

# » ELECTRONICS SETUP

## [BEGIN TO USE THE NEW ESC]

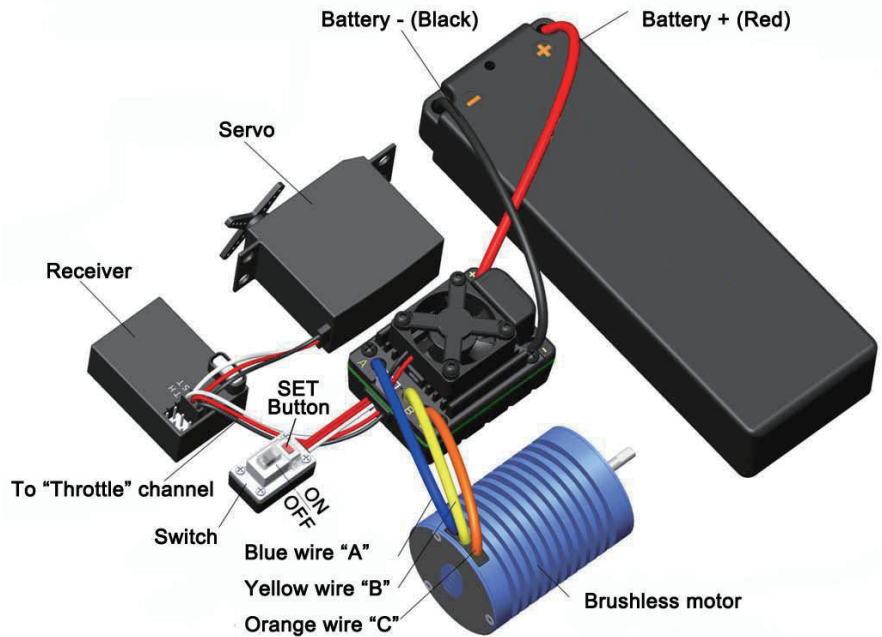
### 1. Connect the ESC, motor, receiver, battery and servo according to the following diagram

“+” and “-” wires of the ESC are connected with the battery pack, and #A, #B and #C are connected with the motor wires. The “SET” button is used for programming the ESC.

The control cable of the ESC (trio wires with black, red and white color) is connected with the throttle channel of the receiver (Usually CH2).

The #A, #B, #C wires of the ESC can be connected with the motor wires freely (without any order). If the motor runs in the opposite direction, please swap any two wire connections.

**Note:** You can use the transmitter to set the throttle channel to



the “Reverse” direction, and then the motor will run oppositely. Please calibrate the throttle range again after changing the direction of throttle channel.

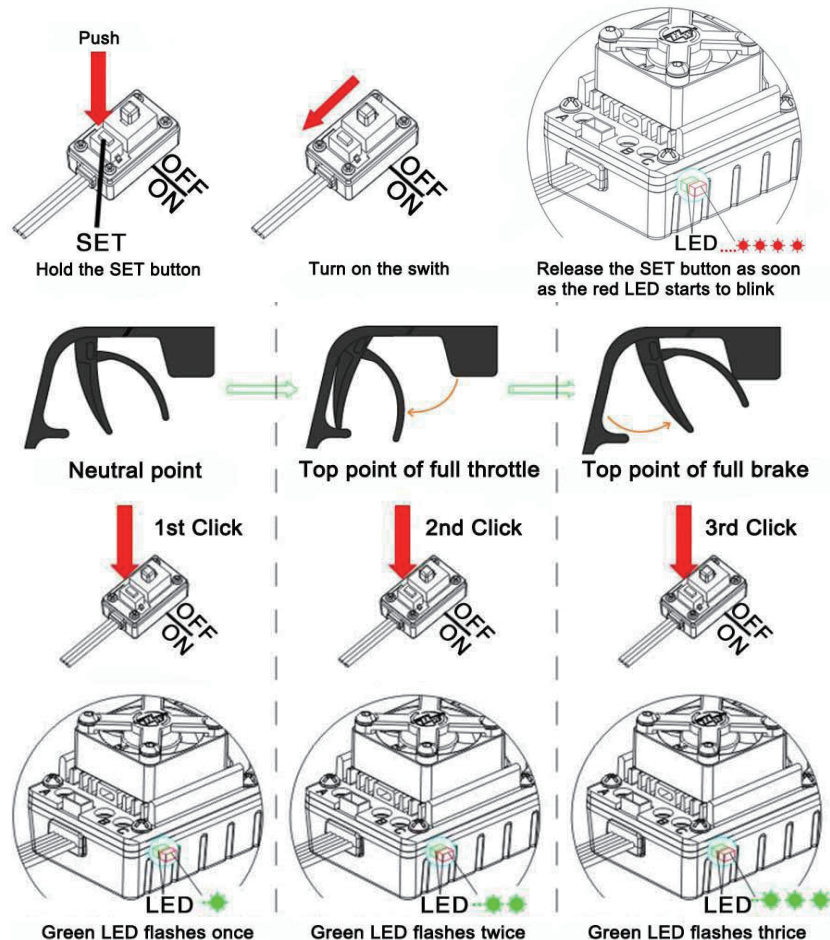
### 2. Throttle Range Setting (Throttle Range Calibration)

