Hobbywing 30113400

HOBBYWING XERUN XR8 Pro G3 Instruction Manual

Model: 30113400 | Brand: Hobbywing

Introduction

Welcome to the instruction manual for your HOBBYWING XERUN XR8 Pro G3 Electric Speed Controller (ESC). This manual provides essential information for the proper setup, operation, and maintenance of your ESC, ensuring optimal performance and longevity. Please read this manual thoroughly before using the product.



Image: The HOBBYWING XERUN XR8 Pro G3 Electric Speed Controller, a compact black unit with a cooling fan on top and gold-plated connectors on the side.

What's in the Box

Upon unboxing your HOBBYWING XERUN XR8 Pro G3, you should find the following components:

- (1) XERUN XR8 Pro G3 ESC
- (1) Instruction Manual
- (1) Accessory pack (may include wires, connectors, and decals)

Key Features

The XERUN XR8 Pro G3 ESC incorporates several advanced features designed for high-performance RC applications:

- **Compact Design:** Measuring 54.8x36.8x38.8mm, this ESC delivers a maximum output current of 200A while maintaining a small footprint.
- **FOC Braking Mode:** Offers a realistic braking experience similar to a real car, unaffected by motor speed, with adjustable brake force curvature. Supports traditional BLDC braking as well.

- **Enhanced Efficiency:** Innovative smart freewheeling technology and hardware design lead to higher drive efficiency and reduced operating temperatures (approx. 15°C lower than XR8 Pro G2).
- **Durable Frameless Fan:** Designed with specialized material to resist impact from debris, ensuring fan longevity.
- **Intelligent Fan Control:** The fan activates automatically only when the ESC temperature reaches a pre-set value, reducing noise and conserving power.
- **Advanced Timing Technology:** Supports up to 48 degrees of Boost and Turbo Timing, offering a 50% performance increase when paired with HOBBYWING 4268/4274 G3 motors.
- **Reverse Polarity Protection:** Built-in circuit protects the ESC from damage if battery polarity is accidentally reversed.
- **Real-time Data Recording:** When connected to an OTA module box, allows access to real-time operating status data.
- **Capacitor Thermal Protection:** Prevents capacitor damage and explosion due to overload, enhancing ESC durability.

SPECIFICATIONS

Detailed technical specifications for the HOBBYWING XERUN XR8 Pro G3 ESC:

Mode	XERUN XR8 PRO G3
Cont./Peak Current	200A / 1080A
Motor Type	Sensored / Sensorless Brushless Motors
Applications	1/8 Off-road,On-road Racing & 1/10 Short course truck,Monster truck
Motor Limit	With 3S Lipo: KV≤ 4000 3660 Size motor With 4S Lipo: KV≤ 3000 4268 Size motor
LiPo Cells	2-4S Lipo
BEC Output	6V/7.4V Adjustable, Continuous Current: 6A(Switch-mode)
Cooling Fan	Powered by built-in BEC
Size/Weight	54.8(L) x 36.8(W) x 38.8(H)mm / 102.8g
Programming Method	Multifunction LCD G2 Program Box, OTA Programmer

Image: A table detailing the specifications of the XERUN XR8 Pro G3, including current, motor type, applications, motor limit, LiPo cells, BEC output, cooling fan, size/weight, and programming method.

XERUN XR8 Pro G3 Technical Data

Parameter	Value
Cont. / Peak Current	200A / 1080A
ESC Type	Sensored Brushless
Motor Type	Sensored / Sensorless Brushless Motors
Applications	1/8 Off-road, On-road Racing & 1/10 Short course truck, Monster truck
Motor Limit (3S LiPo)	KV= 4000 (3660 Size motor)
Motor Limit (4S LiPo)	KV= 3000 (4268 Size motor)
LiPo Cells	2-4S LiPo
BEC Output	6V/7.4V Adjustable, Continuous Current: 6A (Switch-mode)

Parameter	Value
Braking Mode	FOC/BLDC
Fan Type	Frameless fan
Size (L x W x H)	54.8 x 36.8 x 38.8mm
Weight	102.8g
Programming Port	Multifunction LCD G2 Program Box, OTA Programmer

