

01 Warnings

- Read through the manuals of all power devices and aircraft and ensure the power configuration is rational before using this unit, as improper power configuration will overload the motor and damage the unit.
- When installing this unit, relevant operations like soldering, connecting will be needed, so please ensure all wires and connections are well insulated before connecting the unit to related devices, as short circuit will damage the unit. When soldering relevant wires of the unit, please use a soldering iron with sufficient power to do the soldering, as poor connection may cause your aircraft to lose control or other unpredictable issues like damage to the device.
- Always keep your aircraft away from unsafe elements like obstacles, crowd, high-voltage power lines. Please fly your aircraft in the working environment as regulated in this manual. Although there are some protections, improper use may still cause permanent damage to the product.
- Always disconnect and remove batteries after use, as the ESC may drive the motor to rotate and cause unpredictable danger if it's still connected to the battery. Long-time contact will cause the battery to completely discharge and result in damage to the battery or/and the ESC. This will not be covered under warranty.

02 Features

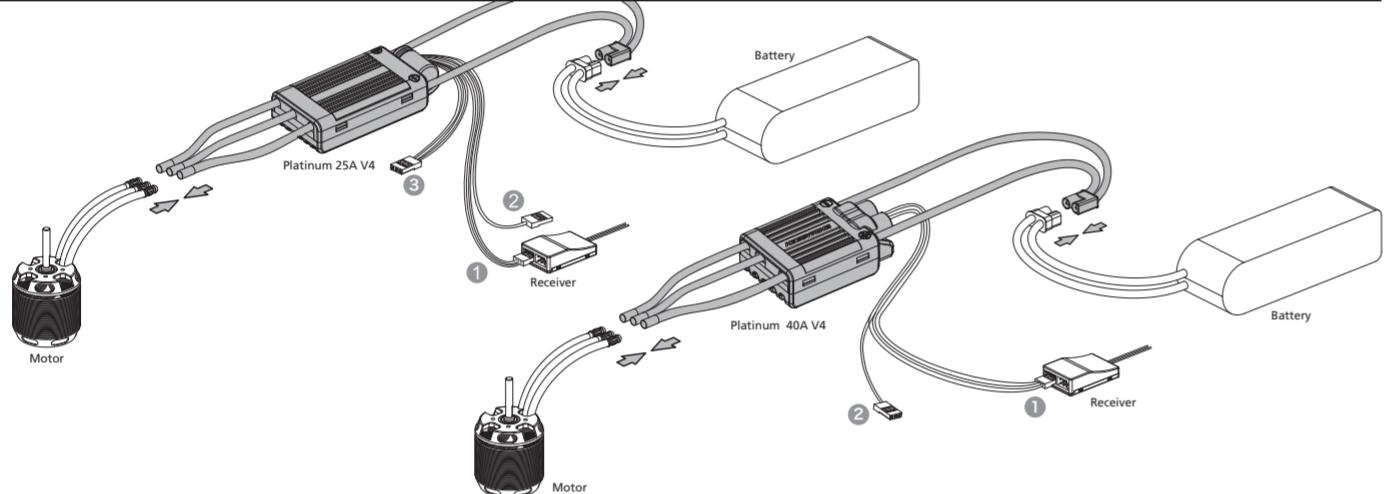
- High performance 32-bit microprocessor with the running frequency of up to 72MHz for excellent performance. The microprocessor powered by the separate voltage-regulating IC, which features great anti-interference performance, greatly reduces the possibility of losing control.
- Separate switch-mode voltage-regulating BEC with adjustable voltage. The BEC is separated from other circuits, its normal output will be guaranteed to protect your aircraft from crash when issues like the power board of the ESC is burnt out.
- DEO (Driving Efficiency Optimization) technology or Freewheeling for smoother throttle response, higher driving efficiency and lower ESC temperature.
- Four flight modes: Fixed-wing, Helicopter (External Governor), Helicopter (Elf Governor), and Helicopter (Store Governor).
- Soft start-up in the three Helicopter modes.
- Helicopter speed-governing function, which features adjustable "Governor Parameter P". It is easy to use. It can guarantee the stable rotation of main blades when the load changes dramatically.
- Auto Restart Time allows you to interrupt the shutdown and landing during the preset time and restart the motor promptly to avoid crash caused by improper operation.
- Data Logging can record the minimum voltage, the maximum temperature and the standardized RPM of the current flight and output the running data of the ESC in real time (HOBBYWING WiFi Express module, HW Link mobile phone APP are needed).
- RPM Signal Output port for outputting the electrical RPM of the motor (calculated in 2 poles) in real time.
- Reverse Brake allows your aircraft to simulate the landing of a real aircraft. That is a reverse thrust will be generated when the propeller rotates reversely to shorten the coasting distance and make the aircraft stop rapidly.
- Separate programming port for connecting HOBBYWING LCD program box or WiFi Express module.
- ESC programming, firmware upgrade, and data checking via HOBBYWING WiFi Express module. HW Link mobile phone APP allows you to program your ESC, upgrade its firmware and check relevant data wirelessly (HOBBYWING WiFi Express module is needed).
- Real-time data checking for checking the running data of your ESC in real time via HOBBYWING WiFi Express module, HW Link mobile phone APP.
- Online data checking, ESC programming, firmware upgrade are supported (HOBBYWING LCD program box & PC or WiFi Express module & Smartphone are needed).
- Multiple protections like start-up protection, ESC thermal protection, capacitor thermal protection, over-current protection, overload protection, and throttle signal loss protection.

