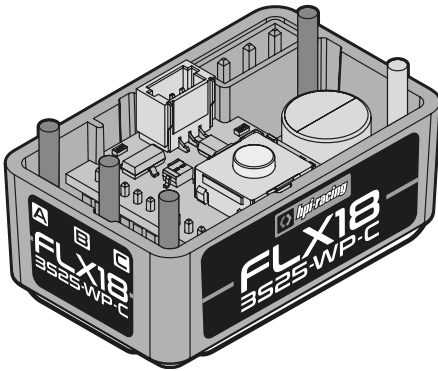




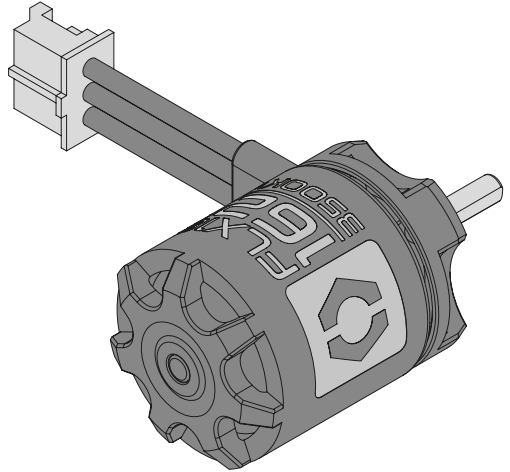
FLX18-3S25-WP-C COMPETITION CRAWLER FLUX ESC
FLX18-1621-3500KV OUTFRUNNER BRUSHLESS MOTOR

Instruction Manual



160967

FLX18-3S25-WP-C
Competition Crawler Flux ESC



160862

FLX18-1621-3500KV
Outrunner Brushless Motor

En: Scan Me
De: Scanne mich
Fr: Scanne-moi
Es: Escanéame
Fi: Skannaa minut
No: Skann meg

Da: Scan mig
Sv: Skanna mig
Pt: Escaneie-me
It: Scansionami
Tr: Beni Tara
Ro: Scanează-mă

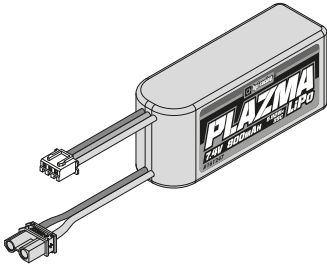
Pl: Przeskanuj mnie
Cs: Naskenuj mě
Zh: 扫描二维码
Ja: スキャンして



Equipment Needed

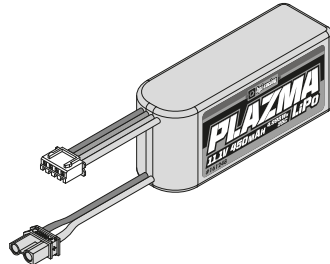
FLX18-3525-WP-C ESC
FLX18-1621-3500KV MOTOR

Battery



2 cell LiPo 7.4V battery pack

OR



3 cell LiPo 11.1V battery pack



Cautions

Failure to follow these instructions can damage your kit, and cause serious bodily injury or death.



Attention

Failure to follow these instructions can cause injury to yourself or others. You might also cause property damage or damage your kit.



Cautions

This is an extremely powerful brushless motor system. We strongly recommend removing your tires for your own safety and the safety of those around you before performing calibration and programming functions with this system. Please keep your hands, hair, and loose clothing clear from the gear train and wheels of an armed high performance system.

Rubber tires will “expand” to extreme size on a high speed vehicle. DO NOT hold the vehicle in the air and run it up to full throttle. Tire failures at that speed can cause serious injury! Make sure your tires are securely glued to the rims and check them often!

Always disconnect the battery from the ESC when you are finished using your vehicle. The switch on the ESC controls the power that is delivered to the receiver and servos. The controller will always draw current when it is connected to the battery and will completely discharge batteries if they are connected for long durations. This may cause failure of your batteries.



