

# USER MANUAL

## SENSORLESS BRUSHLESS SPEED CONTROLLER FOR CAR

### ■ DECLARATION

This is Electronic Speed Controller (ESC) for car. High power system for RC model is very dangerous, so please read this manual carefully. Since we can't control over the correct use, installation, application, or maintenance of our products, we've no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of the product. Any claims arising from the operating, failure of malfunctioning etc. will be denied. We assume no liability for personal injury, consequential damages resulting from our product or our workmanship.

### ■ FEATURES

1. Specially designed for RC car with excellent start-up, acceleration and linearity features.
2. Compatible with sensorless brushless motor.
3. The strong resistant current capability, excellent heat dissipation.
4. Multiple protection features: Low voltage cut-off protection for lithium or nickel battery / Over-heat protection / Throttle signal loss protection / Motor blocked protection/
5. Easily programmed and compatible with pocket-sized program card.
6. Low Voltage Cut-Off: The function is mainly to prevent the lithium battery pack from over discharging. When using lithium battery pack, please set the suitable value for low-voltage protection as your like.
7. WARNING: Never use the default value "Non-protection" for lithium battery! 3.1V、2.9V、2.7V、Non-Protection (default value 3.1V)。
8. 3 start modes (Also called "Punch") from "soft" to "very aggressive" (default value Medium)
9. Maximum brake force: 25%, 50%, 75%, 100% (default value 25%)
10. Maximum reverse force: 25%, 50%, 75%, 100% (default value 25%)
- 11: Neutral range: 9%(narrow), 6%(Normal), 12%(Wide) (default value 9%)

### ■ Specifications

Model	25A	45A	60A	80A	120A
Cont. Current/ Burst Current	25A/100A	45A/180A	60A/320A	80A/480A	120A/1080A
Motor Type	Sensorless Brushless Motor				
Suitable Car	1/18, 1/16 car	1/10 car	1/10 car	1:10/1:8 car	1:8/1:5 car
Suitable Brushless Motor	>=12T	>=9T	>=9T	》 12T	》 5.5T
Resistance	0.004ohm	0.0014ohm	0.0007ohm	0.0008欧姆	0.0002欧姆
Battery	2 cells Lipo 4~6 cells NiMH	2~3 cells Lipo 4~9 cells NiMH	2~3 cells Lipo 4~9 cells NiMH	2~4S LIPO/ 4~12CELLS NiMH	2~6S LIPO/ 4~18CELLS NiMH
BEC Output	5V/2A	5.8V/3A	5.8V/3A	6V/3A	6V/4A
Dimension	25*30*18mm	32.5*34*24mm	32.5*34*24mm	43X31X32MM	55X50X50MM
Weight ( G)	25G	76G	78G	60G	95G

### ■ Instructions

1. Connect BEC wires with the receiver
2. Connect motor wires with ESC
3. Turn on the transmitter
4. Connect battery pack with ESC then switch on the ESC.
5. When the connection of motor and battery is finished, the motor emits "Beep-Beep" tone.
6. When the throttle stick is in the neutral position, the motor re-emits "Beep-Beep" tone.
7. The ESC is workable.

### ■ Program Method

1. Connect BEC wires with the programmer then turn on the ESC. (80A、120A press the keys to be not put)
2. The Green LED flashes for 2 times then LED off, that is, the connecting programmer with ESC is successful, and the Red LED on presents the current value of that item. Otherwise, the connecting is failed.
3. Please press the Key "↓" to select different programs
4. Please press the Key "→" to select different value of the current program
5. Please press the Key "Program" to confirm above selections, the Green LED on immediately and has gone out within 5 seconds, that is, this process is successful.
6. Please press the Key "Reset" to reset the factory setting.

### ■ Troubleshooting

1. If after power on, motor can't work, no sound is emitted, please check the connections between battery pack and motor.
2. If after power on, LED flashes, please check the voltage of battery pack, which should be from 5V~13V.
3. If the motor emits a "Beep-Beep" tone Only, please check all the connections: BEC wires, transmitter and receiver, throttle signal wires, etc.
4. If the car can't be speed up, please check either voltage of the battery pack is too low or the temperature of ESC is too high. If the voltage of the battery pack is too low, please replace the battery pack. If the temperature of ESC is too high, please check all connections.
5. If the car stops suddenly while in working state, please check the motor's connections, and the roadblock.
6. If the car runs in the opposite direction, which the transmitter is available, please swap two wire connections between the ESC and the motor.