

The ESC are developed by ourselves so that we hold the core technology and circuit ownership. Moreover, our software will be updating rapidly and our new products will be promoted quickly.

Currently, we have developed brushless motor type in 5A/10A/18A/20A/30A/40A/60A/80A/125A. They can be fit by different type of brushless motors produced by different factories with efficiency of 95% matched.

The motor use double-layer or multi-layer print circuit boards and separate MCU power supply. We have tried large number of different circuit designs. After comparison and enhancement, we reached the most rational design. The new design improves the motor stability and reliability and significantly reduces the weight. For example, the 5A motor weights less than 2 grams ( without wire), the 10A motor weights less than 3 grams ( without wire).

It can be used within a large voltage range of 5 to 16V. It has various low-voltage protection functions which can give maximum protection to the battery, and protection adopts lowering-power method.

It has overheat protection; the power will be cut off once the surface temperature reaches 120 degree and it can prevent burnout hence efficiently extend the motor's longevity

It has throttle signal loss protection. If throttle signal is lost for 2 seconds, it will cut off the output power and wait for the signal to get back. This function can prevent signal lost once the remote control is out of battery or it is out of remote area. The 2-second throttle signal inspecting time can avoid action failure due to signal lost.

It has safe electrify function. Once the power is on, the remote control's throttle stick and any other parts won't start the motor immediately hence it will avoid sudden movement that would hurt..

It has a positive and negative shift control. There is no need to alternate the connection between the motor and the ESC.

The throttle linearity mode has been updated to emulated four-stroke methanol engine mode, its resolving power reaches 1024 and posses with flowing and exquisite speed handle, topping speed control linearity.

Maximum RPM - 300000RPM of 2 poles internal rotation /50000RPM of 12 poles external rotation/42000RPM of 14 poles external rotation.

First make sure ESC is connected to the motor, move throttle stick to bottom, switch on transmitter, connect battery pack, "dee da – dee da " tone should be emitted, which means the system is working normally and waiting for throttle control. . The helicopter model will inspect the throttle position and will send out warning tone if the position is not adjusted.

How to set the function:

- Switch “On” the transmitter
- move the throttle stick to full throttle
- Connect the main power pack
- Wait 2 seconds, you will hear “beep...beep beep...beep beep beep beep” tone

To set a timing function, after the warning tone, move the throttle stick to “low” and wait for “dee da ” tone to confirm.; if you want to change to other function, move the throttle stick to” full throttle” again; once a function is chosen and the throttle stays in the lowest position, the system will exit the setting state and return to the driving motor state.

### Feature 1. low voltage protection ( only one low voltage protection function can be chosen)

Lithium battery protection:

Tone “beep”, protecting 2 lithium batteries

Tone “beep beep”, protecting 3 lithium batteries

### Feature 2. positive and negative shift setting

Special tone: 3 beep tone (beep.beep..) Users do not need to alternate the connect between ESC and motor .

### Feature 3. Start-up

Special tone: 4 beep tone (beep.beep..) Normal start-up mode(fixed-wing mode); soft start-up mode ( helicopter mode)

### Feature 4. Lead angle selection

Special tone: 5 beep tone (beep.beep..) low lead angle 10 degree setting (applicable to helicopter multi-stage high speed motor)

Special tone: 6 beep tone (beep.beep..) medium lead angle 20 degree setting (applicable to most motor types)

Special tone: 7 beep tone (beep.beep..) high lead angle 30 degree setting (applicable to Lowspeed high torque motor)

### Feature 5. Lithium battery monomer voltage selection

Special tone: 8 beep tone (beep.beep..) monomer lithium battery protection voltage 3V

Special tone: 9 beep tone (beep.beep..) monomer lithium battery protection voltage 2.9V

Special tone: 10 beep tone (beep.beep..) monomer lithium battery protection voltage 2.8V

**Feature 6. low voltage protection ( only one low voltage protection function can be chosen)**

Special tone: 11 beep tone (beep.beep..), protecting 4 lithium batteries

Special tone: 12 beep tone (beep.beep..), protecting 5 lithium batteries

Special tone: 13 beep tone (beep.beep..), protecting 6 lithium batteries

Special tone: 14 beep tone (beep.beep..), automatically exam the battery and set a protecting voltage ( applicable to Nickel-Metal battery or nickel-hydrogen battery)

**Feature 7. Brake choice ( only one low voltage protection function can be chosen)**

Special tone: 15 beep tone (beep.beep..) Motor brake (Folding Blades fixed wing mode);  
No-brake switching

Factory default motor battery protection function: 3 Lithium batteries

Factory default motor start-up mode: Fixed-wing mode

Factory default lead angle setting: Medium lead angle setting

Factory default Lithium battery monomer voltage selection: monomer lithium battery protection voltage 2.9V

Factory default brake choice: No-brake

The system will repeat the function mode until a user choose a certain function, the system then will exit the function mode and enter the motor driving state. The function setting is different from different type of ESC, please follow the specific introduction.