In order to make the ESC match the throttle range, you must calibrate it when you begin to use a new ESC, or a new transmitter, or after changing the settings of the neutral position of throttle channel, ATV or EPA parameters, otherwise the ESC cannot work properly.

There are 3 points need to be set, they are the top point of “forward”, “backward” and the neutral point.

The following pictures show how to set the throttle range with a Futaba™ transmitter.

- Switch off the ESC, turn on the transmitter, set the direction of throttle channel to “REV”, set the “EPA/ATV” value of throttle channel to “100%”, and disable the “ABS” brake function of your transmitter. (\*Note2)
- Hold the “SET” key and then switch on the ESC, when the red LED begins to flash, release the key immediately. (Please check the picture on the right side)



**Note2:** If you don't release the “SET” key after the red LED begins to flash, the ESC will enter the program mode, in such a case, please switch off the ESC and re-calibrate the throttle range again from step A to step D.

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### 3. The LED Status in Normal Running

- a) When the throttle stick is in the neutral range, neither the Red LED nor the Green LED lights up.
- b) When the car moves forward, the Red LED solidly lights; the Green LED also lights up when the throttle stick is at the top position (100% throttle).
- c) When the car brakes, the Red LED solidly lights; the Green LED also lights up when the throttle stick is at the bottom position and the maximum brake force is set to 100%.
- d) When the car reverses, the Red LED solidly lights.

### 【ALERT TONES】

- 1. Input voltage abnormal alert tone: The ESC begins to check the input voltage when power on, if it is out of the normal range, such an alert tone will be emitted: “beep-beep-, beep-beep-, beep-beep-” (There is 1 second time interval between every “beep-beep-” tone).
- 2. Throttle signal abnormal alert tone: When the ESC can't detect the normal throttle signal, such an alert tone will be emitted: “beep-, beep-, beep-” (There is 2 seconds time interval between every “beep-” tone).

### 【PROTECTION FUNCTION】

- 1. Low voltage cut-off protection: If the voltage of a Lipo battery pack is lower than the threshold for 2 seconds, the ESC will cut off the output power. Please note that the ESC cannot be restarted if the voltage of each Lipo cell is lower than 3.5V.  
For NiMH battery packs, if the voltage of the whole NiMH battery pack is higher than 9.0V but lower than 12V, it will be considered as a 3S Lipo; If it is lower than 9.0V, it will be considered as a 2S Lipo. For example, if the NiMH battery pack is 8.0V, and the threshold is set to 2.6V/Cell, it is considered as a 2S Lipo, and the low-voltage cut-off threshold for this NiMH battery pack is  $2.6 \times 2 = 5.2V$ .
- 2. Over-heat protection: When the temperature of the ESC is over a factory preset threshold for 5 seconds, the ESC will cut off the output power. You can disable the over-heat protection function for competition race.
- 3. Throttle signal loss protection: The ESC will cut off the output power if the throttle signal is lost for 0.2 second.