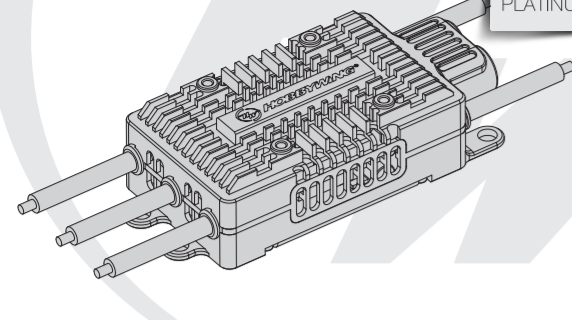


USER MANUAL PLATINUM Brushless Electronic Speed Controller PLATINUM 180A HV SBEC V5



20240328

HW-SMA002DUL-A0



Thank you for purchasing this HOBBYWING product! Please read this declaration carefully before use...

02 Warnings

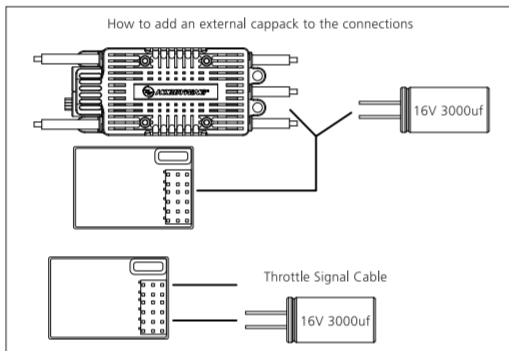
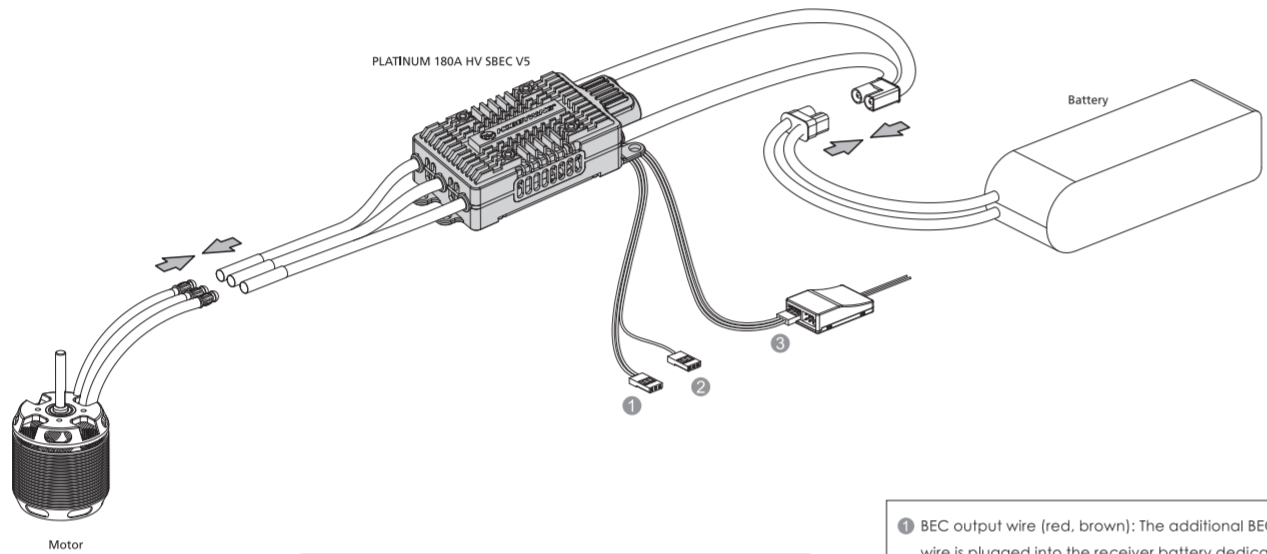
- Before using this product, read the instruction manual carefully. Ensure that all components are used correctly to avoid any damage of the ESC and other components of the system...