03 Specifications

Model	Platinum 25A V4	Platinum 40A V4
Cont./Peak Current	25A/40A	40A/60A
Input Voltage	3-6S Lipo	3-4S Lipo
BEC	Switch-mode, 6V / 7.4V Adjustable, Cont./Peak : 3A/7A	Switch-mode, 5-8V Adjustable (Step: 0.1V), Cont./Peak : 7A/18A
Input / Output Wires	Black & Red 16AWG input wires / Black 16AWG output wires	Black & Red 14AWG input wires / Black 14AWG output wires
Separate Programming Port	Short Black & Red & White wires with JR 3Pin connectors, For connecting LCD Program Box or WiFi Express	For connecting LCD Program Box or WiFi Express
Size / Weight	47x22x10mm / 27g	48x30x15mm / 47g
Application	250Class electric Helicopter (Main Blades: 200-300mm), electric fixed-wing, multi-rotor	300 Class electric Helicopter (Main Blades: 280-325mm), electric fixed-wing, multi-rotor

04 User Guide

1 Wiring



- ① Throttle Signal Cable (White/Red/Black): plug it into the TH throttle on the receiver or the corresponding channel on the Flybarless system. About which channel you should plug it in, it depends on the receiver type and the Flybarless system type. The White wire is for transmitting throttle signals, the Red & Black wires are connected to the output end of the internal BEC in parallel (that is they are BEC output wire and ground wire).
- ② RMP Signal Wire (Yellow): plug it into the RMP input channel on the Flybarless system. (This wire can be used for providing RMP signal input when using external device for speed-governing.)
- ③ Separate Programming Cable (the short White/Red/Black cable): for connecting the ESC to a LCD program box or WiFi Express module.

2 Normal Start-up Process

- Turn on the transmitter, and then move the throttle stick to the bottom position.
- After connecting the ESC to a battery, the motor will emit "2 123" to indicate it's powered on normally.
- The motor will emit several short beeps to indicate the number of LiPo cells you've plugged in.
- The motor will emit a long beep to indicate the system is ready to go.

3 ESC/Radio Calibration

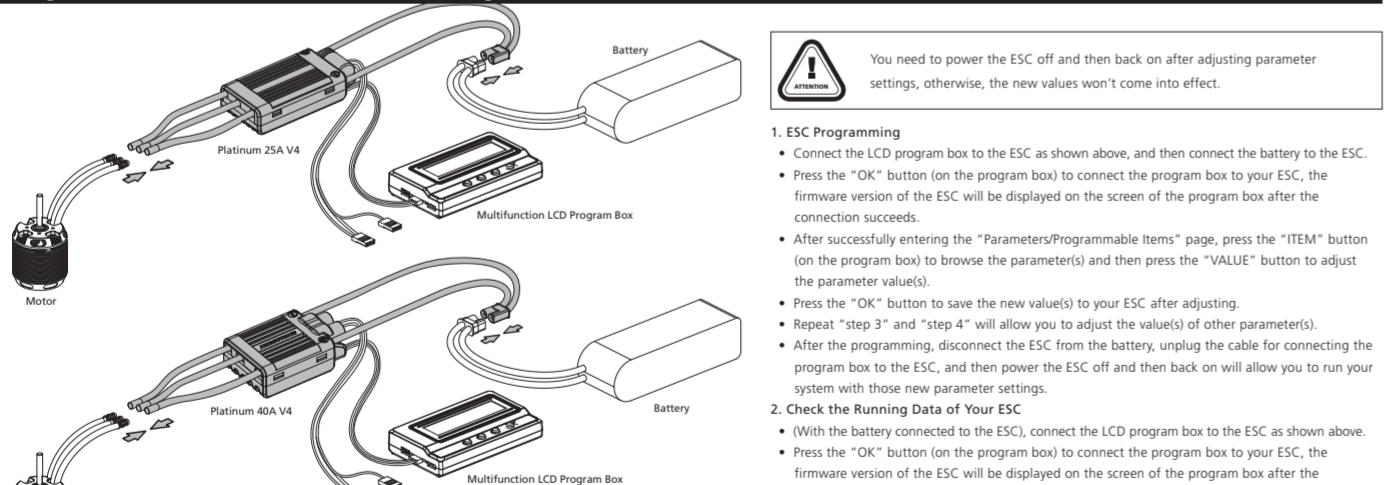
- Turn on the transmitter and move the throttle stick to the top position.
- Connect a battery to the ESC, the motor will sound "2123" to indicate the ESC is powered on normally.
- 5 seconds later, the motor will beep two short beeps to indicate the maximum throttle position is accepted.
- Move the throttle stick to the bottom position after you hear those two beeps, the minimum throttle position will be accepted 1 second later.
- The Motor will beep "Number" short beeps to indicate the number of LiPo cells you have plugged in.
- The motor will beep a long beep to indicate the calibration is complete.

Attention! The throttle range of the ESC is from 1100us to 1940us by default. You need to re-calibrate the throttle range when the first time you use this ESC or after you change the transmitter. During the ESC/Radio calibration, please set the throttle curve to NORMAL and ensure the corresponding throttle amounts to the maximum throttle endpoint and the minimum throttle endpoint on your transmitter are respectively 100% and 0%.

