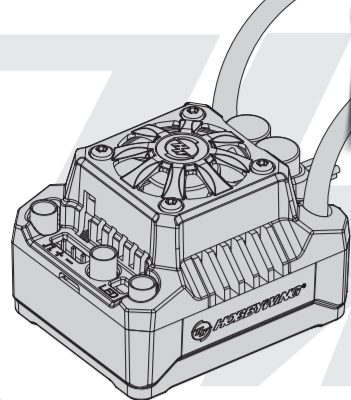


01 Introduction



EZRUN USER MANUAL Brushless Electronic Speed Controller MAX10 SCT / MAX10



Congratulations and thank you for your trust in Hobbywing product. By purchasing a EZRUN MAX10-SCT and EZRUN MAX10, you have chosen a high performance brushless electronic speed controller!

02 Warnings

- Ensure all wires and connections are well insulated before connecting the ESC to related devices, as short circuit will damage your ESC.
Ensure all devices are well connected to prevent poor connection that may cause your vehicle to lose control or other unpredictable issues such as damage to the device.
Read through the manuals of all power devices and chassis and ensure the power configuration is rational before using this unit.

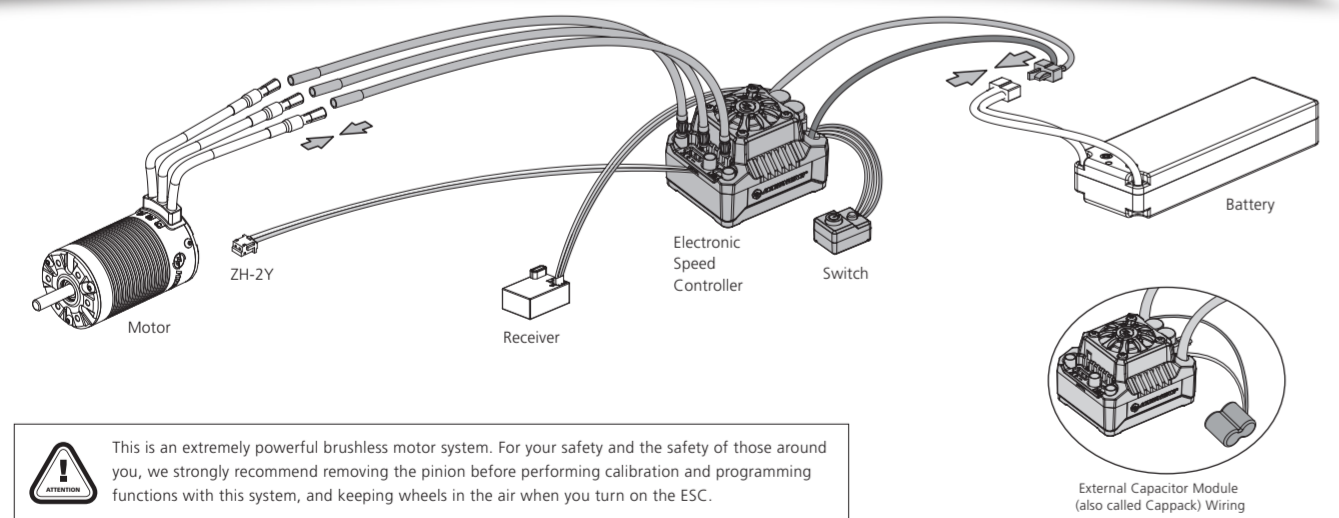
03 Features

- ESC is compatible with both sensorless and sensed brushless motors (only in sensorless mode).
Fully waterproof design for all conditions.
Super internal switch-mode BEC with switchable voltage of 6V/7.4V for usage with high torque and high voltage servos.

04 Specifications

Table with 3 columns: Model, EZRUN MAX10 SCT, EZRUN MAX10. Rows include Cont./Peak Current, Motor Type, Applications, Motor Limit, LiPo / NiMH Cells, BEC Output, Cooling Fan, Connectors, Size/Weight, Programming Port.

05 Connections



- 1. Motor Wiring: There is no polarity on the A/B/C three ESC-to-motor wires, hence, do not worry on how you connect them initially.
2. Receiver Wiring: Plug the throttle control cable on the ESC into the throttle (TH) channel on receiver.
3. External CapPack Wiring (Optional): If the temperature of the capacitor is consistently above 85 C when in use, you need to connect an external cappack.

06 ESC Setup

1 Radio Calibration

Begin using your ESC by calibrating with your transmitter. We strongly recommend Hobbywing users to use the "Fail Safe" function on the radio system and set (F/S) to "Output Off" or "Neutral Position".

Diagrammatic instructions for radio calibration steps 1 through 4, including throttle position adjustments and LED status checks.

2 Power ON-OFF Warning

- 1) Power ON/OFF: (Start with the ESC turned off), press the ON/OFF button to turn on the ESC; (start with the ESC turned on) press and hold the ON/OFF button to turn off the ESC.
2) Warning Tones: Turn on the ESC (that is to turn it on without holding the SET button); the motor will beep the number of LiPo cells you have plugged in.

