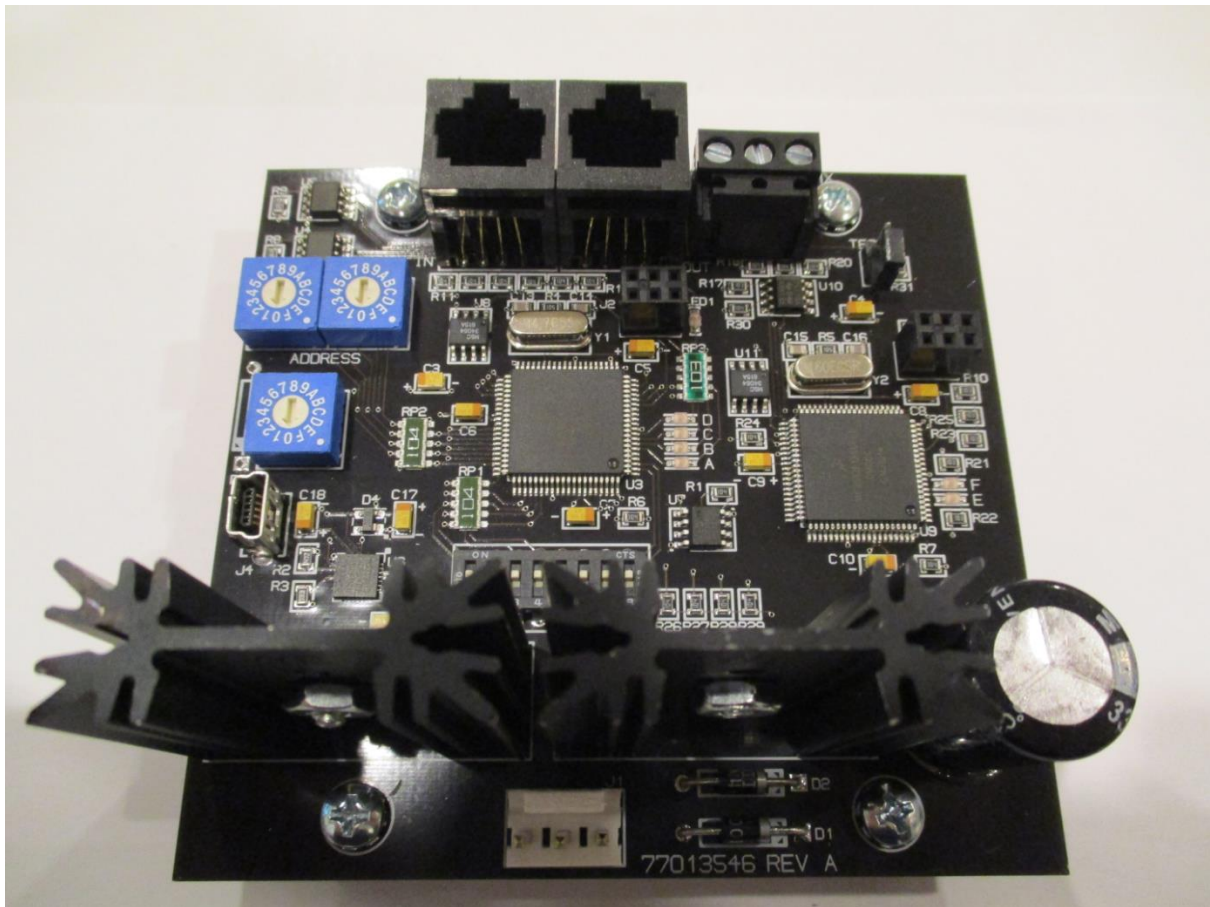


Figure 1 DMX Driver Module

Panel Installation:

- Mount the module on top of one of the output board's standoffs. Fasten the module using the 4 - #6 machine screws provided with the unit. Preferably, the unit should be mounted towards the top, as power is required from the transformer.

Remote Installation:

- Remove the back-plate from the module.
- Install the back-plate in the remote location using the 4 holes provided.
- Mount the module to the back-plate standoffs. Fasten it using the 4 - #6 machine screws provided with the unit.

Wiring the Module and Data Line:

- Run a CAT5 cable from the lighting controller local LightSync port to the LS DMX Module and install RJ45 connectors onto each end.
- Test the cable with a CAT5 tester to 568B standards.
- Terminate to the Local Port on the LightLEEDer lighting controller and the IN port on the LS DMX module (J5) as shown in Figure 2. Note: Data line can be run to the next LightSync device from the OUT port (J6).

