

Thank you for purchasing the XR10 Justock, HOBBYWING's high performance sensorless brushless motor electronic speed controller! Brushless power systems can be very dangerous. Any improper use may cause personal injury and damage to the product and related devices. We strongly recommend reading through this user manual before use. Because we have no control over the use, installation, or maintenance of this product, no liability may be assumed for any damage or losses resulting from the use of the product. We do not assume responsibility for any losses caused by unauthorized modifications to our product.

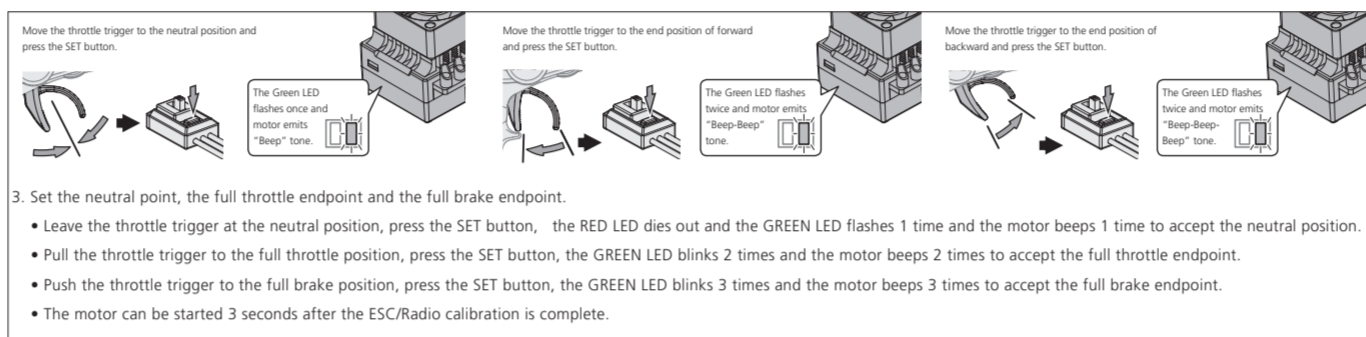
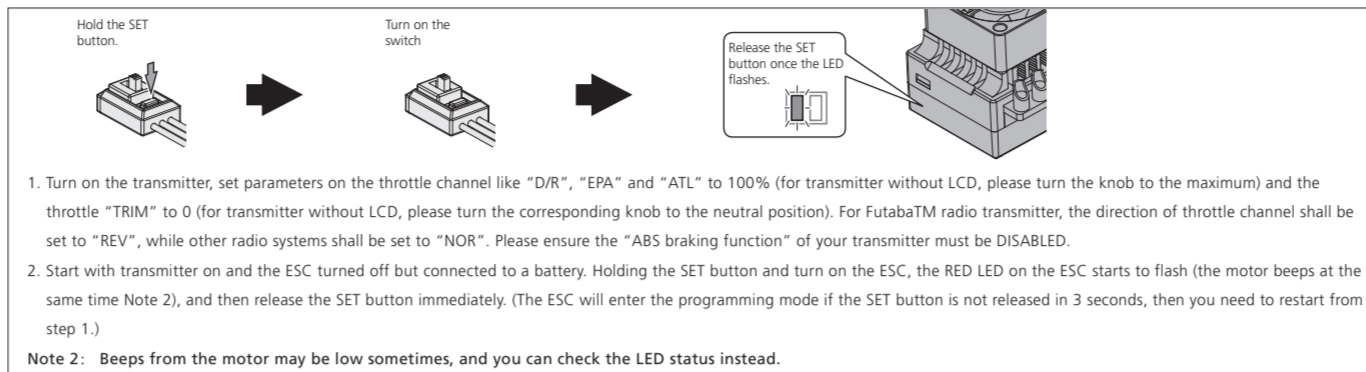
- Ensure all wires and connections are well insulated before connecting the ESC to related devices, as short circuit will damage your ESC.
Ensure all devices are well connected, in order to prevent poor connections that may cause your vehicle to lose control or other unpredictable issues like damage to the device.
Read through the manuals of all power devices and chassis and ensure the power configuration is rational before using this unit.
Please use a soldering iron with the power of at least 50W to solder all input/output wires and connectors.
Stop using the ESC when its casing temperature exceeds 90 C/194 F; otherwise your ESC will get destroyed and may also get your motor damaged.
Always disconnect and remove batteries after use, as the ESC will continue to consume current if it's still connected to batteries (even if the ESC is turned off). Long-time contact will cause batteries to completely discharge and result in damage to batteries or ESC or both. This will not be covered under warranty.)