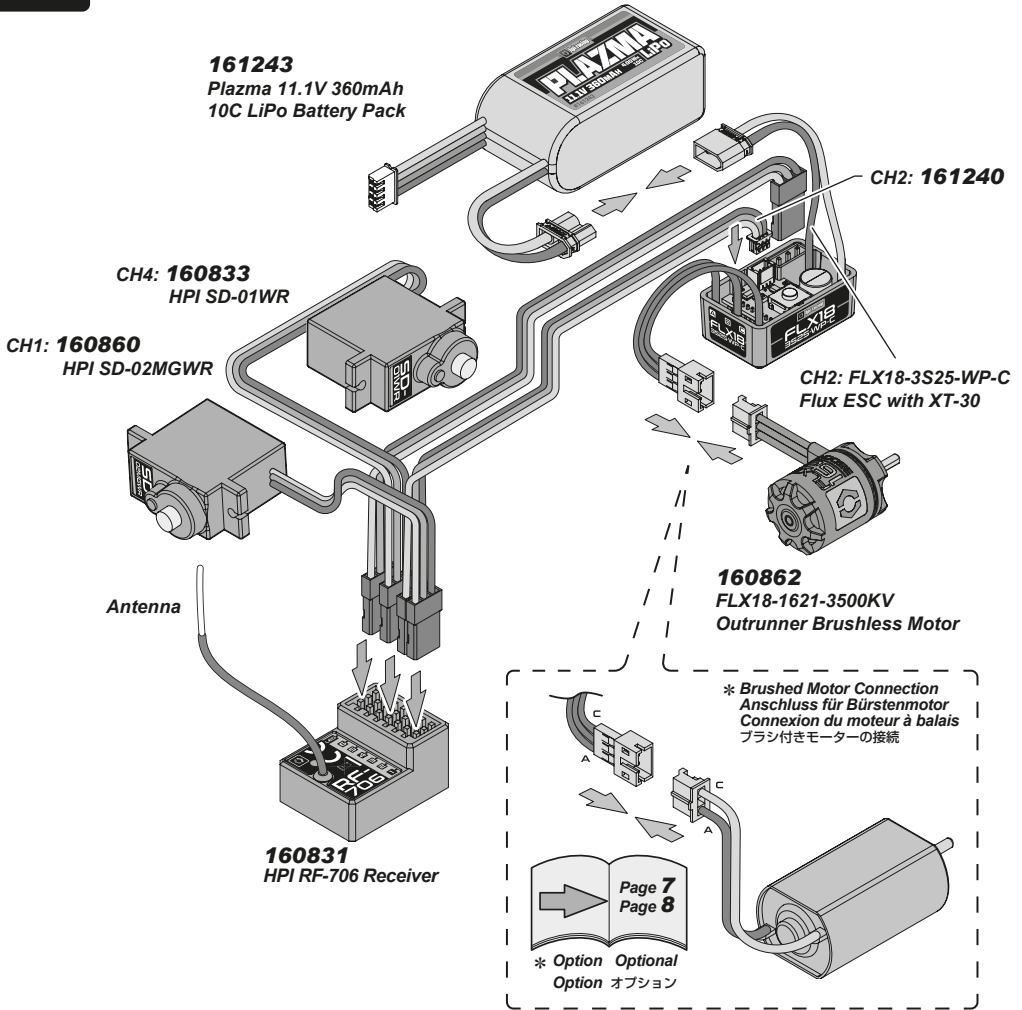
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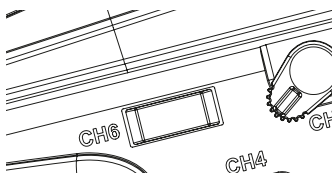
1 Receiver Connections

FLX18-3S25-WP-C ESC
FLX18-1621-3500KV MOTOR

1-1 Receiver Connections



1-2 AUX: Drag Brake Force

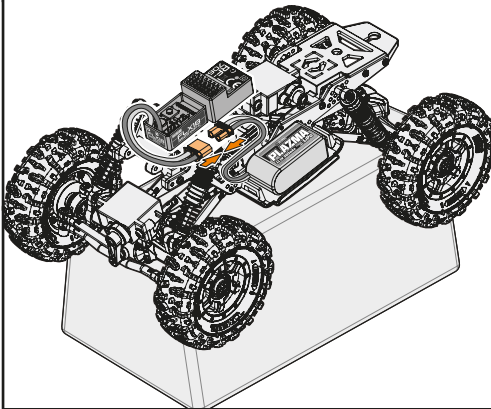


When the Auxiliary cable is connected, you can adjust the Drag Brake Force from the transmitter. If the channel switch is a dial, then you can infinitely adjust the Drag Brake Force between 0% and 100%. If the channel uses 3 position switch, the Drag Brake Force can be adjusted between 0%, 50%, and 100%. If the channel uses a 2 position switch, the Drag Brake Force can be adjusted between 0% and 100%.