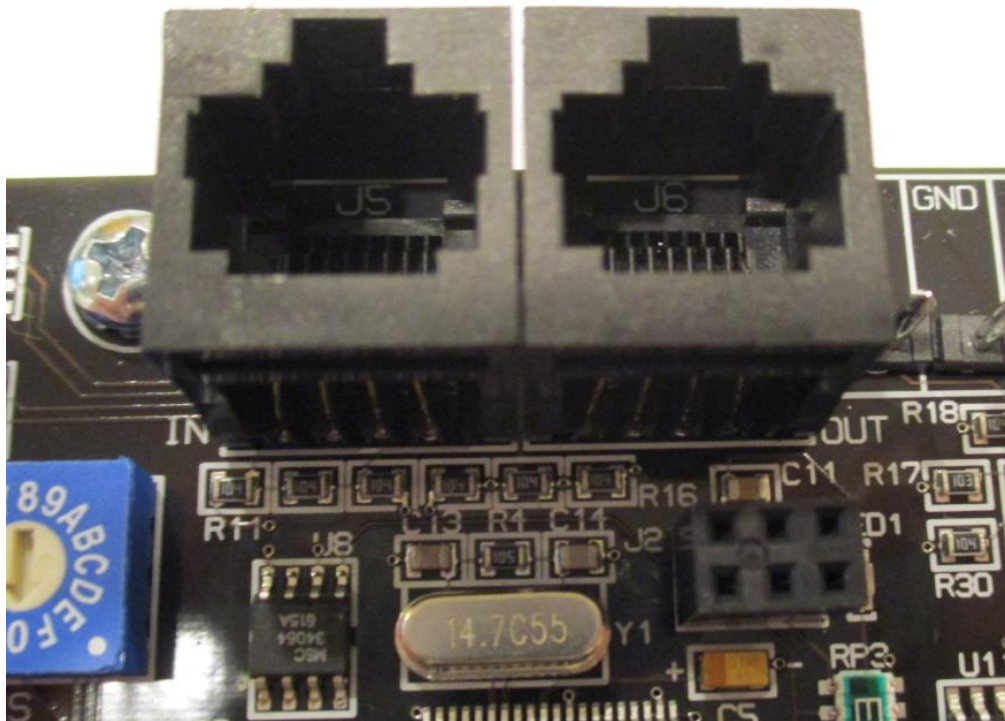


Figure 2 Data Line IN (J5)/OUT (J6) Connection

- Connect the power from the panels Power Distribution Board using the cable provided to the power connector on the module as shown in Figure 3 and 4. Note: If needed, the cable can be extended with 16AWG stranded to reach the module. A separate 24VAC CT transformer may be used if desired.

