



www.KCRacing.net

TECH CORNER

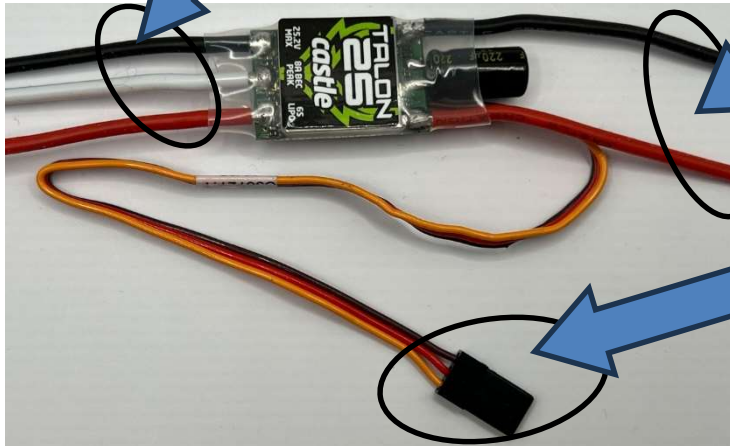
DRAG RACING MOTOR CONTROLLER

FAMILIARIZATION

IMPORTANT - Once electrical parts are sold, manufacturers have limited control over their usage and operating environment. This makes it difficult to ensure that they are installed and used in accordance with design specifications and not subjected to conditions that might shorten their lifespan or lead to failure. The controller (ESC) is tested by the manufacturer for proper operation prior to shipment and as an electrical part does not carry an implied warranty of merchantability or expressed warranty.

These 3 wires (red, white, black) connect to your brushless motor in any order. If your motor spins in the wrong direction, swap the position of two of the wires and the motor will spin in the opposite direction.

The 2 wires here are the power wires connected to the braids that contacts with the track. The Black wire is the Ground (Negative), and the Red wire is the Positive side.
DO NOT REVERSE THE POLARITY AS IT WILL DESTROY THE ESC INSTANTLY!



The wires terminated with the miniature plug are for changing motor performance settings controlled by the ESC. Do not cut off or attempt to shorten these wires.

PREPARATION FOR INSTALLATION



The length of the wire(s) from the braids to the controller and from the controller to the motor are NOT critical and can be shortened.

DO NOT ATTEMPT TO DESOLDER the wires from the controller. The solder has an extremely high melting point and attempting to remove the wires may damage the circuit board.

DO NOT REMOVE the shrink tube from the Controller.

- Method of attaching motor wires:
1. Cut the ESC to motor wires from 5/8 to 3/4 of an inch from the board.
 2. Strip and tin the wire ends.
 3. Place shrink tube on the motor wires.
 4. Tin the motor leads
 5. Solder the motor wires to the ESC wires.
 6. Temporarily tape the wires with electrical tape to prevent a short circuit.
 7. Check the motor rotation using a 9-volt battery or power supply on the power leads. Make sure you connect the ESC + and - wires to the correct polarity on the power source. Correct wiring for motor rotation, if necessary, by switching two of the wire positions.
 8. If the motor is rotating correctly remove the power, remove the tape, and slide the shrink tube into place and apply heat to shrink the tube. Don't overheat the ESC!



www.KCRacing.net

TECH CORNER

DRAG RACING MOTOR CONTROLLER



WARNING!

When Voltage is applied (maximum 18 VDC) the connected motor will spin to full RPM in a fraction of a second.

Allowing a slot car to free spin with power applied is dangerous as the mechanical components if the car could fail and cause personal injury.

A vehicle crash or a power system malfunction may result in fire.

NEVER INSTALL A CONTROLLER THAT HAS BEEN FLASHED FOR SLOT CAR USE INTO AN AIRCRAFT, WATERCRAFT OR GROUND VEHICLE CONTROLLED BY RADIO CONTROL.

IMPORTANT - KC Racing is not responsible for your use of this product or for any damage or injuries you may cause or sustain because of its usage.

NOTES

The Controller settings are set to 10-5-100, what does that mean? Did you watch the YouTube video? If not, now is the time.

Great, you have viewed the video and are familiar with the settings. Below is a printout of the standard settings installed in a drag racing controller.

For a detailed step by step tutorial on changing the settings of the Controller visit **Brushless Slot Car Racing** on



Castle-Link Program Settings Report

Title: C36127-1-8 10/23
Date: 12/9/2023 11:16:36 PM

Throttle	
Vehicle Type	Airplane
Throttle Type	Auto Calibrate Endpoints
Throttle Response	10
Brake	
Brake Strength	0%, Disabled (Default)
Cutoffs	
Cutoff Voltage	Auto Li-Po (Default)
Auto-Lipo Volts/Cell	3.0 Volts/Cell
Voltage Cutoff Type	Soft Cutoff (Default)
Current Limiting	Disabled
Current Cutoff Type	Soft Cutoff (Default)
Motor	
Motor Start Power	High (100) (Default)
Motor Timing	Normal (5) (Default)
Direction	Forward (Default)
PWM Rate	16 Khz
Other	
Power-On Beep	Disabled
Link Live Enable	Disabled (Default)
Software	

As the final step in our quality control a controller that has been updated and set up for drag racing receives the Brushless Mafia seal on the face of the controller.



The reverse side of the controller has a label attached warning the user not to use a converted controller in an aircraft.

