

Manual of AEO Power Series ESC

The ESC are all 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.

At the present time, we have developed the appropriate ESC for helicopter brushless motor type in 10A/15A/20A/30A/40A/60A/100A and 30A/40A. They can be fit by different type of brushless motors produced by different factories with efficiency of 95% matched.

Use double-layer or multi-layer print circuit boards and separate MCU power supply. We have tried different circuit designs. After comparison and enhancement, we reached the circuit layout with minimal circuit elements. The new design improves the motor stability and reliability and significantly reduces the weight.

Full protection features: Low-voltage cutoff protection, over-heat protection, and throttle signal loss protection that can efficiently extend the motor's longevity.

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

Invocative pre-select throttle mode---/steep/ smooth /super-smooth, possess with flowing and exquisite speed handle, topping speed control linearity.

Maximum RPM - 30000RPM of 2 poles internal rotation /50000RPM of 12 poles external rotation/42000RPM of 14 poles external rotation.

Frequency can be chosen among 8KHz, 16KHz and 32KHz, which is suitable for any other brand's brushless motor.

3 start modes: Mighty, Soft, or super-Soft, can be used for helicopter ESC models.

The helicopter ESC model has low power supply protections: Soft cutoff (Gradually reduces the output power) or Cutoff (Immediately stops output power), suitable for players in any level.

We also develop portable programmed card with easy and simple interface with which the user can modify the parameter easily.

How to use :

First make sure ESC is connected to the motor, move throttle stick to bottom, switch on transmitter, connect battery pack, a . 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 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 a beep beep beep beep tone
- To set a timing function, after the warning tone, move the throttle stick to low and wait for a . 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 a beep, protecting 2 lithium batteries

Tone a beep beep, protecting 3 lithium batteries

Tone a beep beep beep, protecting 4 lithium batteries

Tone a beep beep beep beep, protecting 5 lithium batteries

Nickel-Cadmium / Nickel-Hydrogen batteries protection

Tone a beep beep beep beep beep, high protection

Tone a beep beep beep beep beep beep, normal protection

Tone a beep beep beep beep beep beep beep, low protection

Tone a beep beep beep beep beep beep beep beep, no protection

✧ Feature 2. positive and negative shift setting

Special tone: 9 beep tone (beep.beep..) Users do not need to alternate the connect between ESC and motor .

✧ Feature 3.Brake choice (The helicopter ESC model Feature 3 is Low Power protections: Cutoff power or Gradually reduces the output power)

Special tone: 10 beep tone (beep.beep..) Brake mode setting: switch the mode between %Brake On+and %Brake Off+(when the remote controller throttle stick is off, it can simulate the brake effect to avoid the motor to be driven by the airscrew and most useful for folding oar glider)

Feature 4、throttle linearity mode---/steep/ smooth /super-smooth 油门线性选择

Special tone: 11 beep tone (beep.beep..) steep linearity

Special tone: 12 beep tone (beep.beep..) smooth linearity

Special tone: 13 beep tone (beep.beep..) very smooth linearity

Feature 5、 Switching Frequency

Special tone: 14 beep tone (beep.beep..) 8KHZ

Special tone: 15 beep tone (beep.beep..) 16KHZ

Special tone: 16 beep tone (beep.beep..) 32KHZ

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.