05 ESC Programming & Data Checking

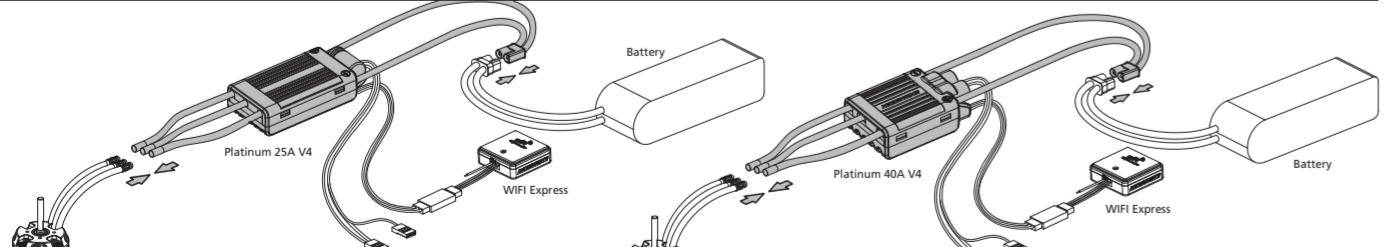
- The parameters of this ESC are programmable, you can adjust relevant parameter settings to meet different flight demands.
- The ESC will record relevant data like the standardized speed (it can only be checked and won't disappear when the ESC is disconnected from the pack in "Helicopter (Store Governor)" mode), the minimum voltage, and the maximum temperature of the current flight. Therefore, if you want to check the relevant data after the flight, please keep the ESC connected to the pack and then connect the LCD program box or WiFi Express module to the ESC to check the data. Those data won't be stored after the pack is disconnected from the ESC.

1 Program Your ESC with a Multifunction LCD Program Box



1. ESC Programming
 - Connect the LCD program box to the ESC as shown above, and then connect the battery to the ESC.
 - Press the "OK" button on the program box to connect the program box to your ESC, the firmware version of the ESC will be displayed on the screen of the program box after the connection succeeds.
 - After successfully entering the "Parameters/Programmable Items" page, press the "ITEM" button (on the program box) to browse the parameter(s) and then press the "VALUE" button to adjust the parameter value(s).
 - Press the "OK" button to save the new value(s) to your ESC after adjusting.
 - Repeat "step 3" and "step 4" will allow you to adjust the value(s) of other parameter(s).
 - After the programming, disconnect the ESC from the battery, unplug the cable for connecting the program box to the ESC, and then power the ESC off and then back on will allow you to run your system with those new parameter settings.
2. Check the Running Data of Your ESC
 - (With the battery connected to the ESC), connect the LCD program box to the ESC as shown above.
 - Press the "OK" button (on the program box) to connect the program box to your ESC, the firmware version of the ESC will be displayed on the screen of the program box after the connection succeeds.
 - Press the "RPM" button to enter the "Data Record" page after successfully entering the "Parameters/Programmable Items" page, continue to press the "RPM" button to browse all the running data of your ESC.

2 Program Your ESC with a WiFi Express (Item sold separately)



1. ESC Programming
 - Connect the ESC to the WiFi Express module as shown above, and then connect the battery to the ESC.
 - Open the WiFi setting on your smart phone and then connect (the phone to) the WiFi Express module (the WiFi name is HW-WIFILINK and the password is 12345678 by default, you can change them by yourself).
 - After the connection succeeds, open the "HW Link" APP on your phone (the APP needs to be installed in advance), click the "connect to ESC" icon (in the upper right corner), and then you can adjust parameter values, check the running data of the ESC, or carry out other operations.
 - After successfully saving the new values(s) to your ESC, disconnect the ESC from the "HW Link" APP, unplug the WiFi Express module, and then power the ESC off and then back on will allow you to run your system with those new parameter settings.
2. Data Checking
 - (With the battery connected to the ESC), connect the ESC to the WiFi Express module as shown above.
 - Open the WiFi setting on your smart phone and then connect (the phone to) the WiFi Express module (the WiFi name is HW-WIFILINK and the password is 12345678 by default, you can change them by yourself).
 - After the connection succeeds, open the "HW Link" APP on your phone (the APP needs to be installed in advance), click the "connect to ESC" icon (in the upper right corner) and directly click the "Data Record" icon to enter the "Data Record" page.
 - After entering the "Data Record" page, click "Aircraft" and then "Real-time Data" to enter the "Real-time Data" page, fill in the gear ratio (if it's not applicable, then fill in 1) and the pole pairs of the motor (that's to halve the motor poles), and then click "OK".
 - The ESC will transmit the real-time data to the "Real-time Data" page when it starts to function, you can check the data on that page.

Attention! After adjusting parameters, you need to power your ESC off and then on. Otherwise, those new parameters won't take effect.

06 Programmable Parameters & Explanations

Programmable Parameters

(1) There are four flight modes available for the ESC, please refer to the following form to check the programmable items under each mode. (** in the form below indicate factory defaults.)

Values	Parameter	Option 1	Option 2	Option 3	Option 4
1	Flight Mode	Fixed Wing	Helicopter (External Governor)	Helicopter (Elf Governor)	Helicopter (Store Governor)
2	LiPo Cells	Adjustable	Adjustable	Adjustable	Adjustable
3	Voltage Cutoff Type	Adjustable	Adjustable	Adjustable	Adjustable
4	Cutoff Voltage	Adjustable	Adjustable	Adjustable	Adjustable
5	BEC Voltage	Adjustable	Adjustable	Adjustable	Adjustable
6	Response Time	N/A	It turns to "Soft Start-up Enabled/Disabled"	Adjustable	Adjustable
7	Governor Parameter P	N/A	N/A	Adjustable	Adjustable
8	Governor Parameter I	N/A	N/A	Adjustable	Adjustable
9	Auto Restart Time	N/A	N/A	Adjustable	Adjustable
10	Restart Acceleration Time	N/A	N/A	Adjustable	Adjustable
11	Brake Type	N/A	N/A	N/A	N/A
12	Brake Force	Adjustable	N/A	N/A	N/A
13	Timing	Adjustable	Adjustable	Adjustable	Adjustable
14	Motor Rotation	Adjustable	Adjustable	Adjustable	Adjustable
15	DEO Technology /Freewheeling	Adjustable	Adjustable	Not Adjustable	Not Adjustable
16	Start-up Force	Adjustable	Adjustable	Adjustable	Adjustable

