ATTACHING WIRES TO THE BATTERY:
The same techniques described in the preceding section may be used to connect the battery to the brushless motor. IMPORTANT: Take precautions if removing factory battery connectors. Connecting the battery backshells will cause damage, and will void warranty. When attaching connectors to a battery pack, cut only one wire of the battery pack at a time to ensure that the exposed wires do not short together.

HINT: If you are using connectors for both the battery and the motor, make sure that they are not the same or that you have a male and a female attached to the speed control wires. That way, you cannot accidentally connect the battery to the motor wires or vice versa.

1) Make sure that the connector ends will be mated together correctly, male to female, and that the wire colors match—red to red and black to black.
2) Solder the wires from the speed control to each of the connectors, then solder wires from the battery to each connector’s male.

ATTACHING WIRES TO THE MOTOR:
The same techniques described in section 5 and 6 may be used to solder the wires to the motor.

TIPS & THICKS: Place the speed control upright and use serve tape to secure it to the bench. Doing so provides a stable work surface. Do not connect the power wires until in use. To clean the power wires, peel off the cover on one side of the doubled-sided tape, (included) and stick to the bottom of the speed control. DO NOT peel off the other side yet.

SOLDERING

MOUNTING HOLE DIMENSIONS

1.07" Diameter

0.075" Depth

Connect Speed Control To Receiver

Plug the speed control into the throttle channel of the receiver.

• Channel 1: Servo

• Channel 2: Speed Control

“REMEMBER: 1 to Turn, 2 to Burn”

1) CONNECT SPEED CONTROL TO RECEIVER

Plug the speed control into the throttle channel of the receiver.

2) CONNECT SPEED CONTROL TO BATTERY

Visually check that the connector on the battery pack and the speed control match the chart below then connect.

3) SELECT SPEED CONTROL TO MOTOR

Depending on your RC system, you may need to use a “sensored” motor. If using a “sensored” motor, connect the sensor wire from both the RX8 and the motor.

Attach the power leads to the motor terminals.

TIPS: If using a “sensored” motor, connect the sensor wire from both the RX8 and the motor.

Quick Tune Example: Let’s say you want to use a 4-cell LiPo battery. To change the Voltage Cut-off from the default setting (1 = None) to setting 4 (4 = 12.0 Volt Cut-off), first follow step 1 above by pressing and releasing the MODE button 7 times. Now press and release the MODE button and the LED should show the current setting of 1. Press and release the INC button 4 times and the LED will move to position 4, indicating that Voltage Cut-off is now set to 12.0 Volts. Wait 5 seconds and the ESC returns to normal operation.

HINT: If you wish to set another Program Feature, press the “MODE” button again. After 5 seconds pause, the values you selected will be saved in memory and the speed control will resume normal operation.

Pit Tuning:

If you are in the pit area and cannot use your transmitter you may use pit tuning mode to adjust settings by following this procedure: Unplug the steering servo from the receiver to avoid servo damage. Hold down either MODE or INC button while turning the power switch on. LEDs will ramp up and down in sequence indicating you are in pit tuning mode. The user settings will be active, but the motor will not run and the speed control will not respond to receiver input. Turn the speed control power off and back on to resume normal operation.

HINT: Before Radio Calibrating, ensure speed control is hooked up to a charged battery properly connected, and the ESC is turned on. On your radio, set all trim adjustments to the middle, throttle brake and dual rate set to 0 and ensure that your throttle direction is set to “normal.” Some Radios will require you to set your throttle mode in reverse in order for your Speed Control to calibrate properly. Calibration press and hold the MODE button for 3 seconds to enter radio calibration. Let the speed control “find” your neutral, then let it “find” your full throttle and full brake. If you are unsure how to perform the process, please follow the Pit Tuning instructions below. After calibrating your radio, when the speed control power switch is turned ON the unit will begin looking for the neutral signal. If a neutral signal is found the Arming Sequence (Figure 5) will occur followed by LED’s (Neutral) then (Brake) then (Forward) then (Neutral). HINT: Once calibrated, the ESC’s speed control will not operate until the brake or a brake is applied.