- Compact design for easy installation.
Compatible with sensored/sensorless brushless motors. In sensored mode, it's compatible with most popular sensored brushless motors on the market. In sensorless mode, it's compatible with 99% of brushless motors on the market.
Aluminum housing top with excellent heat dissipation and great current endurance.
The timing has been permanently set to 0 degree. With the identical competition motor, this ensures that every driver will have the same power system and have a really just STOCK race.
Proportional brake with 4 steps of maximum brake force, 8 steps of drag brake force and 4 steps of initial brake force.
9 levels of acceleration/punch from "soft" to "aggressive" for different vehicles, tires and tracks.
Multiple protections: motor lock-up protection, low-voltage cutoff protection, thermal protection and fail safe (throttle signal loss protection).
Single-button ESC programming and factory reset.
Advanced programming via portable LED program card or multifunction LCD program box.
Firmware upgrade via HOBBYWING multifunction LCD program box (item sold separately).

Table with 2 columns: Model (XERUN XR10 Justock) and specifications including Cont./Peak Current (60A/380A), Motor Limit, Applications, (Motor) KV Limit, LiPo/NiMH Cells, BEC Output, Fan (Included), Connectors, Size/Weight, and ESC Programming.

1 ESC/Radio Calibration

In order to make the ESC match the throttle range, you must calibrate it when you begin to use a new ESC, or a new transmitter, or after you change the settings such as the TRIM, D/R, EPA and other parameters of throttle channel on your transmitter, otherwise the ESC cannot work properly. We strongly recommend activating the "Fail Safe" function of the radio system and set it (F/S) to "Output OFF" or set its value to the "Neutral Position" to ensure the motor can be stopped when there is no signal received from the transmitter. About setting the throttle range, let's take FutabaTM transmitter as an example.



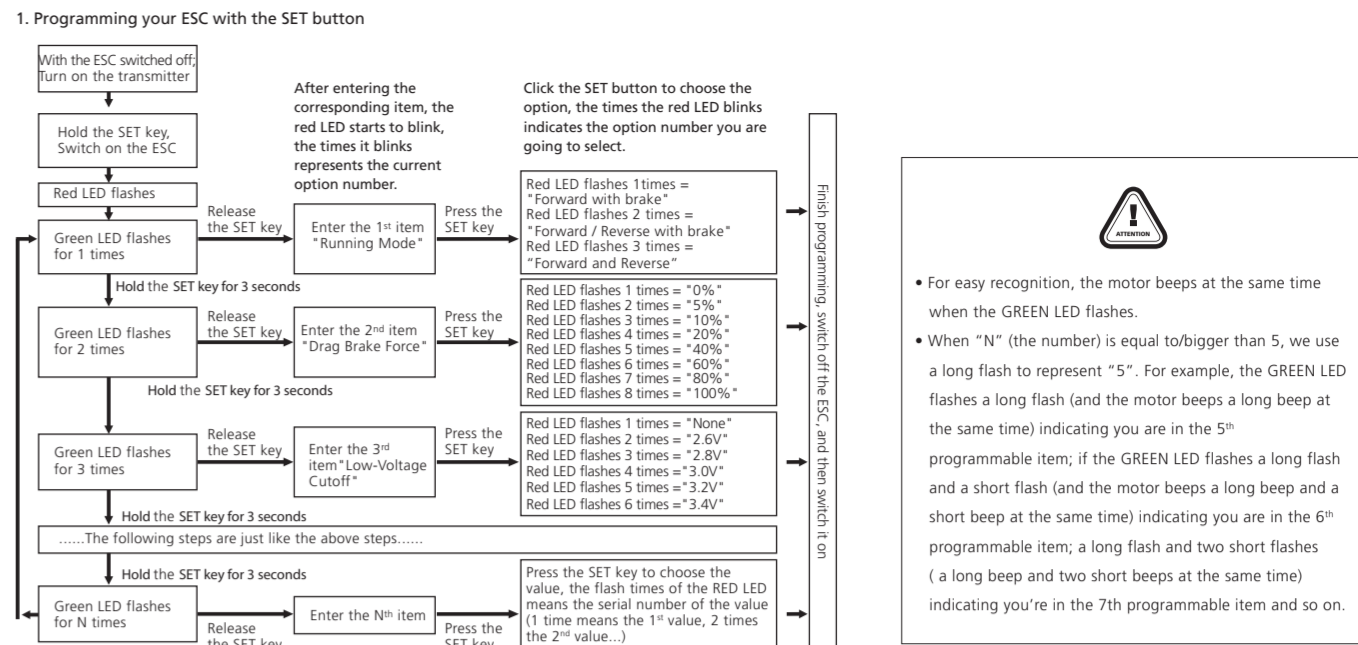
2 Warning Tones

Turn on the ESC in the normal way (that is to turn it on without holding the SET button); the motor will beep the number of LiPo cells you have plugged in. For example, 2 beeps indicate a 2S LiPo, 3 beeps indicate a3S LiPo.

