SAFETY PRECAUTIONS

1. Before installing your ESC, make sure the motor/battery are within recommended specs.
2. Make sure the motor/battery are within recommended specs.
3. Double check the battery you are using and adjust Voltage if needed.
4. Follow the manufacturer’s instructions for your motor and ESC.
5. Use a high-quality solder for all connections.
6. Always use tin-free solder for ESC connections.
7. Double check all connections before installing the ESC.
8. Be sure to connect your motor to the ESC with the correct polarity.
9. Always use a battery eliminator circuit (BEC) to switch power to the ESC.
10. When soldering, use a low-temperature soldering iron to avoid damaging the ESC.

TINNING WIRE ENDS

1. Before tinning the wire ends, strip the insulation back 3/32”.
2. Heat both and connect the ends.
3. Apply solder to the iron tip, and hold both the INCR and MODE buttons down for 3 seconds. If you have trouble, clean and tin the connection again.

CONNECT ESC TO BATTERY

1. Set transmitter throttle trims to 0 and throttle EPAs to 100. You can now connect the battery to the ESC.
2. Check the polarity of the battery and make sure it is correct.
3. Connect the battery to the ESC in the correct order:
   - (+) Positive
   - (-) Negative

CONNECT ESC TO RECEIVER

1. Connect the ESC to the receiver.
2. Turn on the transmitter and receiver.
3. Make sure that the motor is running smoothly.

BATTERY CONNECTIONS

1. Make sure the battery connectors are properly inserted.
2. Use a battery eliminator circuit (BEC) to switch power to the ESC.
3. Connect the batteries to the ESC in the correct order:
   - (+) Positive
   - (-) Negative

CALIBRATION MODE

1. Perform a Radio Calibration, refer to Section 9 & 10.
2. Make sure all the radio calibration settings are correct.

FACTORY RESET

1. To perform a Factory Reset, refer to Section 17 on reverse side.
2. Clear all the radio calibration settings to their default values.

SPECIFICATIONS

1. Control System: Tekin’s QuickTune™
2. Power Source: 2S LiPo battery (3.7V)
3. Voltage Range: 4.0 mm
4. Current Limit: 180 Amps per Phase
5. Specifications for more precise trigger sensitivity around neutral.
6. Higher values increase trigger sensitivity.
7. LED2 (BUSHED MODE): REV-DRAG

WARNING:

Exceeding product specifications or using equipment outside the specifications of the ESC can result in damage to the ESC. To achieve accurate results, make sure the ESC is on, then hold both the INC and MODE buttons down for 5 seconds to initiate the reset process. This will reset all the calibration settings to their default values. Any damage caused by misuse of the equipment will be at the customer’s expense. All repairs will be handled by the Tekin Service Department. For further warranty information, please refer to Section 26 or visit us on the web at www.tekinnovations.com.

ALL Tekin ESCs have a built-in factory reset that resets all user settings to the default factory settings. To access the factory reset, turn the ESC off and hold both the INC and MODE buttons down for 5 seconds. This will reset all the factory settings to their default values. For more information, refer to Section 17 on reverse side.

QuickTune™

Press INCR to:
- LEDs: BRAKE-DRAG MODE
- BRAKE LIMITER
- CURRENT LIMITER
- NEUTRAL LIMIT
- MOTOR TYPE
- VOLTAGE CUTOFF

LED3 (BUSHED MODE): REV-DRAG

REV-DRAG minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.

LED2 (BUSHED MODE): REV-DRAG

REV-DRAG minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.

LED (BUSHED MODE): REV-Drag

REV-Drag minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.

LED1 (BUSHED MODE): REV-DRAG

REV-DRAG minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.

LED (BUSHED MODE): REV-DRAG

REV-DRAG minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.

LED (BUSHED MODE): REV-Drag

REV-Drag minimizes the strength and reverse speed when in brushed mode. Higher values increase brake strength and increase reverse speed.
IMPORTANT LED CODES

- LEDS 1 to 3: 
  1) Mild mist - cyan
  2) Mild mist - orange
  3) Aggressive mist - green
  4) Aggressive mist - yellow

- LEDS 4 to 6: 
  4) LED 4: ON, LED 5: ON
  5) LED 4: ON, LED 6: ON
  6) LED 5: ON, LED 6: ON

- LEDS 7 to 9: 
  7) LED 7: ON, LED 8: ON, LED 9: ON
  8) LED 7: ON, LED 8: ON, LED 9: ON
  9) LED 7: ON, LED 8: ON, LED 9: ON

Your ESC is an intelligent piece of equipment and can usually tell you exactly what the problem is! Refer to this section should your LED sequence out of the ordinary. You can find information about your LED sequencing breakdown hints to see what settings are in action. Each code will flash rapidly.