Quick Tune:

Push “mode” button to access:

- Drag Brake
- Brake Reverse Strength
- Current Limit
- Throttle Proﬁle
- Motor Type
- Voltage Cut-Off

Quick Tune® Modes

MODE RANGE DEFAULT

Drag Brake

1-13

1 (No Drag)

Brake Reverse Strength

1-13

4.5

Current Limit

1-13

1 (OFF)

Throttle Profile

1-6

3 (Linear)

Motor Type

1-7

3 (Brushless: Dshot 600)

Voltage Cut-Off

1-13

1 (NONE)

LED Display:
The LED lights here display values in several categories. One LED shows a value in a range indicator, making it easier to verify correct settings—pay close attention to these when adjusting.

Figure 1.
BRUSHLESS MOTORS

ADJUSTMENT MODES

LEDI: BRAKE/DRAG provides immediate braking action in the neutral zone. This gently slows the car down when you let go of the trigger. Higher values increase the degree of drag braking.

LED2 (IN BRUSHLESS MODE): REVERSE STRENGTH adjusts the percentage of maximum reverse speed and reverse strength when in brushless mode. Higher values increase reverse speed and reverse strength.

LED3 (IN BRUSHED MODE): PUSH CONTROL or ANTI-DRAG becomes the neutral state of a brushed motor when the car returns to neutral. This setting eliminates the need to trim the throttle slider to center when changing drive settings. Low value gives you a short duration push while a higher value gives a longer duration push.

LED4: CURRENT LIMITER adjusts the throttle response during acceleration, gentle to abrupt. Low values allow low amounts of current to pass to the motor, higher values allow higher amounts of current. The highest value (13) turns off current limit.

LED5: NEUTRAL WIDTH adjusts dead band around the neutral point. A low neutral width value provides more sensitive trigger response around neutral. A higher value allows you to move the trigger slightly before throttle or brake is engaged.

RX DRIVE MODES

The RX8 speed control is capable of running all brushless motors in sensorless mode. However, the default used a Tekin RX8 technology, this “Dual Drive” allows the speed control to start out in brushed mode and switch to sensorless mode while at higher rpms. Dual Drive mode uses mechanical/motor timing at start up. The RX8 switches into sensorless drive after the start up routine has plussed into sensorless drive.

With Tekins RX8 speed control you can quickly verify your speed control and motor are communicating properly simply by observing the LED5-LED8 status: 3-6 low = normal. The RX8 drive mode is reading the motors sensors, LEDs 5, 6, and 7 will light if any of the sensors are not working properly. This indicates that all the motors within the sensor are functioning correctly and the system is ready to roll. Should one sensor go bad during the operation, the RX8 will switch into sensorless mode, enabling you to finish the race out.

If you are not seeing LEDs 5, 6, and 7 dimly light in a sequence corresponding to the rotation of the shaft. This indicates that all the motors within the sensor are functioning correctly and the sensor wire harness is secure. If you see a lopsided pattern, there may be a problem with the sensor wire harness.

TROUBLESHOOTING CONT...

TORQUE MODES

The hotwire PC interface (TT1450) unlocks the full potential of your Tekin Speed Control, much more than just a pretty interface. With the Hotwire you can download and install the latest software revisions, access advanced features and features are added to the speed control design. Further, because Tekin continually seeks to push performance levels, we occasionally re-leases Beta Version Software. With the Hotwire you can connect and operate the speed control as desired, such as user-defined Custom Torque Profiles, Custom Voltage Calibators, Timing Boost and Adjustable Timing. Another feature is the motor and user settings. If you want to recall the settings that helped you put the car in its fast lane, you can store Custom Torque Profiles. With the Hotwire you can access and adjust parameters that would normally be inaccessible by the user.

TROUBLESHOOTING CONT...

TRADEMARK DISCLOSURE

The rX8 has built-in factory reset mode that resets all user program-

6) All LEDs (FWD, BRK, REV) lit indicates a problem with the ESC that requires service. If you have a problem with the ESC please consult your Tekin authorized dealer. Additionally, these LEDs are used to check that the ESC is properly connected to your radio.

ADJUSTMENT MODE ...

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