Explanations for Programmable Parameters

1. Flight Mode

- Fixed-wing: in this mode, the motor only starts up when the throttle amount reaches 5% or above and it responds to the throttle input rapidly.
- Helicopter (External Governor): in this mode, the motor only starts up when the throttle amount reaches 5% or above, it will run in either way:

1) when setting to "Soft Start-up Enabled", the motor will start up in a soft way and then quickly accelerate to the speed corresponds to the current throttle amount after the soft start-up completes.

2) when setting to "Soft Start-up Disabled", then there will be no soft start-up and the motor will respond to the throttle input rapidly.

Regarding "Soft Start-up Enabled/Disabled":

please set it to "Soft Start-up Enabled" when not using any speed-governing device; please set it to "Soft Start-up Disabled" when using an external speed-governing device; please set it to "Soft Start-up Enabled" when using a life or LiHV battery.

For the Platinum 25A V4 ESC: it is adjustable between 35 and 65 when setting this item manually.

For the Platinum 40A V4 ESC: it is adjustable between 35 and 45 when setting this item manually.

3. Voltage Cutoff Type

- Soft Cutoff: if this item is selected, the ESC will gradually reduce the output to 50% of the full power when the voltage cutoff protection is activated.
- Hard Cutoff: if this item is selected, the ESC will cut off the output immediately when the voltage cutoff protection is activated.

4. Cutoff Voltage

This item is adjustable between 2.8V and 3.8V with the step of 0.1V, it's 3.0V by default. It is the voltage of one cell, if you're using a 3S LiPo, then the final cutoff voltage of your battery is: the value you set * 3.

5. BEC Voltage

This item is for adjusting the output voltage of the BEC.

For the Platinum 25A V4 ESC: the output voltage is adjustable between 6V and 7.4V, it's 6V by default.

For the Platinum 40A V4 ESC: the output is adjustable between 5V and 8V with the step of 0.1V, it's 6V by default.

6. Response Time

This item is for adjusting the throttle respond, the higher the value, the slower the throttle response. In the "Fixed-wing" mode, any adjustment to this item will be void. In the "Helicopter (External Governor)" mode, this item will turn into "Soft Start-up Enabled/Disabled", select "0" is to disable the "Soft Start-up" function and select "any value between 1 and 21" is to enable the "Soft Start-up" function. In the "Helicopter (Elf Governor)" or "Helicopter (Store Governor)" mode, this item is adjustable from 5 and 21 with the step of 1 (it will be 5 even if you set it to any value between 0 and 5), it's 13 by default (we recommend using the default setting).

7. Governor Parameter P

This item is for controlling the ESC compensate the amount of the motor speed during the process of maintaining the speed-governing effect; the higher the value, the bigger the amount; and vice versa. This function functions together with the Governor Parameter I.

8. Governor Parameter I

This item is for adjusting the response speed of the "Governor Parameter P". The higher the value, the slower the response speed; and vice versa.

9. Auto Restart Time

This function is effective only in the "Helicopter (Elf Governor)" mode and the "Helicopter (Store Governor)" mode. When moving the throttle stick from above 40% to any position between 25% and 40% and then back to above 40% within the preset time period, the motor will skip over the soft start-up process, start up and accelerate to the speed (in the programmed Restart Acceleration Time) corresponds to the current throttle amount rapidly. In that case, the motor will start up in the default way in the "Helicopter (Elf Governor)" mode and the "Helicopter (Store Governor)" mode when moving the throttle stick to above 40%.

10. Restart Acceleration Time

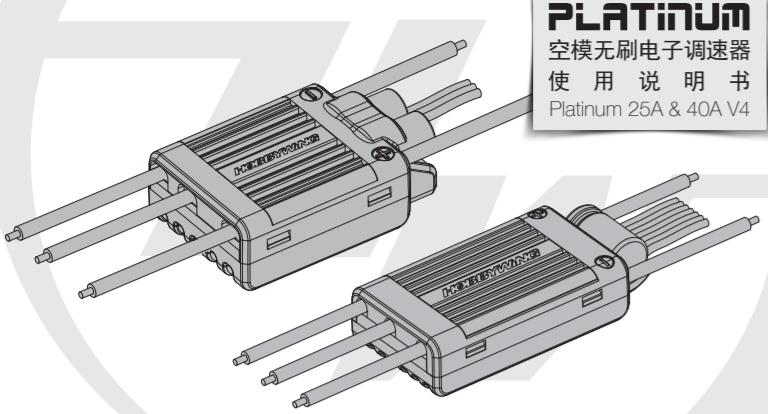
This item is adjustable between 1s and 3s with the step of 0.5s, it's 1.5s by default. It controls the time the motor needs for starting from standstill and accelerating to the full speed when you want to rapidly restart the motor during the preset "Auto Restart Time". (Note: it is an auxiliary function to the "Auto Restart Time", it only effects in the condition that "Auto Restart Time" is effective)

11. Brake Type

- Normal Brake: after selecting this option, if you move the throttle stick to the bottom position, then the ESC will brake the motor as per the preset brake force.