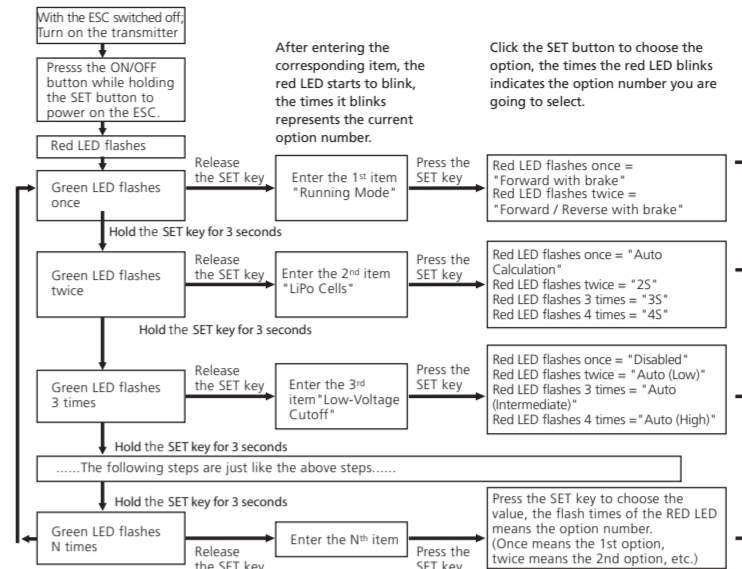
3 Programmable Items

Table with columns: Programmable Items, Option 1, Option 2, Option 3, Option 4, Option 5, Option 6, Option 7, Option 8, Option 9. Rows include 1. Running Mode, 2. LiPo Cells, 3. Cutoff Voltage, 4. ESC Thermal Protection, 5. Motor Thermal Protection, 6. Motor Rotation, 7. BEC Voltage, 8. Brake Force, 9. Reverse Force, 10. Start Mode (Punch), 11. Drag Brake.

- 1. Running Mode: Option 1: Forward with Brake; Option 2: Forward / Reverse with Brake.
2. LiPo Cells: "Auto Calculation" is the default setting.
3. Cutoff Voltage: Sets the voltage at which the ESC lowers or removes power to the motor.
4. ESC Thermal Protection: The ESC will automatically cut off the output with the GREEN LED flashes.
5. Motor Thermal Protection: The GREEN LED flashes when the motor temperature reaches to the preset value.
6. Motor Rotation: Pull the throttle trigger with the motor shaft facing you.
7. BEC Voltage: Option 1: 6.0V; Option 2: 7.4V.
8. Brake Force: The ESC provides proportional braking function.
9. Reverse Force: Different reverse amount will bring different reversing speed.
10. Start Mode / Punch: You can choose the punch from level 1 (very soft) to level 5 (very aggressive).
11. Drag Brake: Drag brake is the braking power produced when releasing from full speed to neutral zone.

4 ESC Programming

1. Programming your ESC with the SET button



2. Program your ESC with a LED program card

The portable LED program card is an optional accessory applicable for field use. Its friendly interface makes the ESC programming easy and quick. Before the programming, you need to connect your ESC and the program card via a cable with two JR male connectors, and then turn on the ESC.

3. Program your ESC with a multifunction LCD program box

You can program this EZRUN MAX10-SCT ESC via a multifunction LCD program box or via a multifunction LCD program box & a PC (HOBBYWING USB LINK software needs to be installed on the PC). Before programming, you need to connect your ESC and the LCD program box via a cable with two JR male connectors and turn on the ESC.

4. Program your ESC with a WiFi Module

The EZRUN Max10 ESC can also be programmed via a WiFi module along with small phone devices (HOBBYWING WiFi Link software needs to be installed on the smart phone). Before programming, users will need to plug the programming cable on the WiFi module into the programming port on ESC and switch on the ESC.

5 Factory Reset

- Restore the default values with the SET button: Press and hold the SET button for over 3 seconds anytime when the throttle trigger is at the neutral position.
Restore the default values with a LED program card: After connecting the program card to the ESC, press the "RESET" button and the "OK" button to factory reset your ESC.
Restore the default values with a multifunction LCD program box: After connecting the program box to the ESC, continuously press the "ITEM" button on the program box until you see the "RESTORE DEFAULT" item.
Restore the default values with a WiFi module (& WiFi Link): After connecting the WiFi module to the ESC, open the HOBBYWING WiFi LINK software on your smart phone, select "Parameters" followed by "Factory Reset" to reset the ESC.

07 Explanation for LED Status

- During the Start-up Process: The RED LED flashes rapidly, showing indications that the ESC doesn't detect any throttle signal or the neutral throttle value stored on your ESC may be different from the current value stored on the transmitter.
When Some Protection is Activated: The RED LED flashes a short, single flash and repeats indicating the low voltage cutoff protection is activated.

08 Trouble Shooting

Table with 3 columns: Trouble(s), Possible Causes, Solution(s). Rows include issues like 'The ESC was unable to start the status LED', 'The ESC was unable to start the motor after it was powered on', 'The ESC didn't detect any throttle signal', 'The receiver was influenced by some foreign interference', 'The ESC entered the battery LVC (Low Voltage Cutoff) protection', 'The ESC entered the thermal (over-heat) protection', 'The motor suddenly stopped or significantly reduced the output in operation', 'The motor stuttered but couldn't start', 'The vehicle could run forward (and brake), but could not reverse', 'The car ran forward/backward slowly when the throttle trigger was at the neutral position', 'The LCD program box kept displaying "CONNECTING ESC"', 'When pressing the SET button to set the throttle neutral position, the GREEN LED didn't flash and no beep was emitted, or you were unable to set the full throttle endpoint and the full brake endpoint after the neutral position was accepted.'