03 specifications

Table with specifications: Model (PLATINUM 180A HV SBEC V5), Continuous/Peak current (180A/260A), Input voltage (6-14S LiPo battery), BEC (Switch Mode BEC...), Input/Output wires (3x black 10AWG...), Independent parameter programming interface (Connect LCD program box...), LED light (Display the statuses and fault alerts), Size/Weight (100.6\*45.5\*26.1mm / 250.6g), Mounting holes (M3, 16.5\*90\*34mm), The scope of application (550-700 class electric helicopter...).

04 User Guide

1 Wiring diagram



- BEC output wire (red, brown): The additional BEC output wire is plugged into the receiver battery dedicated channel or any available channel...

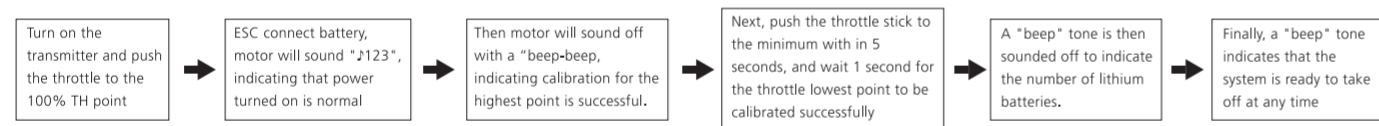
2 External Capacitor Module (also called Capped) Wiring (Optional)

For this ESC, its BEC load capacity may be insufficient when using high power servos. In that case, we suggest connecting the stock external capacitor to the BEC's output end...

3 Normal boot process



4 Throttle stick calibration operation method



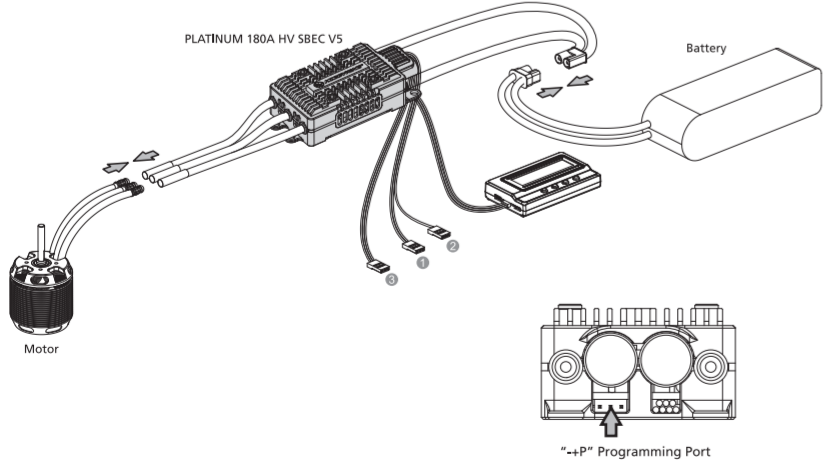
- ESC default throttle range is 1100µs-1940µs (Futaba standard). The throttle range should always be re-calibrated for the first time or when transmitter have been replaced.

05 ESC programming and Data checking

- The ESC parameters can be programmed specifically to meet different flight needs. The ESC will be able to record the calibration speed of the current flight (only in storage fixed speed mode)...

