

User Manual

Specification:

- Constant Current: 20A
- Input Voltage: 6V - 12V
- Burst Current: 25A
- UBEC: 2A
- Dimension: :45mm x 26mm x 8mm
- Weight: 21g (Net Weight)

Features:

- Multi-layer PCB and separate MCU power supply, which improves the motor stability and reliability and significantly reduces the weight.
- Low Voltage Cut-off Protection
- Over-heat protection; avoid the breaking down of the ESC.
- Throttle signal loss protection
- Safe electrifies function.
- Smooth and accurate speed control, excellent throttle linearity.
- Supported highest motor speed: 300000 RPM (2 poles of internal rotation), 50000 RPM (12 poles of external rotation), 42000 RPM (14 poles of external rotation).
- Positive and negative shift automatic control. There is no need to alternate the connection between the motor and the ESC.

Normal Startup Procedure:

1. Move the throttle stick to bottom, Switch on Transmitter
2. Connect the battery pack to ESC, special tome like " dee da – dee da " means power supply is OK
3. When Self test is finished, a long beeeep tone should be emitted.
And a warning tone should be emitte if the position is not proper adjusted.
4. ESC begins to play music, ready to fly.
5. Several"beep-" should be emitted, presenting the value of each programe item.
6. Move throttle stock upwards to go flying.

Throttle range setting:

(Note: Throttle range should be reset when ever a new transmitter being used)

1. Switch on transmitter, move throttle stick to top
2. Connect battery pack to ESC, and wait for about 2 seconds.
3. "Beep-beep" tone should be emitted, means throttle range highest point has been correctly confirmed.

4. Move throttle stick to the bottom, and wait for about 1 second
5. “Beep” tone should be emitted, means lowest point has been confirmed.
6. ESC begins to play music, ready to fly.

Timing Function Setting:

After the warning tone, move the throttle stick to “bottom” 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 automatic 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: (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 Low speed 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 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 users choose a certain function. And the system will exit the function mode after enter the motor driving state.