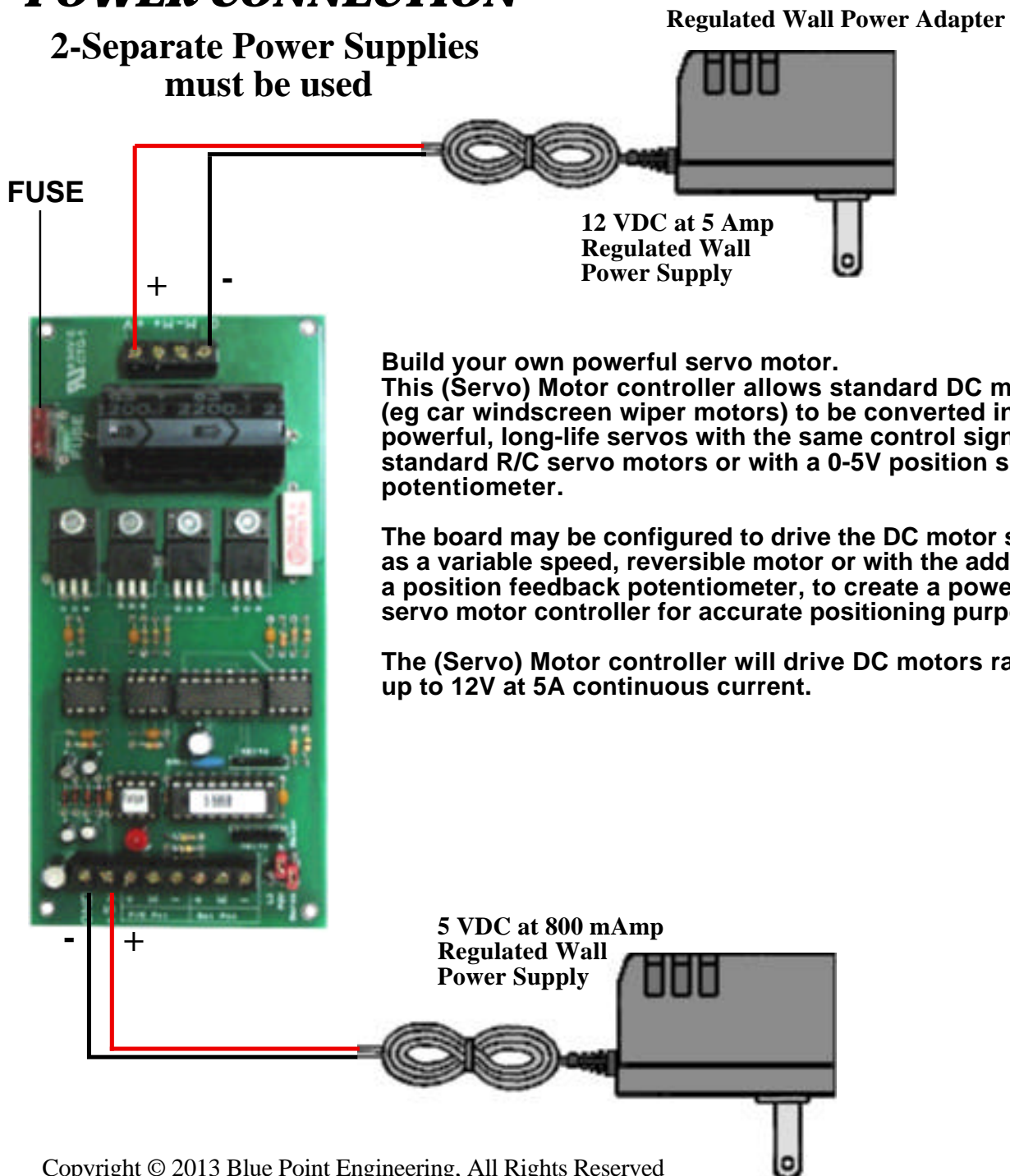




Servo Motor Controller

POWER CONNECTION

2-Separate Power Supplies must be used



Build your own powerful servo motor.

This (Servo) Motor controller allows standard DC motors (eg car windscreen wiper motors) to be converted into powerful, long-life servos with the same control signals as standard R/C servo motors or with a 0-5V position signal potentiometer.