3 Programmable Items

Table titled 'Programmable Items' with columns for Option 1-9 and rows for Running Mode, Drag Brake Force, Cutoff Voltage, Start Mode, Max Brake Force, Max Reverse Force, Initial Brake Force, Neutral Range, Timing, and Overheat Protection.

- 1. Running Mode: Option 1: Forward with Brake, Option 2: Forward/Reverse with Brake, Option 3: Forward/Reverse (For Rock Crawler).
2. Drag Brake Force: Drag brake is the braking power produced when releasing the throttle trigger to neutral zone.
3. Cutoff Voltage (or Low Voltage Cutoff Threshold): Sets the voltage at which the ESC lowers or removes power to the motor in order to keep the LiPo battery at a safe minimum voltage.
4. Start Mode / Punch /Acceleration: You can choose the punch from level 1 (very soft) to level 9 (very aggressive) as per the track, tires, grip, your preference and etc.
5. Brake Amount/ Max. Brake Force: This ESC provides the proportional braking function; the braking effect is decided by the position of the throttle trigger.
6. Reverse Amount/ Max. Reverse Force: Different reverse amount will bring different reversing speed.
7. Maximum Reverse Force: Sets how much power will be applied in the reverse direction.
8. Throttle Neutral Range: Adjust the throttle neutral zone as per your preference (as shown).
9. Timing: This item has been permanently set to "0" degree.
10. Overheat Protection: When the ESC is overheated, the Green LED will flash a short, single flash that repeats.



2. Program your ESC with a LED program box

(For detailed information, please refer to the user manual of the LED program box.) The portable program card is an optional accessory applicable for field use. Its friendly interface makes the ESC programming easy and quick. Before the programming, you need to unplug the throttle control cable (or Rx cable) from the receiver and plug it into the programming/ESC port on the program box, and then turn on the ESC, all programmable items will show up a few seconds later.

3. Program your ESC with a multifunction LCD program box

(For more information, please refer to the user manual of the LCD program box.) You can program this ESC through a 3-in-1 LCD program box or through a 3-in-1 LCD program box and a PC (HOBBYWING USB LINK software needs to be installed on the PC). Before the programming, you need to unplug the throttle control cable (or Rx cable) from the receiver and plug it into the programming/ESC port on the program box, then the boot screen will show up on the LCD, press any button on the program box to initiate the communication between your ESC and the program box.

5 Factory Reset

- Restore the default values with the SET button: Press and hold the SET button for over 3 seconds anytime when the throttle trigger is at the neutral position.
Restore the default values with the LED program box: After connecting the program box to the ESC, press the "RESET" button and the "OK" button to factory reset your ESC.
Restore the default values with a multifunction LCD program box: After connecting the program box to the ESC, continuously press the "ITEM" button on the program box until you see the "RESTORE DEFAULT" item, and then press "OK" to factory reset your ESC.

- 1. During the Start-up Process: The GREEN LED flashes "N" times indicating the number of LiPo cells you have connected to the ESC.
2. In Operation: The RED LED flashes rapidly when the throttle trigger is in the throttle neutral zone. The RED LED turns on solid when your vehicle runs forward. The GREEN LED will also come on when pulling the throttle trigger to the full (100%) throttle endpoint.
3. Some Protection is Activated: The RED LED flashes a short, single flash that repeats (indicating the low voltage cutoff protection is activated). The GREEN LED flashes a short, single flash that repeats (indicating the ESC thermal /overheat protection is activated). The GREEN LED flashes a short, double flash that repeats (indicating the motor thermal /overheat protection is activated).

Table with 3 columns: Trouble(s), Possible Causes, and Solution(s). Lists various issues like ESC unable to start, motor stuttering, and vehicle not reversing, with corresponding causes and solutions.

This is an extremely powerful brushless motor system. For your safety and the safety of those around you, we strongly recommend removing your pinion gear before performing calibration and programming functions with this system, and keeping wheels in the air when you turn on the ESC.

- 1. Motor Wiring: The sensored motor wiring is a little different from the sensorless motor wiring; please make sure that you will strictly follow the introductions below.
A. Sensored Motor Wiring: There is strict wiring order from the ESC to the motor, the three A/B/C ESC wires must connect to the three A/B/C motor wires correspondingly.
B. Sensorless Motor Wiring: There is no polarity on the A/B/C wires between ESC and motor, so do not worry about how you connect them initially.
2. Receiver Wiring: Plug the throttle control cable (also called Rx cable) on the ESC into the throttle (TH) channel on receiver.
3. Battery Wiring: Proper polarity is essential here! Make absolutely sure positive (+) of ESC connects to positive (+) of battery, and negative (-) of ESC connects to negative (-) of battery when you plug in your battery!