• Proportional Brake: after selecting this option, the throttle range on the transmitter is between 20% and 100%, the corresponding ESC brake output is between 0% and 100%.

• Reverse Brake: after selecting this option, the RPM signal wire will turn into a reverse signal wire (the signal range is in line with the throttle range). Please plug this wire into an occupied channel on the receiver and you can control this channel via the transmitter to change the motor rotation. Any signal loss



PLATINUM
空模无刷电子调速器
使用说明书
Platinum 25A & 40A V4

01 产品注意事项

- 使用本产品前, 请认真查看各动力设备及飞行器的使用说明书, 确保动力搭配合理, 避免因错误的动力搭配导致电机超载, 最终损坏电机。
- 安装本产品时, 由于需要进行焊接、连接等操作, 所以请务必确保所有电线和连接部件绝缘良好, 短路将会损坏本产品。对产品的相关线材进行焊接操作时, 为保证焊接牢固, 请使用足够功率的焊接设备进行焊接。若连接不良, 您可能不能正常控制飞行器, 或出现设备损坏等其他不可预知的情况。
- 使用本产品时请远离不安全因素, 如障碍物、人群、高压电线等。请严格按照手册中规定的工作环境(如电压、电流、温度等参数)使用。虽然本产品有关于保护措施, 但极限的使用还是有可能会对本产品造成永久性的损坏。
- 使用完毕后, 切记将电源切断。如使用电池未断开, 电调有可能会误驱动电机转动, 造成不可预料的危险, 若长时间连接电池, 电池最终会被完全放电, 进而导致电池或电调出现故障。

02 产品特色

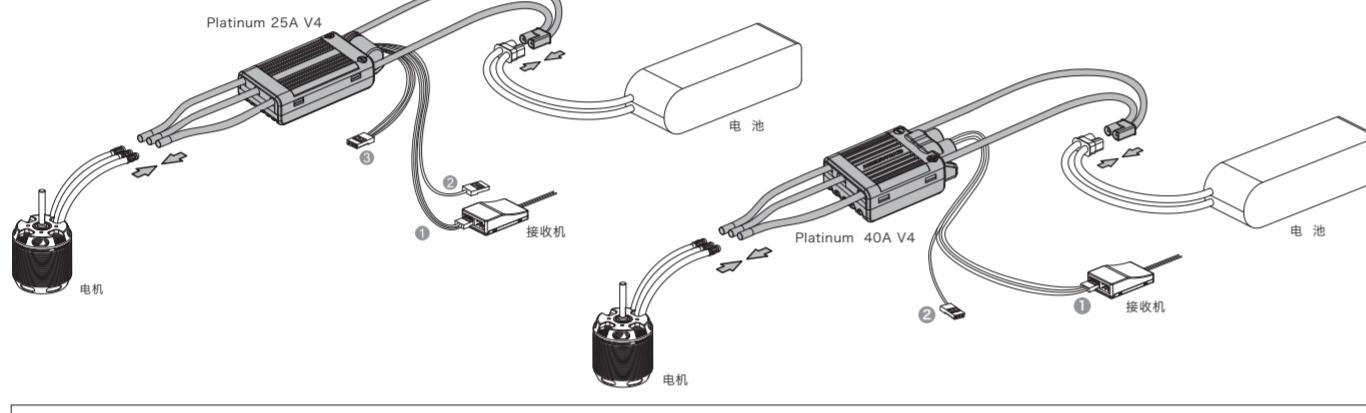
- 采用高性能32位微处理器, 运行频率高达72MHz; 微处理器采用独立的稳压IC给供电, 具有更好的抗干扰能力, 大大降低失控的可能性。
- 采用独立的开关稳压BEC, 输出电压可调。BEC模块和电调其他电路相互独立, 当电调故障时, 可以正常输出, 提供救机机会。
- 采用同步整流驱动效率优化技术(DEO—Driving Efficiency Optimization), 油门响应更迅速, 驱动效率更高, 电调温度更低。
- 具有固定翼模式/直升机外部定速模式/直升机精灵定速模式/直升机存储定速模式⁴种飞行模式。
- 直升机模式下具有缓启动功能。
- 具备升直模式, 定速速度可调, 易于操作。在负载急剧变化的情况下, 保证主旋翼转速稳定, 定速效果优异。
- 具备熄火降落反悔时间选择功能, 在设定的时间内可人工中断熄火降落过程并快速重启电机, 避免因操作失误而坠机。
- 具备反推功能, 可以像真机那样真实地飞降落地螺旋桨反转产生推力, 减少滑行距离快速停。
- 具备反推功能, 可以像真机那样真实地飞降落地螺旋桨反转产生推力, 减少滑行距离快速停。
- 具备独立的设置接口, 可连接LCD参数设置盒或WIFI Express模块进行参数设置。
- 支持WIFI无线调参, 通过手机APP(苹果&安卓)APP可完成参数设置, 升级电调, 查看记录数据等操作。(需要WIFI Express模块)。
- 支持电调读取, 设备电调参数, 查看速度曲线表(直升机存储定速模式下)以及升级电调固件。(需要LCD参数设置盒与PC机或WIFI Express模块与HW Link APP)
- 具有启动保护、温度保护、电容温差保护、过负荷保护、油门信号丢失保护、输入电压异常保护等多重保护功能, 有效延长电调使用寿命。