The board may be configured to drive the DC motor simply as a variable speed, reversible motor or with the addition of a position feedback potentiometer, to create a powerful servo motor controller for accurate positioning purposes.

The (Servo) Motor controller will drive DC motors rated at up to 12V at 5A continuous current.

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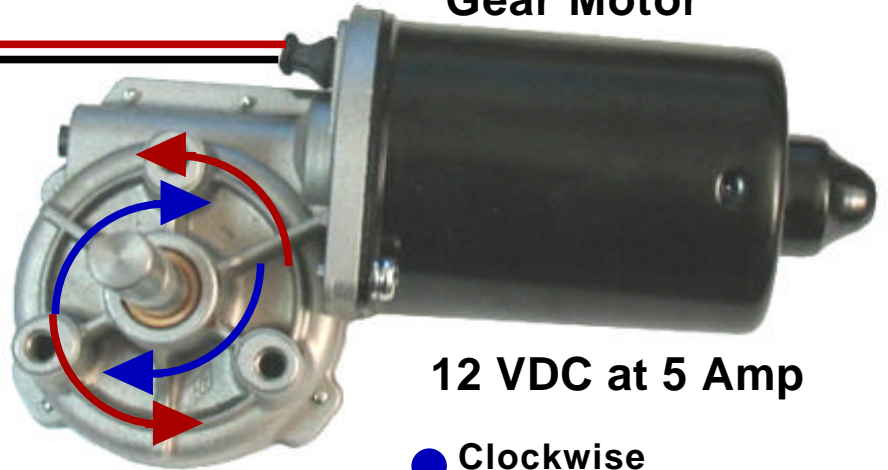
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Servo Motor Controller

MOTOR CONNECTION

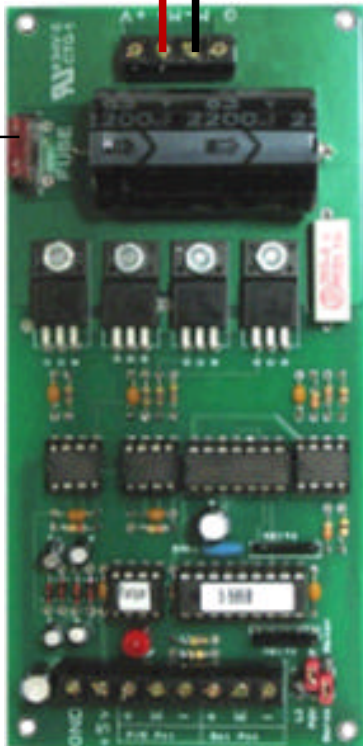
DC Motor
Right Angle
Gear Motor



12 VDC at 5 Amp

- Clockwise Rotation (CW)
- CounterClockwise Rotation (CCW)

FUSE



NOTE:

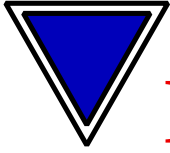
Some motor types may be reversed when connected to the controller, CW=CCW, CCW=CW Rotation, reversing the motor wire leads A to B and B to A (M+ / M-) may correct rotation reversal.

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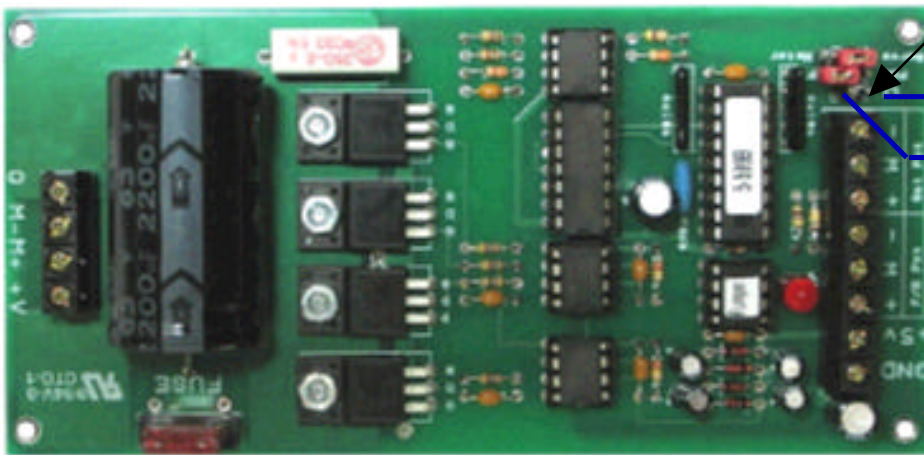
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Servo Motor Controller

