

Specification

1. Input Voltage:
7.2V~8.4V(NI-CD/MH) 7.4V(LI-PO) 6.6V(LI-FE)
2. Output: Rating 25A, Peak: 30A
3. Out max power: 25A/7.2V(MAX 180W)
4. Size/Weight: 51mm×25.5mm×11.5mm/31g
5. BEC: 5V 2A
6. P.W.M: 9.5KHz
7. MOTOR:
Support 300 Brushless Motor/7.4V under 5000KV

Low power auto-cut table

Battery \ Volt	7.2V	7.4V	6.6V
AUTO	Initial Detected voltage x70%		
NI-CD/NI-MH	5.4V		
LI-PO		6.0V	
LI-FE			4.8V

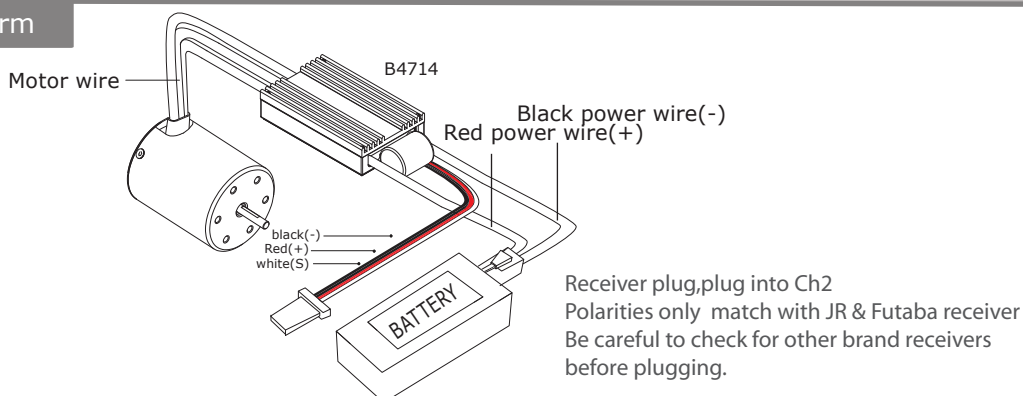
Over temperature protection

The motor will be intermittently turned off when the temperature reaches around $98^{\circ}\text{C} \pm 3 \sim 5^{\circ}\text{C}$. Optional vent fan is available for selection to enhance the ESC ventilation.

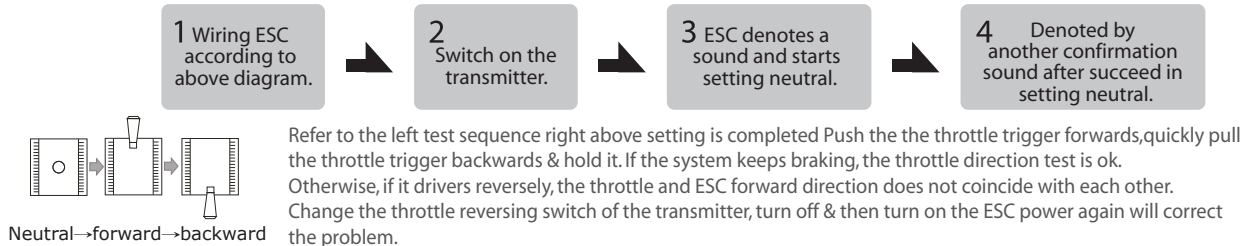
Warning

1. Avoid touching ESC heat sink or motor casing right after operation for not burning your body or skin.
2. To avoid poor contact or overheat melting of connector and power abnormal cut off be sure to always use better current rated connector & wires while replacing the original ESC connector or elongating the connecting wires.
3. Connect the battery pack just before driving, disconnect & take it out the car immediately after termination. Don't solder ESC wires directly to the battery. A proper connector is a must to be used in between.
4. Always make sure connecting the ESC to a proper power source that has the correct voltage & polarity. Incorrect voltages or reversed polarity will damage the ESC. Don't solder ESC wires directly to the battery. A proper connector is a must to be used in between.

ESC wiring diagram



Test of throttle direction coincidence



Safe gear ratio test

Input voltage	resistance	waste current
7.2V	0.18Ω	40A
11.1V	0.18Ω	61.6A
(V/R=1 7.2V/0.18Ω=40A)		
(V/R=1 11.1V/0.18Ω=61.6A)		

* Firstly, trial running starting with a small gear motor for 2~3 minutes, measure the temperatures of both ESC & motor. If both temperatures are close with each other, they are at good match. The gear ratio can then be properly adjusted to optimum according to the features of the courses. However, It's very important to always keep both temperatures under 100°C , while adjusting the gear ratio. Otherwise the demagnetization of the motor will happen, the motor efficiency will drop dramatically & the temperature will also raise up very quickly. Most battery power is now wasted on heat nothing on motor efficiency.

* It's ok to replace a higher gear ratio or a higher KV motor while the temperature of the ESC is under 80°C . But it should be done according to para 6 described, from small to bigger. Unless the KV value of the original motor is very low enough, It should replace a motor with lower KV value when the input battery voltage is changed to a higher level. The ESC will be burnt if the motor doesn't be properly changed while input voltage is changed. See example by the side of lest on the current changed inside motor while input voltage is changed.