03 产品规格

型号	Platinum 25A V4	Platinum 40A V4
持续/瞬间电流	25A/40A	40A/60A
输入电压	3-6S LiPo	3-4S LiPo
BEC	开关稳压BEC, 输出电压6V/7.4V可调; 输出电流持续3A, 瞬间7A	开关稳压BEC, 输出电压5-8V可调; 输出电流持续7A, 瞬间18A
输入/输出线	黑色&红色16AWG硅胶线 / 黑色16WG硅胶线	黑色&红色14AWG硅胶线 / 黑色14WG硅胶线
独立参数编程接口	用于连接LCD参数设置盒或WIFI模块	用于连接LCD参数设置盒或WIFI模块
尺寸\重量	47x22x10mm / 27g	48x30x15mm / 47g
应用范围	250级电动直升飞机(主旋翼最长150-300mm); 电动固定翼, 多旋翼飞行器	300级电动直升飞机(主旋翼最长280-325mm); 电动固定翼, 多旋翼飞行器

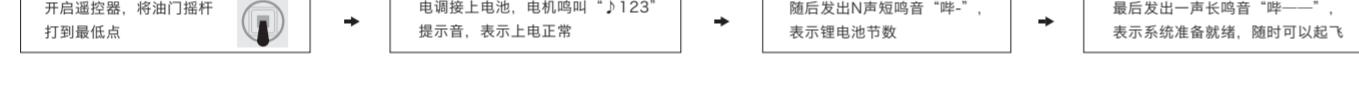
04 使用向导

1 接线示意图

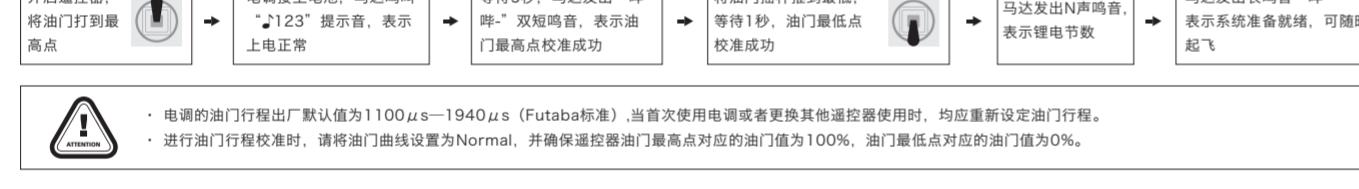


- 油门信号线(白、红、黑): 插入接收机油门通道或无副翼系统对应通道, 具体接收机类型及无副翼系统类型而定。其中白线用于传送油门信号, 而红线和黑线分别并联在内部BEC的输出端(即BEC电压输出线和地线)。
- RPM信号线(黄): 插入无副翼系统转速输入通道; (当使用外部定速时, 可使用该RPM信号线提供转速信号输入。)
- 独立参数编程接口(短的白红黑线): 用于连接LCD参数设置盒或WIFI模块。

2 正常的开机过程



3 油门行程校准操作方法

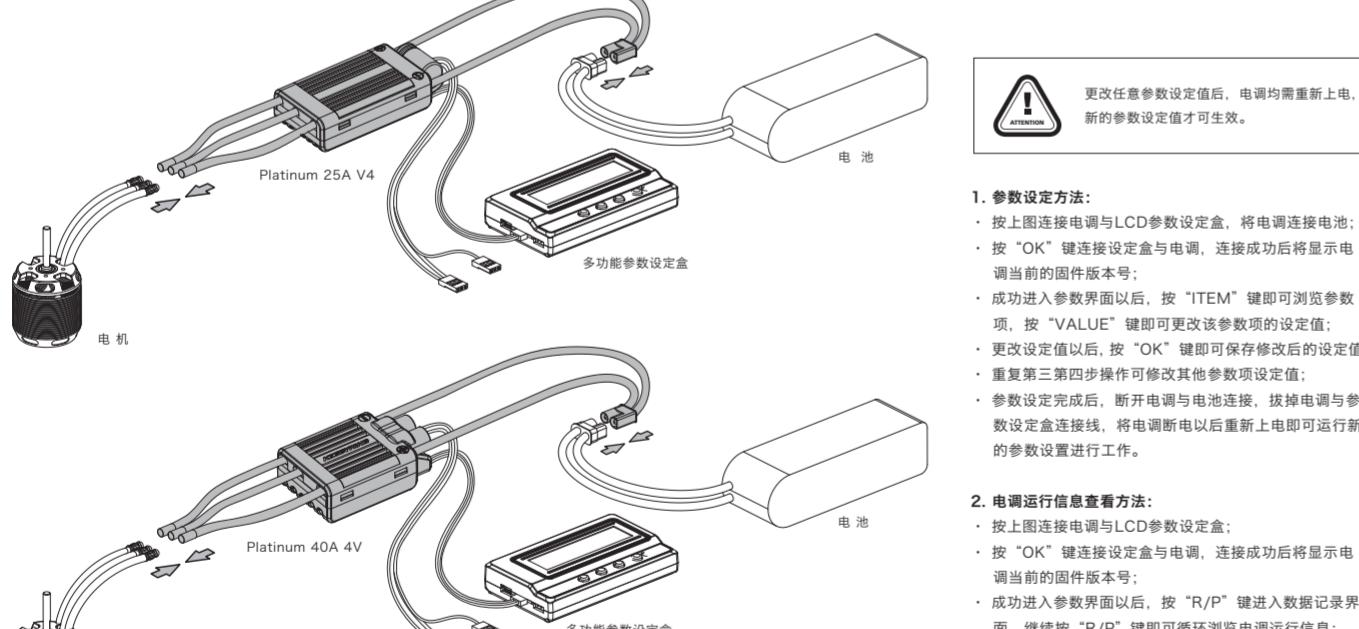


- 油门信号线(白、红、黑): 插入接收机油门通道或无副翼系统对应通道, 具体接收机类型及无副翼系统类型而定。其中白线用于传送油门信号, 而红线和黑线分别并联在内部BEC的输出端(即BEC电压输出线和地线)。
- 进行油门行程校准时, 请将油门曲线设置为Normal, 并确保遥控器油门最高点对应的油门值为100%, 油门最低点对应的油门值为0%。