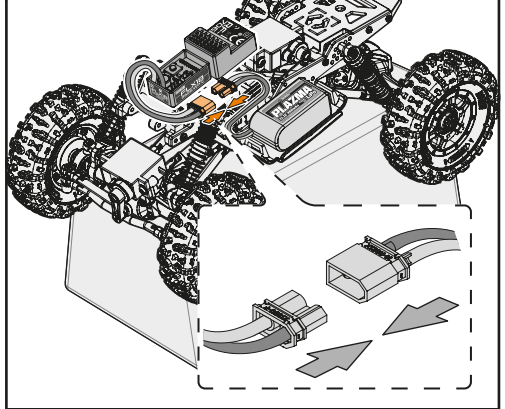
2-1

You must setup the ESC before running the first time. After the initial setup, it is not required before every run. Please read through the instructions and get familiar with the procedure before starting setup. The setup process moves quickly, and it will help you to be ready for each step.

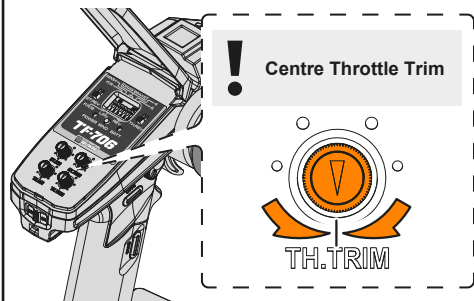
1 Put the car on a stand



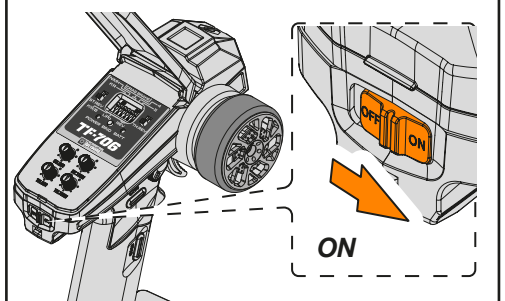
2 Connect Battery



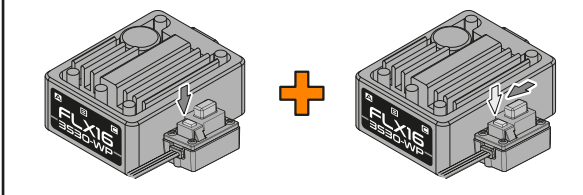
3 Centre throttle trim



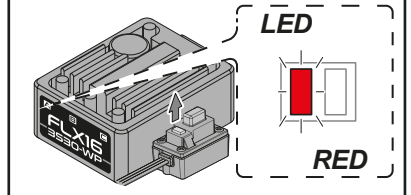
4 Switch on transmitter



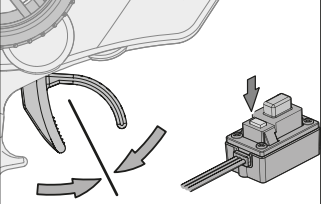
5 To enter calibration mode: Hold down the setup button while turning on the ESC.



6 Release the Setup button once the LED flashes



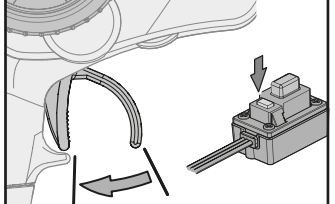
7 Leave the trigger in the neutral position. Press the setup button



8 Green Led Flashes And A Beep Sound From The Motor



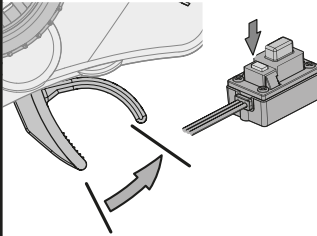
9 Move trigger to full throttle and press the setup button



10 Green Led Flashes Twice Beeps Twice From The Motor



11 Move the trigger to full brake and press the setup button.



12 Green Led Flashes Three Times, Beeps Three Times From The Motor



2-2 LED Status

1. During the Start-up Process

- The GREEN LED flashes "X" number of times indicating the number of LiPo cells you have connected to the ESC.
- The GREEN LED turns on solid indicating the throttle trigger is at the neutral position.
- The RED LED flashes a short, single flash and repeats (☆, ☆, ☆), along with a beep from the motor if the ESC doesn't detect any throttle signal.

2. During Operation • The GREEN LED turns on solid indicating the throttle trigger is at the neutral position. • The RED LED turns on solid when your vehicle runs forward. The GREEN LED comes on when pulling the throttle trigger to the full (100%) throttle endpoint. • The RED LED turns on solid when you reverse, the GREEN LED will also come on when pushing the throttle trigger to the full reverse endpoint and setting the "maximum brake force" to 100%.

