

V16 MOSFET high performance speed controller

HIGHLIGHT

- Motor Torque Adjustable Control
- Large Heat Sink Built-in, Helps Cool the MOSFET
- Power Boost Circuitry Maintains Steering-Servo Voltage When Battery Power Drop Down
- 4KHz Switching Smooth Throttle Response
- Smart Braking
- Automatic Brake (ABS)
- Real Time Braking
- One-touch Push-Button Set Up and LED for Easy Programming without Using External Devices
- 100% Digital Circuitry
- Heavy Duty Power Wires
- External Solder Tabs
- Quick Start Circuitry
- BCE Voltage Regulation
- Incredibly Low Resistance for More Speed and Minimal Power Loss
- Super-Light and Small in Size Fits Anywhere

PREPARATION

Get ready of the below tools :-

- Remote control car use wires for motor and battery connection
- One > 60W solder iron
- Solder for soldering
- Cutter to peer off wire insulation
- 1mm flat head screwdriver for speed controller adjustment

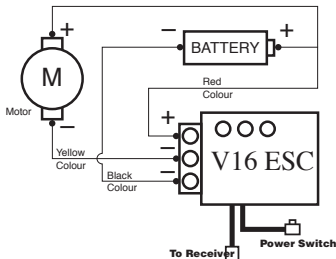
INSTALLATION

Use high quality and heavy-duty double sided servo tape to firmly mount the speed controller on the chassis of the car. Keep all the wires at least 1.6" (3cm) away from the receiver.

Battery and Motor Connection

- Solder the wire from the post marked with '-Motor' to the negative (-ve) terminal of the motor. (Blue Colour)
- Solder the wire from the post marked with '-Battery' to the negative (-ve) terminal of the Battery. (Black Colour)
- Solder the wire from the post marked with '+Motor/Battery' to both the positive (+ve)

Fig.A Soldering connection of the speed controller



terminal of the battery and the motor positive (+ve) terminal. (Red Colour)

Use minimum length of power wires of your car in order to reduce the voltage loss and increase the efficiency to the motor.

WARNING: Make sure there is no soldering bridge between any soldering post on the speed controller. The soldering bridge will damage your speed controller and void the warranty.

Schottky diode connection

Locate the positive leg of the Schottky diode (the leg with a white or silver ring) and solder this side to the motor positive terminal. Solder the other leg of the Schottky to the other motor negative terminal.

WARNING: Take high caution on the solder of the diode connection leg, the reverse connected diode polarity can damage the speed controller.

Power capacitor connection

The use of power capacitor can improve overall performance by removing power spikes that generated by the speed controller. In addition, the use of power capacitor allows the speed controller to run cooler. Make sure you do NOT mix up the polarity of the capacitor. The negative (-ve) is usually marked with minus sign across the marking on the capacitor.

Receiver connection

Futaba type radio plug comes with this speed controller. Please change the order of the wires according to your radio system setup.

Red -> Receiver power (positive)
Black/Brown -> Receiver Ground (negative)
White/Orange -> Receiver signal

Fig.B Schottky diode

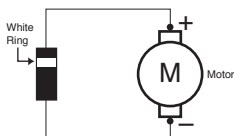


Fig.C Power capacitor polarity

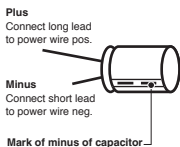
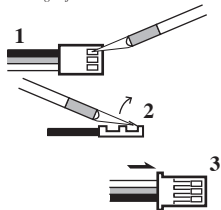


Fig.D Change of connector wires



ADJUSTMENT

Radio travel adjustment

- Switch ON the transmitter, set the throttle trim to neutral.
- Set the transmitter throttle position at the neutral.
- Turn ON the speed controller switch, the speed controller LED should come ON afterward.
- Press 'SET button' on the speed controller.

Do NOT move the transmitter throttle position.

- After 2 seconds, LED will turn OFF to indicate the neutral position has been saved.
- Within the following three seconds, move the throttle to both directions of maximum forward and brake position. Return the throttle back to the neutral position, wait until LED lights up.
- You can check the proper adjustment by watching the LED, it turns ON at neutral, full throttle and full brake position.

Motor Torque adjustment

The torque of motor can be adjusted at the pot on the speed controller by a small flat head screwdriver. The adjustable max current can be used to adjust the limit of wheel-spin and increase the motor run time.

Turn clockwise can increase the maximum current of 100%. Turn anti-clockwise can decrease the minimum current to 5%.

CAUTION

- Do not short the speed controller and reverse polarity of the battery connection
- Do not run the motor by another external battery without using the speed controller.
- Avoid any water get into the unit.
- This speed controller is not a toy and it is not suitable for children under age 14.