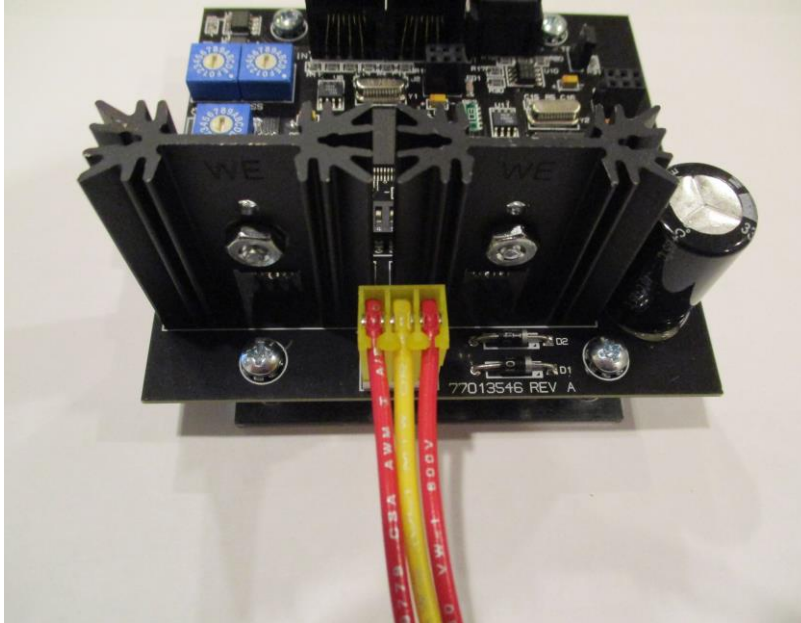


Figure 3 Power Connection

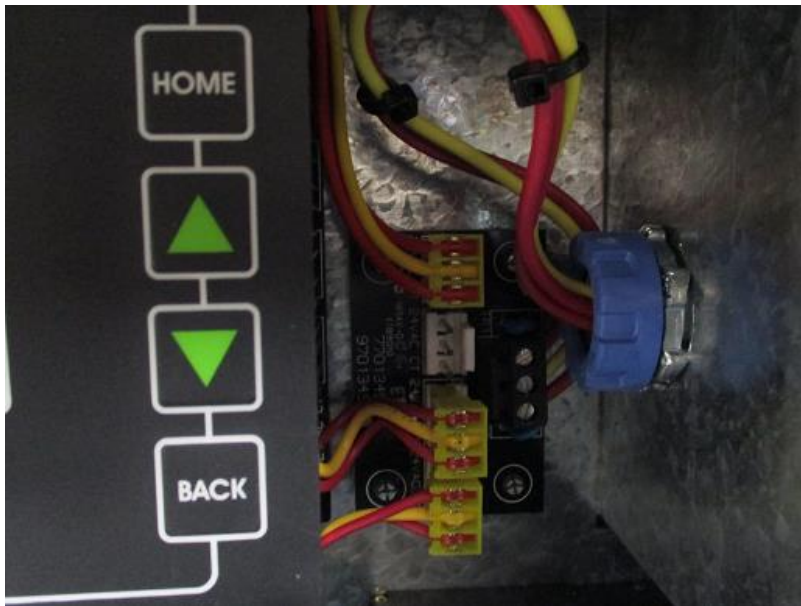


Figure 4 Power Distribution Board

- The DMX512 RS485 connection is located in the upper right hand corner of the board. Terminate to the screw connector provided with the polarity shown in Figure 5 (Removable screw connector not shown). Terminate the shield to the GND if not connected to a ground on the other end of the cable. **Note: Terminate the shield to ground only on one end of the cable.**
- If the data line needs a terminating resistor on this end, jump the TERM header with the shunt provided.



Figure 5 DMX termination

Configuration Settings

Overview: The LS DMX Driver Module is capable of controlling up to 64 channels per unit. The module is capable of controlling the 64 channels 1 to 1 to the DMX channels 1 through 64. It is also programmable for each channel to control any of the 512 DMX channels using proprietary software. The hardware needs to be configured for the LS dimmer output starting address, range of the module DMX channels, set for fixed or programmable control, and set for the default DMX value at power-up of the module. See Figure 5 and 6.

Address Switch: The address switch sets the base (dimming output starting address) address for this module. If this is set to address 02 as shown in Figure 6, the first LS dimming device address will be 02.

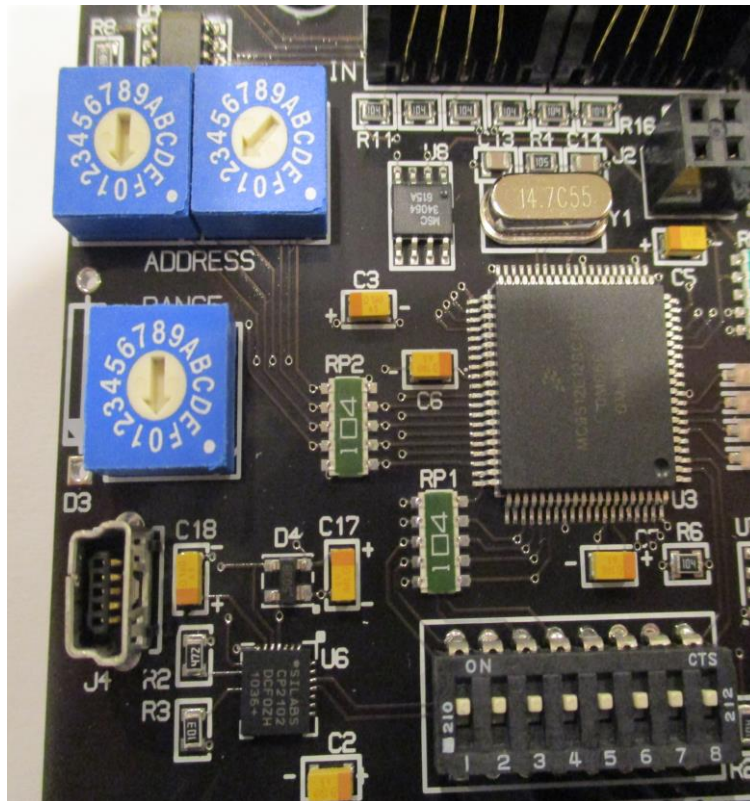


Figure 6 Configuration Switches

Range: The range of the LS DMX module can set using the rotary switch directly below the address switch. For each setting, 4 channels are enabled. See Table 1

Setting	Channels
0	4
1	8
2	12
3	16
4	20
5	24
6	28
7	32
8	36
9	40
A	44
B	48
C	52
D	56
E	60
F	64

Table 1 Range Settings

DIP Switch Configuration:

Note: DIP switches are moved to the up position to turn ON, and down to turn OFF. Default setting is 1-8 OFF.

Switch 1: Set to OFF, the module is automatically mapped 1 to 1 for up to 64 channels. Set to ON sets it for a software mapping (must be configured and downloaded to the module using the ILC LightLEEDer DMX Output Map Software).

Switch 2 & 3: Not used.

Switch 4 & 5: Both DIP switches set to OFF, sends all of the 512 DMX channels to a value of 0% when the DMX module is powered up. Both set to ON sends all of the 512 DMX channels to a value of 100% when the DMX module is powered up. **Note: The power-up settings for the dimmer output channels are set from the LightLEEDer panel. The default setting for each output is 100%. This power-up setting is used to set the remaining channels to 0 or 100% if needed.**

Switch 6 – 8: Not used.

Status LEDs:

LED 1: This LED indicates the 5VDC power supply is active or ON.

LED A: Cycles at power-up, indicates receiving data from LS data line.

LED B: Cycles at power-up, indicates transmit data from LS data line.

LED C: This LED will blink to indicate U3 processor is running.

LED D: This LED should not be ON, if ON after a download, cycle module power.

LED E: Cycles at power-up, indicates DMX transmission.

LED F: Cycles at power-up, and not used after power-up.