3. ESC Protection is Activated • The RED LED flashes a short, single flash and repeats (☆, ☆, ☆) indicating the low voltage cut-off protection is activated. • The GREEN LED flashes a short, single flash and repeats (☆, ☆, ☆) indicating the ESC thermal protection is activated.

2-3 Fail-safe Function

If the temperature of the ESC is too high, the Thermal Protection Function will activate. Once the ESC has cooled down to normal temperature, it will work as normal.

3 Programmable Settings

3-1 Optional HOBBYWING PROGRAM BOX

Your HPI Flux ESC is fully compatible with the HOBBYWING LED Program Box which allows you to quickly change settings easily with the LED screen. Available separately.

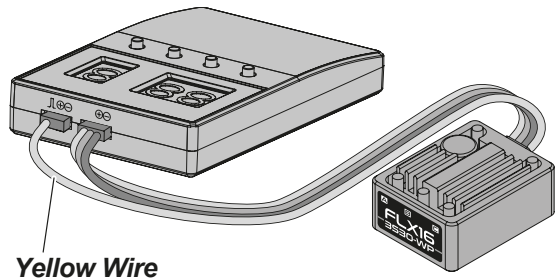


1

Connect the Program Box using a separate programming cable as shown in the diagram.

Then connect the ESC to the battery and turn it on.

Use the "ITEM" and "VALUE" buttons on the program card to select and change the values. Press "OK" to save the parameters.



Yellow Wire

3-2 Factory Reset

Restore the ESC to the factory settings using the Setup Button.

Turn on the transmitter, then turn on the ESC. Press and hold the SET button of the ESC switch for over 3 seconds. RED & GREEN LEDs flash simultaneously indicating you have successfully restored the default values. To save the changes you must switch off the ESC. When you next switch it back on your settings will be back in the default mode.

Restore the ESC to the factory settings using the LED program card.

Once the LED program card is connected to the ESC, press the "RESET" key and then press "OK" to save to restore the factory settings.

3-3 Program Modes

| Parameter mode Eingestellter Wert Mode paramètre モード設定 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
|---|----|--|--|--|--|-------------------|---------|---------|---------|---------|---------|
| P P R r o g r a m m s a i m b r e M o d e S e t t i n g s | 1 | Running Mode Fahrmodus Mode Allumage ランニングモード | Fwd/Brake Vorw./Brems Avt/Frein 前進/ブレーキ | Fwd/REV/Brake Vorw./Rückw./Brems Avt/Arr/Frein 前進/後進/ブレーキ | Rock Crawler Rock Crawler Rock Crawler ロックローラー用 | | | | | | |
| | 2 | Motor Type Motortyp Type de moteur モーターの種類 | Brushed | Brushless | | | | | | | |
| | 3 | Auto-Lipo Cut off Auto-Lipo Abschaltung Coupure Auto-Lipo オートLIPOカットオフ | Disable Deaktiviert Inactif プロテクトOFF | Auto 2.8V/Cell | Auto 3.1V/Cell | Auto 3.4V/Cell | | | | | |
| | 4 | Motor Direction Motorrichtung Direction du moteur モーター方向 | CCW | CW | | | | | | | |
| | 5 | BEC Voltage BEC-Spannung Tension BEC BEC電圧 | 6.0V | 7.4V | | | | | | | |
| | 6 | Drag Brake Force Roll-Brems des Motors Freinage de Ralentissement ドラッグブレーキ | 0% | 10% | 20% | 30% | 40% | 60% | 80% | 90% | 100% |
| | 7 | Drag Brake Rate Widerstand Bremsrate Talentissement Taux de freinage ドラッグブレーキ率 | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Level 9 |
| | 8 | Max. Reverse Force Max. Rückwärtskraft Force max. arrière 最大逆動力 | 25% | 50% | 75% | 100% | | | | | |
| | 9 | Max. Brake Force Max. Bremskraft Force frein. max 最大制動力 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 85% | 100% |
| | 10 | Punch Punch パンチ | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Level 9 |
| | 11 | Neutral Range Neutralbereich Plage neutre ニュートラル範囲 | 4% | 6% | 8% | 10% | 12% | | | | |
| | 12 | FOC Power FOC-Leistung Puissance FOC FOCパワー | Disable Deaktiviert Inactif プロテクトOFF | 9% | 12% | 15% | 18% | 21% | 24% | 27% | 30% |
| | 13 | Low Speed Throttle Langsamfahr-Gas Gaz basse vitesse 低速スロットル | 10% | 15% | 20% | 25% | 30% | 40% | 60% | 80% | 100% |

