DMX Single Motor Controller

v3102x

Silovsky Studios 2022

Ryan Holsopple

ryan.local@gmail.com

DMX Single Motor Control Instructions v3102x

Controller direction and speed works with two channels of DMX-512
Available Channels 1-511

Logic controller on V3102x powered by Motor Input Power Supply.
12-24 VDC

Fuse According to your Motor's Rated Current
Do NOT exeed 13 Amps of Continuous Draw.

DMX ADDRESSING: This Motor driver uses 2 Channels of DMX (1-511)
Use DIP Switches on Box to choose your DMX START address.
UP==ON

Adjust DIP Switch DMX Address with POWER OFF
Once set, this DMX address will be initiated & retained after a power cycle.

DMX DIP Switch Calculator
https://www.laserworld.com/en/laserworld-toolbox/dmx-address-setting.html

DMX values are represented as 0-255 (NOT percent)

Set START address to: < 50 == MOTOR DISABLED (Blue LED Blinks Fast)
Set START address to: > 50 && < 127 == MOTOR ENABLED ROTATES CW
Set START address to: > 127 == MOTOR ENABLED ROTATES CCW

Use the NEXT channel after Start address to control Speed of Motor (most motors begin rotation about 10% power DMX 25)

EXAMPLE Programming:
 Light cue to move the motor Clock Wise (CW) at full speed.

The Controller Box set to DMX Channel 9 as the start address.

Ch9 @ 20 Ch10 @ 255

Light cue to turn off motor.

The Controller Box set to DMX Channel 9 as the start address.
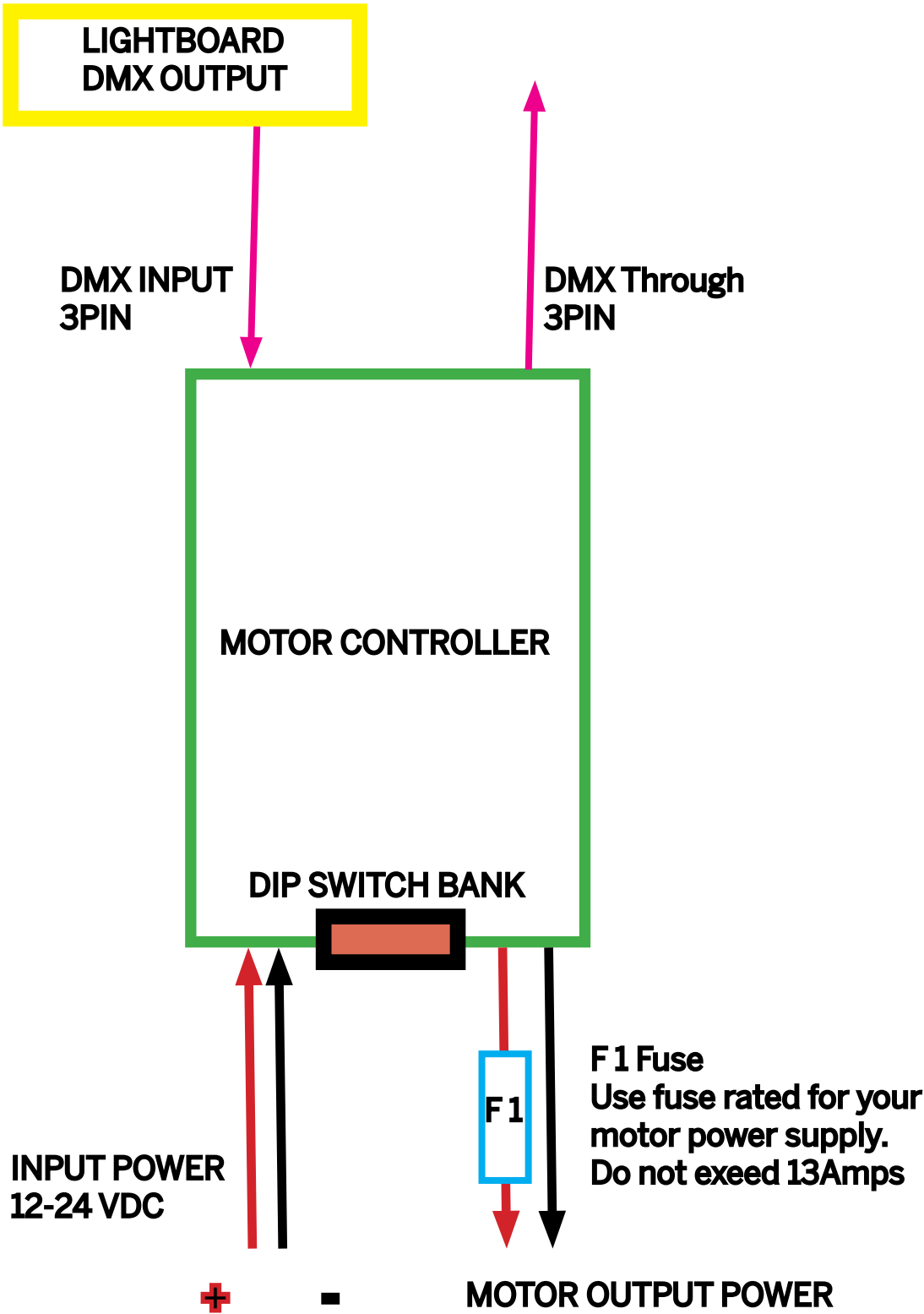
Ch9 @ 0 Ch10 @ 0

LED Blink Logic:
External Blue LED Indicator.
Blinking rapidly = Motor Disabled & waiting for DMX
Steady ON = Motor ENABLED and Working Properly

Internal LED (seen through top air vents) Blinks on startup and if FAULT with Motor Driver

Wiring and Hook Up Guide

LIGHTBOARD DMX OUTPUT

DMX INPUT 3PIN

DMX Through 3PIN

MOTOR CONTROLLER

DIP SWITCH BANK

INPUT POWER 12-24 VDC

+   **-**

F 1

F 1 Fuse
Use fuse rated for your motor power supply.
Do not exeed 13Amps

MOTOR OUTPUT POWER

**DMX INPUT AND THROUGH 3 PIN SOCKETS
INPUT ON THE RIGHT IN THE PICTURE ABOVE
DIRECTIONS MARKED ON BOX.**

**NOTE: ON CONTROLLER VERSION
V3102A&B USB AND POWER JACKS ARE NOT IN USE.**

DIP SWITCH DMX ADDRESSING, EXAMPLE OF START ADDRESS 3
CHANGE DMX ADDRESS WITH POWER OFF

POWER SUPPLY IN AND OUT LINES
INLINE FUSED MOTOR OUTPUT

Components

Motor Drivers

V3102A Pololu G2 High-Power Motor Driver 24v13.
https://www.pololu.com/product/2992

V3102B Pololu G2 High-Power Motor Driver 24v21
https://www.pololu.com/product/2995

Pololu 6V, 1A Step-Down Voltage Regulator D24V10F6
https://www.pololu.com/product/2832

Libraries:
photodude G2 library
https://github.com/photodude/G2MotorDriver

DMXSerial
https://www.mathertel.de/Arduino/DMXSerial.aspx

MCP23017
https://github.com/blemasle/arduino-mcp23017