ALL LEDS FLASHING: No signal recorded. Check that receiver and ESC connection into receivers are properly matched. Check ESC voltage input.

LEDS 1, 2, & 3: Wrong motor type, or internal fault in ESC or motor detected. Check motor wire setup.

LEDS 1, 2, & 5: Low neutral equal. Adjust receiver to Consumer value if ESC or motor detected. Check receiver setup.

LEDS 5 & 6: Unbalanced sensor. Adjust receiver to Consumer polarity.

LEDS 1, 2, & 5: High PV caused by short. Check ESC, receiver and radio. Check ESC polarity.

LEDS 5 & 6: ESC in neutral and Locked Spec Mode will show LEDs 3, 4 & 5 blinking rapidly. These codes in action. Each code will FLASH rapidly:

- STEERING WORKS, NO THROTTLE
- ALL LEDS FLASHING
- NEUTRAL WIDTH: 
  0 to 0%: No neutral detected. Check transmitter and receiver are properly matched. Check sensor setup.
  0 to 80%: Neutral detected. Check sensor setup.
  80% to 100%: Neutral detected. Check sensor setup.

LED Display: The LED display shows voltage and battery status on your speed controller in a 2s wire. Settings with a value of 0 (blue) and 1 (red) are displayed. At the same time, adjusting the LEDs will "walk" you through the setup. A third LED will hold the INCR button. The ESC should blink and flash before going back to neutral. The Hotwire is needed to open and view data logs (Section 23).

Sensored vs. Sensorless

The RSX speed control is capable of running all brushless motors in sensored mode, whether or not they have a sensor. The RSX will automatically detect any sensors and if present will operate in Dual Drive mode as standard. If no sensors are detected, the ESC will run in sensorless mode. Tekin’s Dual Drive technology allows ESC to start in sensored mode and switch to sensorless mode at higher RPMs for efficiency. This is a great feature for modified racing. Dual Drive and sensors use the Timing Advance function, while using a Sensorless-only the Brush and sensorless ESC’s. The ESC is a very precise piece of equipment that has the capability to run brushless motors with sensors and without, as well as washed motors.

CHECKING SENSOR OPERATION

With Tekin ESCs you can quickly verify your ESC and sensored motors are communicating properly with the on-board sensor. Follow the steps below to verify your ESC’s sensor operation.

1. Power on the ESC, listen for the arming chime.
2. Check for proper radio calibration. All LEDs should flash at neutral before reverse will activate.
3. Check transmitter low throttle EFLA adjustments.
4. Check for proper radio calibration. All LEDs should flash at full throttle and full brake reverse.

HotWire® PROGRAMMING DIAGRAM

The Hotwire PC interface (T81450) will unlock the full potential of your Tekin ESC. Offering a wide range of adjustable features and options, you can fully customize your setup to any particular track and top driving conditions. The Hotwire can also download Driver Setups from Tekin’s database and upload them directly into your ESC. The Hotwire can also be used to remove or add custom setup. No problem! The Hotwire makes it easy to load ESC. New advanced setup tool offers gas trigger and brake sensitivity settings. Set up each setup can be applied and saved into various user-created profiles so you can have the exact setup you need saving. This takes all the guesswork out of the setup.

T81450 Hotwire PC Interface (T81450) will unlock the full potential of your Tekin ESC. Offering a wide range of adjustable features and options, you can fully customize your setup to any particular track and top driving conditions. The Hotwire can also download Driver Setups from Tekin’s database and upload them directly into your ESC. You can also remove or add custom setup. No problem! The Hotwire makes it easy to load ESC. New advanced setup tool offers gas trigger and brake sensitivity settings. Set up each setup can be applied and saved into various user-created profiles so you can have the exact setup you need saving. This takes all the guesswork out of the setup.

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