

### Specification

- 1.Input Voltage:  
7.2V(NI-CD/MH) 7.4V(LI-PO) 6.6V(LI-FE)
- 2.Output:Rating 50A, Peak:80A
- 3.Out max power:30A/7.2V(MAX 216W)
- 4.Size/Weight:40mmX28.8mmX30mm/52g(Fan excluded)
- 5.BEC:5V 2A
- 6.P.W.M:9.5KHz
- 7.MOTOR:  
Support 540S Brushless Motor/7.4V under 3600KV

### 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

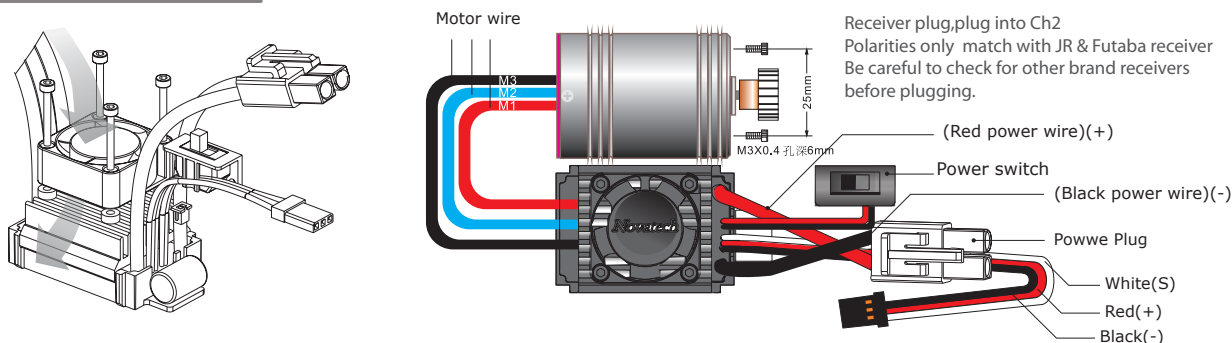
### Over temperature protection

The motor will be intermittently turned off when the temperature reaches around 95°C(±3~5°C).Optional vent fan is available for selection to enhance the ESC ventilation.

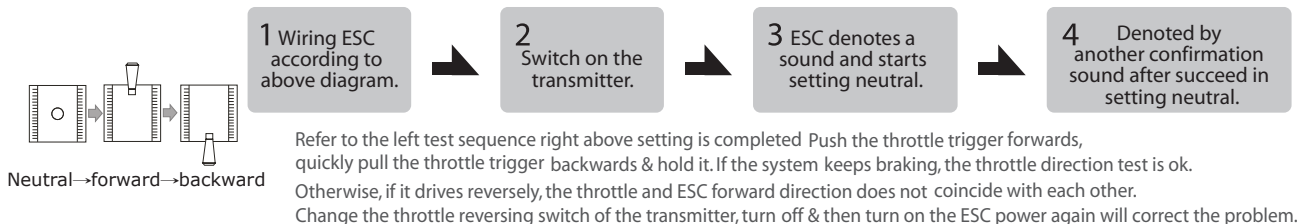
### Warning

- 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 of the car immediately after termination. Always make sure connecting the ESC to a proper power source that has correct voltage & polarity.Incorrect voltages or reversed polarity will damage the ESC.Don't solder ESC wires directly
4. Please make sure turn off ESC power, when you use set-up card (B6090). And take the servo wire out of the receiver, then insert the set-up card according to the electrode sign on the card. You need to turn off ESC power when setting is done, then insert servo wire into the receiver.
5. This ESC is not for waterproofing; please letting ESC out of water when use. Or take the power plug out when it in water and use dryer to make ESC dried, then turn on power and test it again.

### ESC wiring diagram



### Test of throttle direction coincidence



### Safe gear ratio test

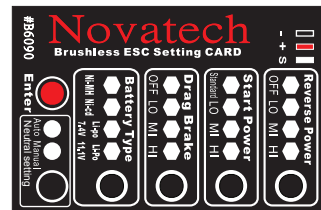
Input voltage	resistance	waste current
7.2V	0.18Ω	40A
11.1V	0.18Ω	61.6A

(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 test on the current changed inside motor while input voltage is changed.

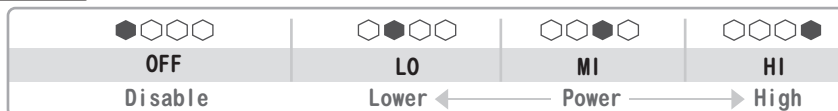
1. The setting parameters displayed after plugging on the programming board are the parameters programmed last time not the parameters inside current ESC.
2. Press down "Enter" button after setting all parameters, a sound of "Di Di Di ( for Brushless ESC)" or "Di Di Di Di Di ( for Brushed ESC)" indicates that setting is successfully completed.



### Set process

1. Turn off the "ESC" power and take the servo wire out of the receiver, then insert the set-up card according to the electrode sign on the card, and then turn on "ESC" power.
2. The set-up card will transfer the last setting to ESC, a series of sound from motor to confirm the finish of the setting transfer. By pressing down the corresponded buttons of each parameter to change the setting level as required. Red led indicates level of parameter being selected. Press down the "Enter" button to transfer the new setting to ESC, another sound come out from motor indicates completed transfer.
3. Turn off the ESC power, plug servo line into receiver, & then turn on the ESC power. Followings are ESC parameters able to be set by programming board.

**(Reverse Power)** 4 set up levels, low, middle & high.



**(Start Power)** 4 set up levels from low to high. (power level from still to full speed)



※ The lower the setting, the more smoothly startup will be. The higher the setting the stronger respond of acceleration will be.

**(Drag Brake)** Set of brake strength while the throttle gets back to the contra position.



**(Battery Type)**

Press down the right hand side button to select the battery type being used.

**(Neutral Setting)**

1. Auto -Esc default set at Auto, support transmitter with 50-50 or 70-30 throttle.
2. Manual- Adjust the throttle of transmitter to the factory default setting, insert the set-up card & press "manual" button. Plug the servo wire back into receiver. Turn on the ESC, sound of "Bi Bi Bi" denotes. Move the throttle to the forward full, stay 2 second & get a sound of "Bi Bi Bi". Move the throttle to the reverse full, stay 2 second & get a long and quick sound of "Do Ra Mi Fa So". Release the throttle to the central point, & get a sound of "Do Mi Do Mi". The manual set up of the ESC neutral is now completed. Be sure to strictly follow the set up steps at the sequence of forward full, reverse full & then neutral. Otherwise the manual set up can't work properly.
3. Once after press down the manual button, the set-up process should be completed within 15 sec; otherwise, the ESC will be reset to the auto-neutral detecting.

**If you use other mode on the programming card (ex: Start Power) after set the manual setting mode, you have to change neutral setting from Manual to Auto, and then it won't affect the manual setting as before as you setting.**