

BRUSHLESS ESC INSTRUCTION MANUAL

Thank you for buying our brushless ESC. Before using the product, please read this manual thoroughly.

1. INSTRUCTIONS

- A. Scientific circuitry designs, all of them are made from import components.
- B. Using lowest impedance PCB, the capability of enduring current is good and completely reach the current specifications marked.
- C. Controlling circuitry and BEC circuitry use independent circuitry to supply power, they have better anti-jamming ability, which can avoid wild possibility.
- D. Controlling circuitry and power output use independent PCB, which can prevent the temperature of power tubal effect controlling circuit. There are 2mm clearances on controlling PCB and power output PCB so that there is better heatradiating surroundings.
- E. Good temperature protection circuit.
- F. Over- voltage protection and low- voltage protection function.
- G. Super soft and superior timing linearity feeling.

2.SPECIFICATIONS

CXM-40A-GL

Rated current: 40A

Continuous current: 40A

Max Current: 50A(not less than 10 seconds)

BEC Current: Max 2A(linearity voltage stabilizing component)

3. FUNCTIONS

- A. Safety start-up mode: when ESC gets power, the throttle sticker of transmitter which is in any point can't make ESC turn on.
- B. Low-voltage protection: when input voltage is less than enactment value, ESC can decrease or close power input automatically and protect drive battery effectively.
- C. Over-voltage protection: when input voltage is less than enactment value, ESC will utter alarm, and ESC will stop working, which prevent ESC from damageing.
- D. Over-heat protection: when the temperature is out of range, ESC will breake off power

output automatically, which can protect ESC effectively.

E. Battery type option: there are two options.

F. Start-up mode: there are three modes which can be used for all model aerocrafts.

G. Transmitter compatibility: T setting throttle travel, being compatible with all brand transmitters.

H. Safety: using ESC properly, if ESC lose remote control signal, ESC will colse output automatically, which avoid loss causing by losing control.

4. THROTTLE SETTING INSTRCTIONS:

Throttle setting is only used for using ESC first time or using ESC match new transmitter

A. Turn on transmitter, move the throttle stick to the top point, switch on ESC power.

B. There is “di---” sound on brushless motor, when ESC switches on.

C. Wait for 2 seconds, then brushless motor will utter “di---di---”, when the throttle reaches the top point.

D. Move the throttle stick to the low point.

E. Wait for 1 second, then brushless motor will utter “di---”, when throttle reaches the low point.

F. When brushless motor utters“di---di---di-----di”, when all ready.

G. Then you can use ESC.

5. PROCESS INSTRUCTIONS OF NATURAL USING

A. Turn on transmitter, move the throttle stick to the low point,

B. Brushless motor utters “di---”, when power is on.

C.Brushless motor utters “di---di---di-----di”, when all ready.

D.Then you can use ESC.

6. ESC PROGRAMM SETTING

There are four steps:

- a. Enter progamming
- b. Choose setting item.
- c. Choose parameter item under setting item.
- d. Exit.

A. ENTER PROGRAM MODE

- a. Turn on transmitter, move the throttle stick to the top point, connect up ESC power.
- b. Brushless motor utters “di---”, when power is connected up.
- c. Wait for 2seconds, then brushless will utter “di---di---”.
- d. Go on waiting for 5 seconds, then brushless motor will utter “di---”, when program enters.

B. CHOOSE SETTING ITEM.

CAUTION: Entering program mode, brushless will utter some tones circularly, when you hear some tone, move the throttle stick of transmitter to the low point in 2 seconds and enter the setting item, or brushless will utter next setting item tones. Some tones circularly are as follows:

- | | |
|---------------------------|---|
| a. “di---” | brake setting tone |
| b. “di—di---” | battery type setting tone |
| c. “di---di---di---” | low-voltage protection mode setting tone |
| d. “di---di---di---di---” | low-voltage protection voltage value setting tone |
| e. “di---” | startup mode setting tone |
| f. “di—di---” | timing option setting tone |
| g. “di---di---di---” | set to default setting tone |
| h. “di—di---” | exit setting tone |

C. CHOOSE SETTING ITEM PARAMETER

CAUTION: Brushless motor will utter serval typies tones circularly, after choosing some setting item. After some tone,if you move the throttle stick of transmitter to the top point in 1 second, it means that you choose the setting parameter which corresponds to the tone, then the brushless motor will utter “di---”, it indicates ESC has chosen the parameter and will keep it enduringly. If you do not want to set up other parameters, you can move the throttle stick to the low point in 2 seconds to exit programme setting item fleetly, if you want to go on setting up other parameters, please return the step of CHOOSE SETTING ITEM to choose other setting items.

7. The corresponding parameter diagram of tones:

TONE SETTING ITEM	DI	DI-DI	DI-DI-DI
Brake setting	▲OFF	ON	Inefficacy
Battery type setting	▲ Lithium battery	NiMH/NiCd battery	Inefficacy
low-voltage protection mode setting	▲ Decrease power output	Turn off power	Inefficacy
Low-voltage protection voltage value setting	low	▲middle	high
Startup mode setting	▲fast-start	mild-start	soft-start
Timming option setting	▲low	middle	high

Remakes: the option marked “▲” is factory default parameter.

8. SIMPLE INSTRUCTION OF EVERY FUNTION

BRAKE SETTING

OFF: When the throttle stick of transmitter is on the lowest point, brushless motor will cease gradually with rotation inertia.

ON: When the throttle stick of transmitter is on the lowest point, ESC control brushless motor which will cease fleetly.

BATTERY TYPE SETTING

Lithium battery: Lithium hydronium battery or Lithium polymer battery

NiMH /NiCd battery: Nickel-Metal Hydride battery /Nickel-Cadmium battery

LOW-VOLTAGE PROTECTION MODE SETTING

Decrease power output: when voltage value of battery is lower than enactment value of ESC, ESC will decrease power output, this condition will last about 10 seconds, at last, ESC colse output.

Close power output: when voltage value of battery is lower than enactment value of ESC, ESC will colse power output at once.

LOW-VOLTAGE PROTECTION VOLTAGE VALUE SETTING

When you setup using Lithium battery, ESC will identify the quantity of battery automatically

LOW: the voltage of battery monomer is 2.6V

MIDDLE: the voltage of battery monomer is 2.6V

HIGH: the voltage of battery monomer is 3.0V

When you setup using Nickel-Metal hydride battery /Nickel-Cadmium battery, ESC will identify battery discharge per percent value of voltage.

LOW: 60%

MIDDLE: 65%

HIGH: 70%

STARTUP MODE SETTING

FAST-START: ESC will startup brushless motor fleetly in 0.5 second(**being used for electromotion glider**).

MILD-START: ESC will startup brushless motor slowly in 1 second(**being used for electromotion helicopter**).

SOFT-START: ESC will startup brushless motor slowly in 2 seconds (**being used for electromotion helicopter**).

TIMMING SETTING

LOW: using for brushless motor with 2 poles

MIDDLE: using for brushless motor with 6 poles

HIGH: in order to increase rotation rate, you can setup this item, but a few of brushless motors will work unusually, it is recommended that you can test it on the ground at first, when you use it.

Remarks: low timing is used for most of brushless motors, so it is recommended that you start to set from the high setting to avoid damages of ESC and brushless motor because of setting improperly.