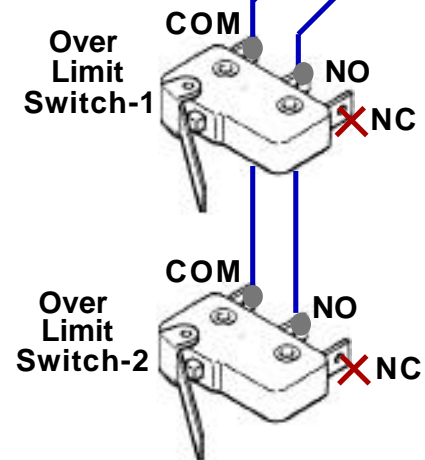
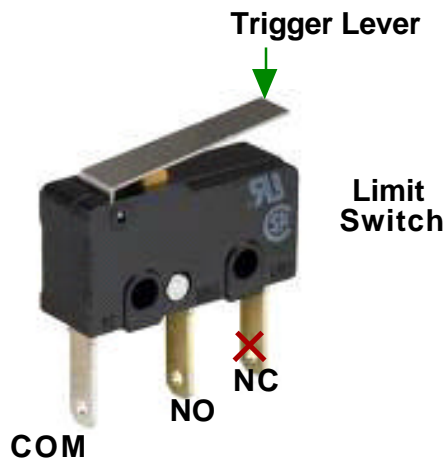
CONTROLLER CONNECTION Limit Switch Setup



Limit Switch Terminal
Wires connected to 2 pin header block

(L1)

Limit Switch 2 pin Header Block (L1)
If required, connect limit switches to these terminals. The terminals are active when closed and will disable the motor drive amplifier until the short is removed. Connect multiple limit switches in parallel.

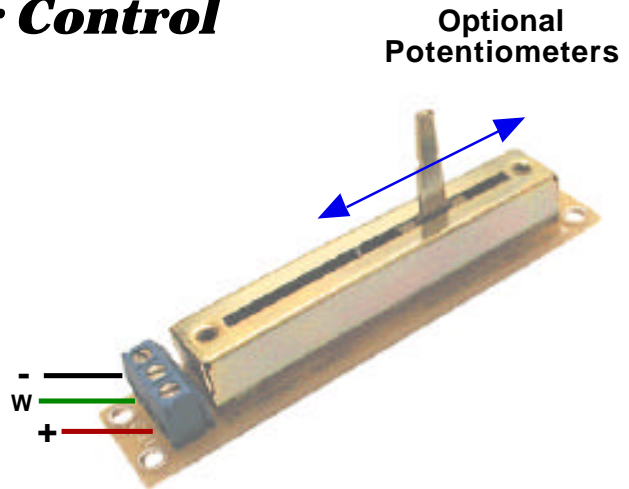
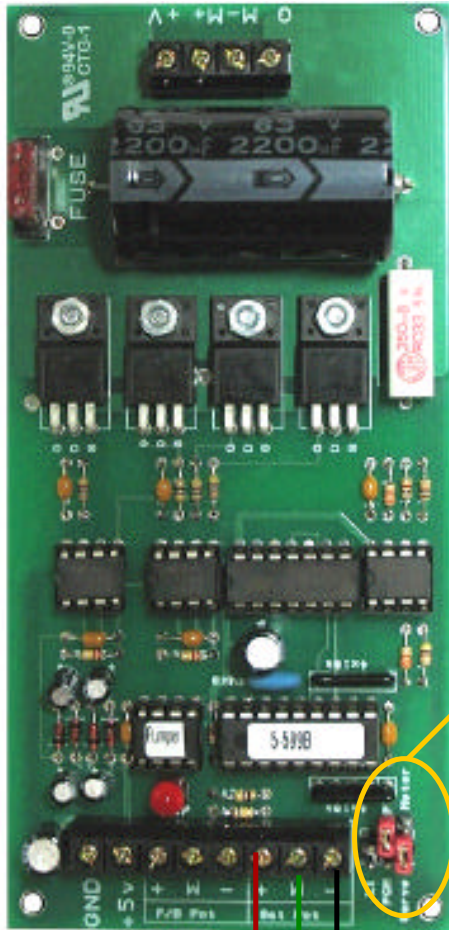