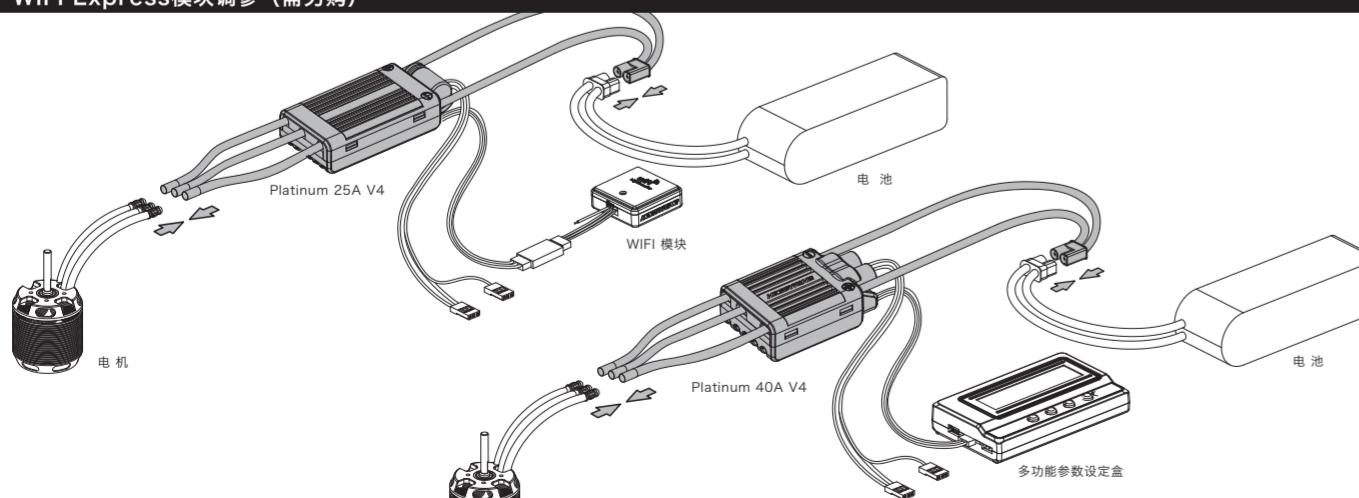
05 参数设定与电调运行信息查看方法

- 本电调可进行参数设定, 以满足不同的飞行需求。
- 本电调会记录上次飞行的标定转速(仅在存储定速模式下可查看且断电不会消失)、最低电压、最高温度等信息, 所以当此飞行结束后如需查看, 请不要断开电源保持电调处于供电状态, 连接LCD参数设置盒或WIFI Express模块可查看。断电后信息将不会保存。

1 使用LCD参数设置盒调参(需另购)



2 WiFi Express模块调参(需另购)



- 参数设定方法:
 - 按上图连接电调与LCD参数设置盒, 将电调连接电池;
 - 按“OK”键连接设置盒与电调, 连接成功后将显示电调当前的固件版本号;
 - 成功进入参数界面以后, 按“ITEM”键即可浏览参数项, 按“VALUE”键即可更改该参数项的设定值;
 - 更改设定值以后, 按“OK”键即可保存修改后的设定值;
 - 重复第三第四步操作可修改其他参数项设定值;
 - 参数设定完成后, 断开电调与电池连接, 拔掉电调与参数设置盒连接线, 将电调断电后重新上电即可运行新的参数设置进行工作。

- 电调运行信息查看方法:
 - 按上图连接电调与LCD参数设置盒;
 - 按“OK”键连接设置盒与电调, 连接成功后将显示电调当前的固件版本号;
 - 成功进入参数界面以后, 按“R/P”键进入数据记录界面, 继续按“R/P”键即可循环浏览电调运行信息;

- 参数设定方法:
 - 按上图连接电调与WiFi Express模块, 将电调连接电池;
 - 打开手机WIFI设置, 连接WiFi模块(默认名称为: HW-WIFILINK, 密码: 12345678, 用户可自行更改)。
 - 成功连接以后, 打开手机端“HW Link”软件, 点选连接按钮, 即可对电调进行参数更改, 查看数据记录等操作。
 - 成功保存参数以后, 断开手机APP与电调的连接, 拔掉WiFi Express模块, 将电调断电后重新上电即可运行新的参数设置进行工作。

- 电调运行信息查看方法:
 - 按上图连接电调与WiFi Express模块;
 - 打开手机WIFI设置, 连接WiFi模块(默认名称为: HW-WIFILINK, 密码: 12345678, 用户可自行更改)。
 - 成功连接以后, 打开手机端“HW Link”软件, 不要选连接电调按钮, 直接点击数据记录按钮选择空模即可查看记录数据。

- 电调实时数据查看方法:
 - 按上图连接电调与WiFi Express模块;
 - 打开手机WIFI设置, 连接WiFi模块(默认名称为: HW-WIFILINK, 密码: 12345678, 用户可自行更改)。
 - 成功连接以后, 打开手机端“HW Link”软件, 不要选连接电调按钮, 直接点击数据记录按钮选择空模进入记录数据界面。
 - 在数据记录界面上点击实时数据, 进入实时数据界面, 填写舵比(无就填1), 电机极对数(电机极数的一半), 点击确定。
 - 电调工作以后会传输实时数据, 可以通过界面查看。

