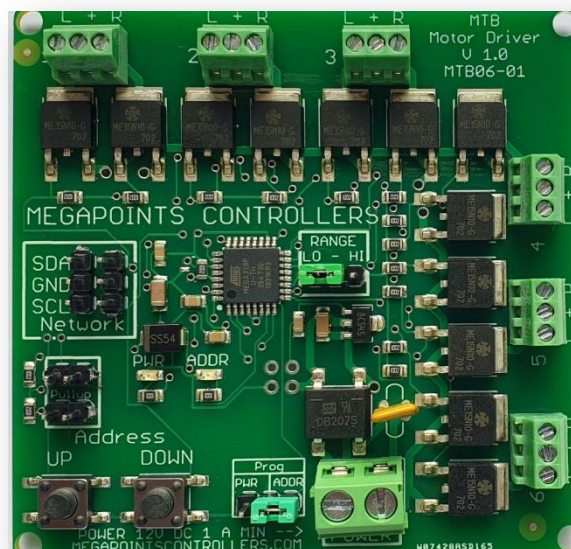


MTB turnout motor driver board by MegaPoints Controllers

A driver for MTB turnout motors.



User guide

Revision 1 – Draft SEP 2020

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MTB driver Board

Introduction

The intelligent MTB driver board is capable of driving up to six MTB turnout motors used for points or turnouts.

The driver board is designed to be installed on the layout in the vicinity of the turnout motors and controlled either directly by our DCC module or MultiPanel Processor via the network connector.

The MTB driver board includes a short network cable suitable for testing or extending by the user.

The solenoid board also has an adjustable power setting.

MegaPoints Controllers use static sensitive components that must be handled with care.

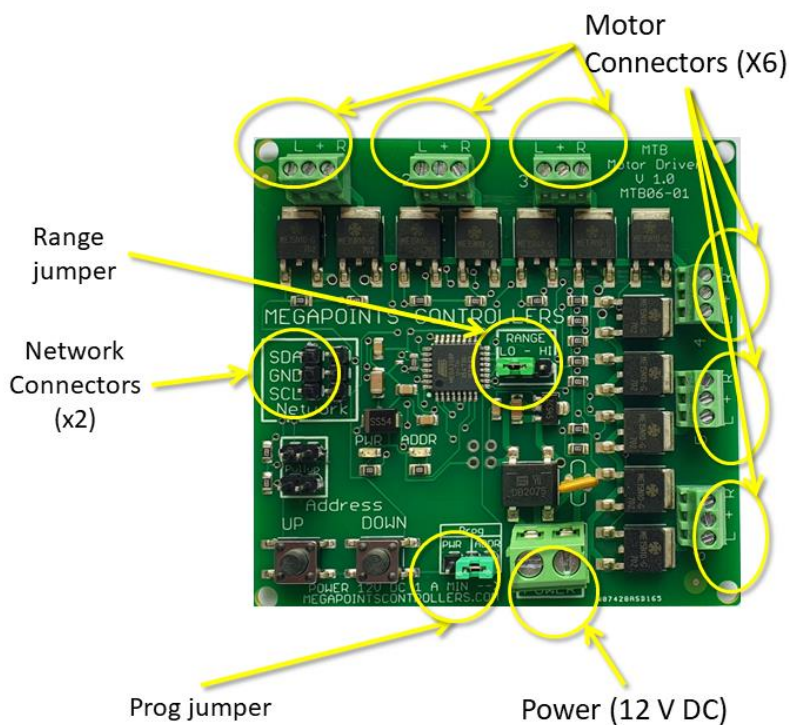
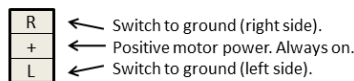
Avoid touching any components or the circuit printed on the bottom of the board.

Avoid placing the board on any metallic surfaces including track.