Standard Position
Standard Einstellung
Position standard
基本設定位置

3-3 Program Modes

3-3-1 Running Mode

- FWD/Brake - This mode offers Forward and Brake functions only. This mode is commonly required at race events.
- FWD/REV/Brake - This mode offers Forward, Brake and Reverse. Note, The Reverse function uses a soft start "Double click" function which will only allow reverse to be activated once the motor has stopped moving forward.
- Rock Crawler - This mode allows instant switching from forward to reverse for quick car control. The brakes are applied when the throttle returns to neutral at the force and rate of the Drag Brake settings. Drag Brake Force of 100% is recommended for Rock Crawling.

3-3-2 Motor Type

This parameter is used to select between brushed or brushless motor types. Please set this parameter according to the motor being used. Wrong selection will cause abnormal operation.

3-3-3 Auto LiPo Cut Off

The Auto-LiPo cut off value is changed depending on the type of battery you will be using in your RC car. When using a Lithium based pack please select the suitable cell voltage for the low voltage protection of your battery pack. **WARNING:** Never use the value " No Protection" if you are using a Lithium battery! The Flux ESC will monitor the battery output voltage. If the voltage drops lower than the preset threshold for more than 2 seconds, the output power will be reduced by 50%. This will allow enough time to bring the car back to you. After 10 seconds the Flux ESC will cut output power completely.

3-3-4 Motor Direction

This setting is used to change the rotation direction of the motor.

3-3-5 BEC Voltage

BEC voltage can be set to either 6.0V or 7.4V. 6.0V is applicable to most standard steering servo, 7.4V is applicable to high voltage servos. Please refer to the steering servo voltage identification for the correct voltage setting.

Note: Do not set the BEC voltage above the maximum operating voltage of the servo, as this may damage the servo or the ESC.

3-3-6 Drag brake force

This mode allows the setting of an automatic drag brake when the throttle stick is returned to neutral, simulating the slight braking effect of a brushed motor while coasting.

3-3-7 Drag Brake Rate

This mode is used to control the response of the drag brake. The higher the setting value, the faster the drag brake is applied. Using a lower value can make the vehicle stop more steadily.

3-3-8 Max.Reverse Force

This mode will set the reverse power applied by the ESC. The higher the value the quicker the reverse function will be.

3-3-9 Punch

Punch can be used to control overall motor response in relation to the throttle input. The higher the set value, the faster the acceleration. Lower punch settings are advised for softer starts, lower traction, or to help with motor hesitations or stuttering when throttle is applied rapidly.

3-3-10 Neutral Range

The neutral range is the “dead zone” for the neutral position of the throttle/brakes.

Not all transmitters have the same stability of the neutral position, so this parameter can be adjusted to your preference.

3-3-11 FOC Power

The FOC Power setting adjusts the motor's torque output at low speed throttle input, enhancing control and performance during slow-speed crawling.

Higher FOC Power values increase torque at low speeds, improving climbing ability and throttle responsiveness. However, increased FOC Power may lead to higher motor temperatures due to greater current draw. It is recommended to monitor motor temperature during extended use with high FOC settings to prevent overheating or damage.

Note: This setting is only applicable to brushless motors.

3-3-12 Low Speed Throttle

This parameter sets the size of the the low-speed throttle range. For example, if set to 60%, then 0%-60% of the throttle will operate at low speed.

Note: This setting is only applicable to brushless motors.

3-4 Driving in Wet Conditions

This HPI Electronic Speed Controller is designed with water protection so that it can be used in wet conditions.

The ESC is not designed to be completely submerged in water. Driving in wet conditions will require additional vehicle maintenance.

Notes:

Never drive the vehicle in stormy conditions where lightning could be present. The transmitter is not waterproof; always keep it protected from rain and water.

Remove all water/mud and dry the vehicle completely after driving. Check the vehicle for trapped water in the tires, transmission etc. Some metal parts like bearings and hinge pins will need lubrication after driving in wet conditions. The electric motor is not designed to be submerged in water. If water gets inside it can reduce the life of the motor.

Most LiPo battery packs are not designed to operate in wet conditions. Consult the instruction manual or manufacturer for limitations. Inspect the inside of the waterproof radio enclosure after driving in wet conditions. Adjust wiring and seals as needed to prevent water damage. After running in water, dry off any water from ESC and connectors.



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