

## ESC 45A Electronic Speed Controller

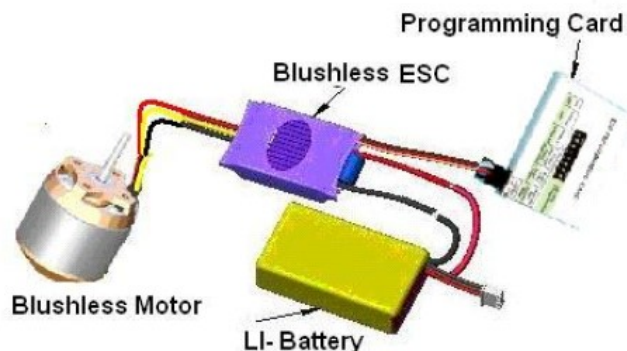
Thanks for choosing this ESC (Electronic Speed Controller) for your brushless motors. This is a user-friendly, easy to setup, and high efficiency speed controller for both fix-wing airplanes & helicopters. It is produced by the highest quality and reliability. We hope it provides you with hours of enjoyment.

We strongly recommend you **pay careful attention to the following instructions and warning** before you start using this electronic speed controller.

### Model : ESC 45 A



### Connection Diagram :



### Specifications:

Application Fields: fix-wing airplane & helicopter.

Battery range:

LI-XX = 2 ~ 4 cells; 7.2V ~14. 4V.

NI-XX = 5 ~ 12 cells; 6.0V ~ 14.4V.

Working Current: 45A /50 A surge 15 sec.

PWM frequency: 8 KHz.

Maximum RPM: 2-pole motor / 210,000 rpm.

6-pole motor / 70,000 rpm.

12-pole motor / 35,000 rpm.

Protection: OHP, Over Heat protection.

OVP, Over Voltage (battery) Protection.

LVP, Low Voltage Protection (soft cut-off).

BEC Current: 3A (Max.) .

Ambient Temperature: 0°C - 50°C.

Weigh: 48 g.

Size: 70 x 27 x 14 (mm).

### Features:

- High rate (8 KHz) switching (PWM); Supported highest motor speed: 210000 RPM (2 poles), 70000 RPM (6 poles), 35000 RPM (12 poles).
- Dynamic braking ensures prompt prop folding.
- Over Heat Protection.(OHP).
- User easily Programmable ESC Features by ESC Programming Card (optional).

- Low-voltage soft cut-off protection, cause throttle going slow down.
- Battery range protection, when the voltage of the battery pack is lower/higher than the Battery range threshold, the alarm status is activated.
- Brake / No-Brake operation. Stop folding props cold or let fixed props freewheel.
- Safe “power on” arming program ensures motor will not accidentally turn on.
- Low torque “soft start” prevents damage to fragile gear boxes.
- Auto shut down in 2sec. after when RX signal is lost or radio interference becomes severe.
- Throttle Range can be auto setting during at first power on time.
- ESC can make brushless motor play a music when all the setting is ready to go.

### Operation Produce:

1. Choose right Battery voltage range according to ESC input range.
2. Automatic throttle adjustment for using on every transmitter.
3. Setting Brake or Non-brake mode.

### **The following setting needs programming card :**

4. This ESC has program card setting or manual setting functions.
5. Setting right battery type, Li-xx or NICD/NIHM battery. For Low Voltage Protection (LVP) function. When battery voltage drops to the LVP level, the motor output decreased gradually instead of a sudden-stop. This low voltage battery warning function allows an early safe landing on R/C aircraft.
6. 8 selectable "ready to go" melody.
7. This ESC has factor programmed for soft start function.
8. This ESC has start and over heat protection function.
9. The motor will decrease its power to full stop if the receiver is out of the control range. Back to the receiving range the motor power will be resumed.

**ATTENTION: In field use, switch-on the transmitter and always make sure that the throttle is on the lowest end before connecting the battery. The controller will detect battery voltage once the battery is connected.**

### **Instruction:**

1. Manual setting:
  - A. Throttle range setting: move the throttle stick to the top end, then connect battery to this ESC, 2 short "B-B" will be heard from the brushless motor, then remove the stick to the lowest end. When the setting is ready a melody will be heard.
  - B. Non-Brake setting: switch-on transmitter and moving the stick to the top end then connect the battery to this ESC. Wait until 3 short "B-B-B" be heard from the brushless motor, removing the stick to the lowest end. When the setting is ready a melody will be heard.
  - C. Brake setting: switch-on the transmitter and move the stick to the top end. Connect battery to this ESC. Wait until 4 short "B-B-B-B" be heard from the brushless motor, then by removing the stick to the lowest end. When the setting is ready a melody will be heard.
2. Program card setting: setting up by program card. (for more detail please read the program card instruction).

### **Warranty:**

The manufacturer's guarantee is limited to the replacement of any defective parts or defective in workmanship. This does not include the damage caused by crash, over-loading or improper use.