GX-H50A Helicopter Brushless Electric Speed Controller Instruction Manual

Connect the output wires of speed controller to the brushless motor, and plug the signal connector to throttle channel of the receiver. (This ESC with integrated BEC circuit).

Check the throttle position of your transmitter and make sure it is at lowest position (full close), switch on transmitter and receiver power, switch on main power to motor.

After the system is powered on, you will hear ♪ ♪, the two beeps indicate power source/speed controller/motor are connected successfully. 1 second later, the motor will emit BEEP BEEP, this is safety alert, it proves the speed controller is under control of the receiver, you should keep away from the propeller to prevent from any accident. The speed controller will act according to the signal from receiver.

*If the motor keep beeping after power on, please check receiver power or transmitter status.

Note: The ESC will cut off power output immediately when lose receiver signal, and emit sound of ♪ ♪ ♪ ♪ ♪ to prompt the error. You may using the BEEP to locate your helicopter in field. (When use PCM receiver, receiver can maintain normal control signal when lose transmitter signal, the ESC will not be able to emit the BEEP sound in this case)

The safety alert sound is loud, and may cause shake of the prop, this is normal. If the safety alert does not clear enough, please check the battery or the wire quality between battery to ESC.

Setting procedures:

1. Switch off main power of the system, Switch on the transmitter and receiver;
2., move throttle stick to the highest position. (Futaba series radios need to set throttle channel to REV);
3. Switch on the main power to speed controller;.
4. wait for .power on alert;
5. Power-on alert: ♪ ♪ and then you will enter into the main manual

Manual 1.: Battery type and cells number

Single BEEP: battery type and cells number

It will repeats 3 times, and will move to manual 2 if the throttle unmoved during the beeping. If you want to set up the battery type and cells, move the throttle swiftly to the middle position, and wait for new BEEP.

- • — denotes NIMH/NICD battery, this speed controller can auto-detect the number of cells before start, but you should make sure the battery is fully charged. When the voltage per cell drops lower than 0.8V, the speed controller will reduce the output, and will fully cut-off when the voltage per cell drops lower than 0.7V. (all options repeat 3 times)

  When the option is you desired, move the throttle to the highest point(full open) before the 3rd time beeps complete, and wait for change setting alert.(change setting alert is a high frequency beep)

  After change a setting, it will back to main manual for other settings.

  - • — — for 6S Lipo
  - • — — — for 5S Lipo
  - • — — — — for 4S Lipo
  - • — — — — — for 3S Lipo

•－－－－－－for 2S lipo

If you do not move the throttle stick, the system will repeat the current sub-manual, and will back to main manual till you move the throttle stick to the highest position (full open). You can stop or cancel a setting by moving the throttle to the lowest position (full close), system will reload the data, you will hear security alert 1 second later, then the system is ready

Manual 2: throttle control: 2 continuous beeps

••－Auto-set throttle range
••－－Fixed throttle range, 1.1(lowest) to 1.8MS (highest)
••－－－High-accelerate mode, suit for sensitive throttle application.
••－－－－Low-accelerate mode, used when power is low or poor battery performance.

Manual 3: working mode options, 3 continuous beeps

•••－ normal slow start-up mode
•••－－ 2 to 4 poles motors, constant-speed control mode.
•••－－－ 6 to 10 poles motors, constant-speed control mode.
•••－－－－ 12 to 16 poles motors, constant-speed control mode.

Manual 4: Power output basic characteristics adjustment, 4 continuous beeps

••••－	default rotating direction
••••－－	reverse rotating direction
••••－－－	soft cut-off protection (reduce output)
••••－－－－	Hard cut-off protection (stop output)

Manual 5: timing advance, 5 continuous beeps

•••••－	1°
•••••－－	7°
•••••－－－	15°
•••••－－－－	30°

*Note: 8-pole and above motor can use 1 level upper time advance setting, but the efficiency will reduce while output is increasing. All motors can use the lowest time advance setting to obtain a high efficiency.

Manual 6: PWM setting, 6 continuous beeps

••••••－ 8KHZ suit for most of motors, especially for outrunners
••••••－－ 16KHZ for high KV (4000KV +) and super low resistance motors, this will obviously reduce the mechanical vibration, and running smoother, but this setting will increase the heat by 20%, please be care for heat radiation.

When the throttle is in middle position, swiftly move it to full open position, then the data will be saved.

If you want to quit setting half-way, just move the throttle to lowest position, data will be not changed.
You can set up all options one time, and move the throttle to lowest position once you complete all the settings, alter the security alert, the system will be ready.

Speed controller factory default setting:

1. Battery type and cell number auto-detect
2. Throttle range auto-setting, low accelerate mode.
3. Timing mode: 1°
4. PWM: 8KHZ.