Hooking up

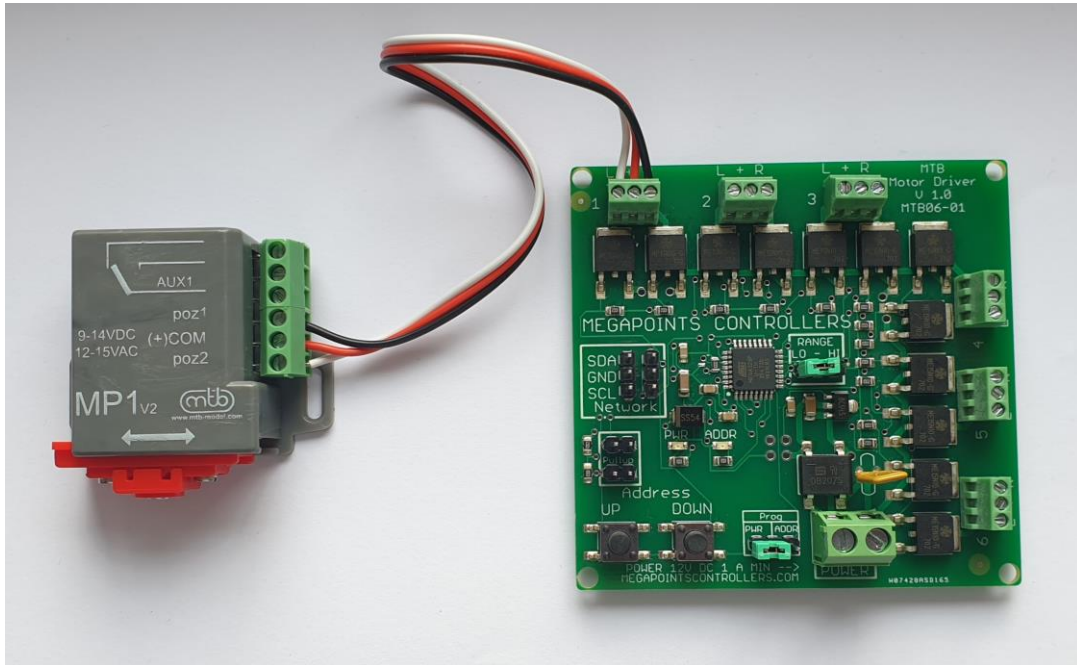
See the image below for details.

MTB Motor Driver Output Terminal



Power should be from a minimum 1 Amp DC power supply or transformer at 12 volts. The power terminals (located at the bottom) are not polarity sensitive.

Each MTB motor is connected to one of the six three way screw terminals located around the upper and right edge. Take care not to overtighten.



The solenoid terminals are labelled L-+R where L & R connect poz1 and poz2 motor terminals and C connects to the (+) COM motor terminal.

Network

Two network connectors are located within the “Network” bounded box. Ensure SDA connects to SDA on all network connections. Also note that all network devices must be powered up for the network to function.

Pullup terminals are provided for completeness and are activated by installing a pair of jumpers. These are supplied on two boards when purchased as part of a MultiPanel Starter kit Solenoid edition.

Jumpers

Prog ADDR jumper

The “Prog” jumper can be connected to the right side “ADDR”. This activates the Address buttons to change the board address from 2 – 17. By default the board is shipped at address #2 to work directly with a DCC module or the first 12 outputs from a MultiPanel processor.

Pressing either the UP or DOWN buttons will increment or decrement the address between the range 2 - 17. The address is flashed out on the ADDR LED.

Range jumper

Each network address decodes signals for up to 12 devices (*see the Servo Controller for an example*), however the solenoid board has connections for up to six solenoids. The range jumper allows you to

select the first or second six for any network address by placing the jumper in the “LO” or “HI” positions.

For example, to control up to 12 solenoids using channels 1-12 on a MultiPanel configure the first board on the “LO” range and the second board on the “HI” range. Both boards should use the default network address of #2.

Prog PWR jumper

There are five selectable switch pulse durations.

| Power | Result |
|-------|----------------------------------|
| 1 | Pulse ½ second |
| 2 | Pulse 1 second |
| 3 | Pulse 5 seconds |
| 4 | Pulse 10 seconds |
| 5 | Permanently ON or OFF (no pulse) |



When finished adjusting it is suggested the jumper is returned to the centre position (vertically) to disable the buttons and prevent accidental adjustment. See image.

For MP1 and MP5 motors select the default power 3.

For MP6 and MP7 motors select power 1.

Factory reset

The unit can be factory reset by holding down BOTH buttons while powering the unit on. You will observe the unit reboot and the default address (#2) and power 3) flashing on the PWR and ADDR LEDs. Factory reset is possible any time the buttons are held during power on irrespective of the jumper position.

Contacting us

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If you have any product improvement suggestions we'd be very pleased to hear from you.

NOTE: We operate on a policy of continuous improvement. Colours, specifications and even the placement of components may vary from time to time.