06 可编程参数项及说明

1) 电调四种模式, 每种模式下的可调参数见下表:

飞行模式	固定翼模式	直升机外部定速模式	直升机精灵定速模式	直升机存储定速模式
锂电池节数	可调	可调	可调	可调
低压保护模式	可调	可调	可调	可调
BEC输出电压	可调	可调	可调	可调
响应时间	无此功能	该功能变为开启或关闭按钮启动	可调	可调
定速参数P	无此功能	无此功能	可调	可调
定速参数I	无此功能	无此功能	可调	可调
熄火降落反悔时间	无此功能	无此功能	可调	可调
快速重启加速时间	无此功能	无此功能	可调	可调
刹车车型	可调	无此功能	无此功能	无此功能
刹车力度	可调	可调	可调	可调
进角	可调	可调	可调	可调
电机转向	可调	可调	可调	可调
DEO开关	可调	可调	不可调, 强制开启	不可调, 强制开启
启动力度	可调	可调	可调	可调

2) 可编程参数项目对应可编程设置值(带*的为出厂默认设置):

参数项	参数值
1 *飞行模式	固定翼模式
2 锂电池节数	*自动计算 3-6节
3 低压保护阈值	*软关断 硬关断
4 BEC输出电压	2.8V-3.8V(默认3.0V)
5 响应时间	0-21(默认13)
6 定速参数P	0-9(默认4)
7 定速参数I	0-9(默认5)
8 熄火降落反悔时间	0-90秒(默认5秒)
9 快速重启加速时间	1-3秒(默认1.5秒)
10 刹车类型	*气刹车 普通刹车 比例刹车 反转刹车
11 刹车力度	0-100% (默认0%)
12 进角	0°-30° (默认15°)
13 电机转向	*默认 反转
14 DEO开关	*开启 关闭
15 启动力度	1-7 (默认3)

07 定速功能说明及设置

1 电调定速说明:

通过转速标定, 建立电机转速-油门值对应曲线, 然后在遥控器上将油门值设置为某一固定值, 即输出该油门值对应转速, 并在电机变化时维持该转速不变。

• 在“直升机精灵定速模式”下, 电调在断电以后不会存储电机转速-油门值对应曲线, 所以每次电调通电以后, 都要执行一次转速标定, 然后才能正常使用定速功能。该模式下, 由于电池放电能力等差异, 每次标定每次的转速有细微差别, 最终会导致油门值为50%时的转速降低为40%左右。

• 在“直升机存储定速模式”下, 电调在转速标定以后会存储电机转速-油门值对应曲线, 所以从其模式调整到该模式后, 首次通电使用时需要执行一次转速标定, 以后电调断电并重新上电就不需要再去执行转速标定, 若从存储定速模式调到其他模式并保存, 再调回存储定速模式, 由存储的电机转速-油门值对应曲线就被清除, 因此需要再次执行一次转速标定。以后保持在存储定速模式下, 会一直保存你的电机转速-油门值对应曲线。

5. BEC输出电:

设置电调内部BEC的输出电压。

Platinum 25A V4: 6V/7.4V两档调节, 默认6V;

Platinum 40A V4: 5-8V可调, 步进0.1V每阶, 默认6.0V。

6. 响应时间:

• 调节油门的响应速度, 数值越大, 油门响应速度越快。

• 该值在固定翼模式下调节是无效的;

• 在直升机线性\外部定速模式下为缓启动开关, 选择O为关闭, 选择1-21任意值为开启;

• 在直升机精灵定速或者存储定速模式下为5-21可调(设置0-5之间的数值为5), 调节步长为1, 默认为13; (建议使用默认设置)。

7. 定速度:

控制电调在保持定速过程中补转的程度, 数值越大, 出现转速不足或转速过高时归零状态的次数就越大, 该功能需要配合定速度I设置;

8. 定速度I:

当转速低于或超过设置的预设值时, 电调会进行转速补偿, 该参数用于调整补转的程度大小。参数过大将造成补转过度, 参数过小将引起补转不足;

9. 熄火降落反悔时间:

该功能仅能在“直升机精灵\存储定速”两种模式下有效。在设定的时间内将油门摇杆从40%以上推至25%-40%之间任意位置后, 再推回40%以上, 电调从输出关闭状态可以不经缓启动快速启动电机并将电机直接推至油门行程的40%以上, 使油门值对应的转速降低, 油门低于25%, 或者将油门摇杆保持在25%-40%之间超过40%以后将执行“直升机精灵\存储定速”两种模式下默认的启动逻辑。

10. 快速重启加速时间:

1-3秒可调, 步长0.5秒, 默认1.5秒。该参数控制在设定的熄火降落反悔时间内若执行快速重启时, 电机从静止加速到全速所需的时间。(该功能为熄火降落反悔时间功能有效的情况下才有效)

11. 刹车类型:

• 普通刹车: 设置为该功能时, 油门摇杆归零后, 电调将按照设置的刹车力度使电机停转。

• 比例刹车: 设置为该功能时, 遥控器上的油门行程20%-100%对应电调油门输出的0%-100%, 遥控器上的油门行程20%-0%对应刹车力度0-100%。

• 反转刹车(气推): 启用反转刹车功能后, RPM转速输出线将变为反转信号输入线(信号范围和油门行程一致), 将该线接入到接收机的一个空闲通道上, 通过遥控器控制该通道