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Servo Motor Controller

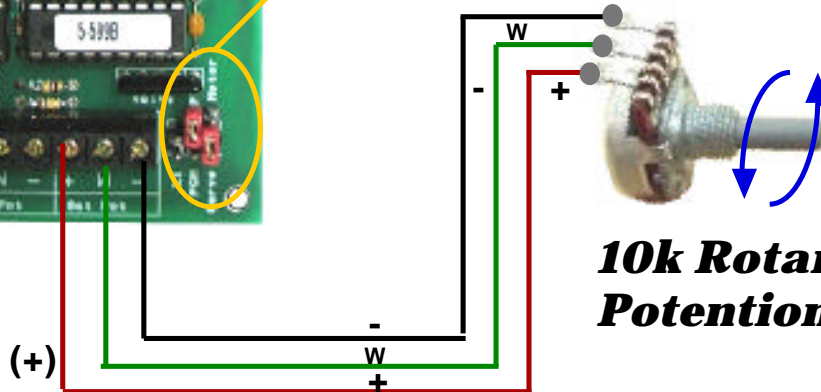
CONTROLLER CONNECTION Manual Potentiometer Control



10k Slide Potentiometer

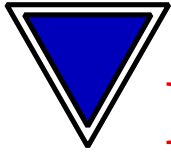
Jumper Set to PT
Jumper Set to M

- OR -



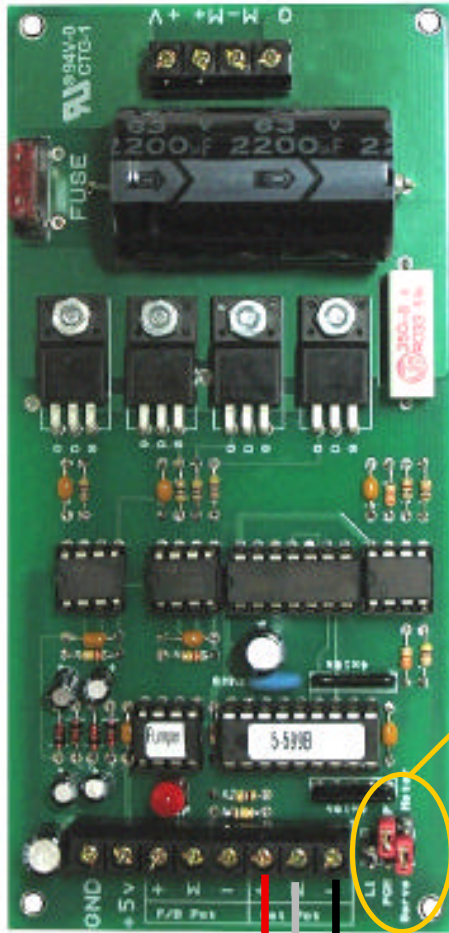
10k Rotary Potentiometer

CAUTION - Check wires for proper orientation; do not connect wires to wrong terminals, board damage may occur.



Servo Motor Controller

CONTROLLER CONNECTION R/C Control Method



CAUTION - Check wires for proper orientation; do not connect wires to wrong terminals, board damage may occur.