1 Use Multifunction LCD program box to program ESC parameters (need to purchase separately)

1. Wiring diagram



2. Setting methods

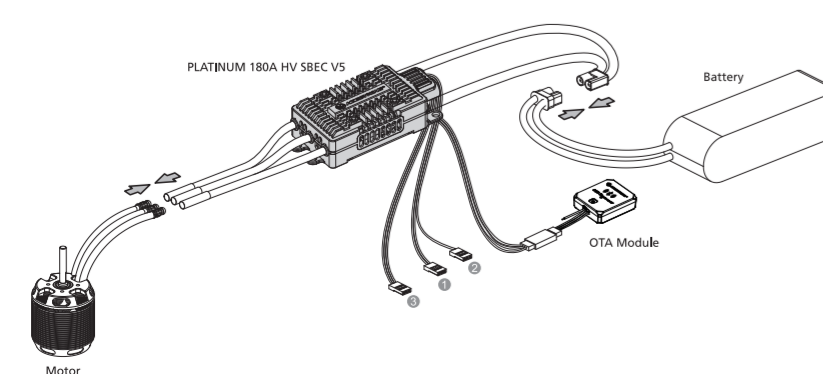
- Connect ESC to LCD program box as shown above, and then connect the battery to ESC. The current firmware version will be reflected once the power is turned on...

3. Check ESC running data

- Do not disconnect the ESC after the flight, then connect the ESC and LCD program box as shown above.

2 Use OTA Module to program ESC parameters (sold separately)

1. The connection diagram



2. Setting methods

- Connect the ESC and OTA module as shown above, then connect the battery to ESC. Turn on your phone's Bluetooth and connect to the OTA module.

3. Check ESC running data

- Do not disconnect the ESC after the flight, then connect the ESC and OTA modules as shown above.

06 Programmable parameter items and instructions

1 Programmable parameter items and parameter values

Table listing 16 programmable parameter items and their values for different ESC modes.

\*\*\* in the form below indicate factory defaults.

2 Programmable parameters project description

- 1.1. Fixed-wing mode: Suitable for fixed-wing, in this mode, the throttle has to be more than 5% (including 5%) to start the motor... 1.2. Helicopter external Governor mode: Suitable for helicopter aircraft without any fixed speed equipment...

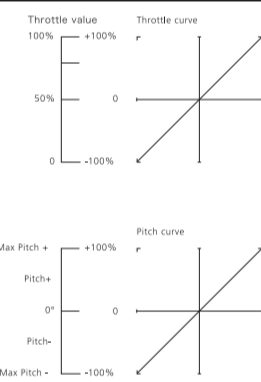
07 Speed Governor Function

1 Explanation for ESC Speed-governing

Establish the "Motor RPM-Throttle Amount Curve" via the speed standardization, and then set the throttle amount to some fixed value on the transmitter... 1.1. Brake types: Normal brake: This function will stop the motor from braking during operating according to the value set on the braking force.

2 RPM Standardization

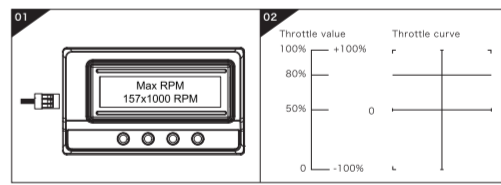
- 1) Theory of RPM Standardization: During the RPM standardization, the ESC will establish a "Motor RPM-Throttle" curve by itself based on the actual battery voltage and the actual KV rating of the motor... 2) Procedures of RPM Standardization: We recommend using the default "Throttle Curve & Pitch Curve"...



3 How to Set the Speed-governing Function

- The best throttle amount (set in the Helicopter "Store Governor" mode) of the ESC ranges from 70% to 90%, so please try to set the throttle amount (set in the Helicopter "Store Governor" mode) within this range.

1. In "Helicopter (Store Governor)" mode, you can check the standardized speed (Max RPM) and needn't standardize the speed every time when the ESC is connected to the battery...



Formula: Main Blades' RPM (at the 100% throttle) = Max RPM \* (Motor Poles + 2) / Drive Gear Ratio. The Main Blades' RPM (at the 100% throttle) in the example is: 157 \* 1000 / (10 + 2) / (120 / 13) = 3400 RPM...

08 Warning Tones and Protection

1 LED indicators and warning notes

Table showing Protection, Tone, LED indicator, and Instruction for various warning conditions.

2 Protection function description

- Abnormal power-on voltage protection: The ESC enters a protective state once the input voltage detected is not in the operating range. Prompting LED light to flash. Start-up protection: The start-up protection will be able to detect the motor speed from when the speed rises or the rising speed is unstable...