Jumper Set to PCM
Jumper Set to M

White
Red
Black

To R/C Receiver
Servo Connection



R/C Transmitter and Receiver



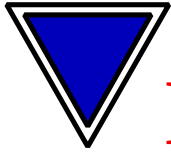
R/C Servo Lead Wire

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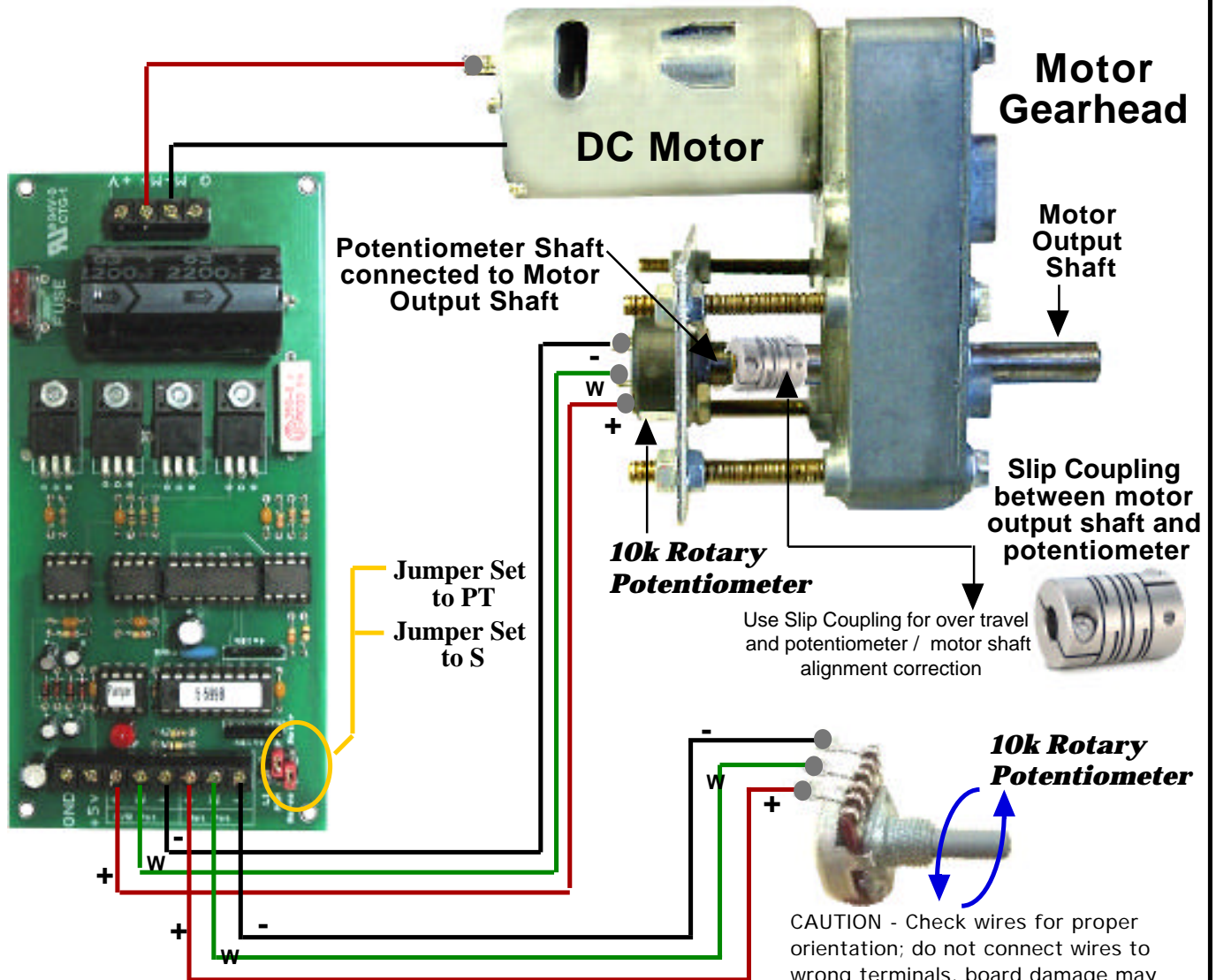


Servo Motor Controller

CONTROLLER CONNECTION Manual Servo control with Feedback Method

Connect a feedback potentiometer to the 3-way terminal block. The feedback potentiometer must be physically driven by the mechanism you are controlling and should incorporate a slip coupling in case of over travel. The servo will give approximately 300 degrees of control depending on the type of feedback potentiometer you use- if this is less or more than you require, you will need to include appropriate gearing into your equipment to give this amount of rotation. Linear potentiometers may also be used.

Before connecting the motor supply, bare in mind you have a 50/50 chance of having the motor connections reversed. Make sure you can disconnect the motor power quickly! Switch on the power supplies to the controller. The motor should start to hum and rotate until the feedback potentiometer value matches the set point. If the motor continues to move or judder, switch off the power and reverse the motor connections. If the motor does not respond, make sure you have nothing connected across the Limit terminals.



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