Setup Guide

Follow these steps for the initial setup of your XERUN XR8 Pro G3 ESC:

1. **Mounting:** Securely mount the ESC in your vehicle using double-sided tape or screws, ensuring adequate airflow around the unit for cooling.
2. **Motor Connection:** Connect the ESC's motor wires to your brushless motor. For sensored motors, ensure the sensor wire is also connected correctly between the ESC and motor.
3. **Battery Connection:** Connect your 2-4S LiPo battery to the ESC's battery input wires. The ESC features reverse polarity protection, but always double-check connections to prevent issues.
4. **Receiver Connection:** Plug the ESC's throttle cable into the throttle channel (usually Channel 2) of your RC receiver.
5. **Radio Calibration:** Perform a throttle range calibration with your radio system. Refer to your radio's manual for specific steps. This ensures the ESC correctly interprets throttle, brake, and neutral signals.
6. **Programming (Optional but Recommended):** For advanced settings and to enable features like reverse, use a HOBBYWING Multifunction LCD G2 Program Box or an OTA Programmer. The ESC ships with FWD/BRAKE ONLY mode by default. A separate programmer is required to enable reverse functionality and other custom settings.

Operating Instructions

Once set up, operating your XERUN XR8 Pro G3 ESC is straightforward:

- **Power On:** Connect the battery and turn on your radio transmitter first, then the ESC.
- **Driving:** Use your radio's throttle trigger to control forward, brake, and reverse (if enabled via programming).
- **Braking Modes:** The ESC supports FOC (Field-Oriented Control) braking for a smooth, realistic feel, and traditional BLDC (Brushless DC) braking. Adjust brake force and curve via the program box for optimal performance.
- **Intelligent Fan Operation:** The cooling fan will automatically activate when the ESC reaches a certain temperature threshold and turn off when it cools down, optimizing efficiency and reducing noise.
- **Power Off:** Always turn off the ESC first, then your radio transmitter. Disconnect the battery.

Maintenance

Regular maintenance helps ensure the longevity and reliable performance of your ESC:

- **Cleaning:** After each use, especially in dusty or dirty conditions, gently clean the ESC with a soft brush or compressed air to remove dirt and debris. Ensure the cooling fan is free of obstructions.
- **Connection Check:** Periodically inspect all wire connections (motor, battery, receiver) for looseness, corrosion, or damage. Secure any loose connections.

- **Fan Inspection:** Check the cooling fan for proper operation and ensure its blades are intact and free from damage. The frameless design is durable, but impacts can still occur.
- **Storage:** Store the ESC in a clean, dry environment away from extreme temperatures and direct sunlight.
- **Firmware Updates:** Check the Hobbywing official website periodically for firmware updates for your ESC. Updates can improve performance, add features, or fix bugs. Use the appropriate programming device for updates.

Troubleshooting

This section addresses common issues you might encounter with your XERUN XR8 Pro G3 ESC:

- **ESC Not Powering On:**
  - Check battery connection and ensure it is fully charged.
  - Verify that the power switch is in the "ON" position.
  - Confirm that the battery polarity is correct. The ESC has reverse polarity protection, but incorrect connection should still be avoided.
- **No Reverse Functionality:**
  - The ESC is factory set to FWD/BRAKE ONLY mode. Reverse functionality must be enabled using a HOBBYWING Multifunction LCD G2 Program Box or OTA Programmer.
  - Ensure the correct programming device is used, as older programmers may not support the XR8 Pro G3 firmware.
- **Motor Not Responding or Erratic Behavior:**
  - Re-calibrate the throttle range with your radio transmitter.
  - Check all motor and sensor wire connections for looseness or damage.
  - Ensure the motor type setting in the ESC (sensored/sensorless) matches your motor.
- **ESC Overheating:**
  - Ensure adequate airflow around the ESC.
  - Check for proper gear ratio; a too-high gear ratio can overstress the motor and ESC.
  - Verify that the cooling fan is operating correctly when the ESC heats up.
  - Consider reducing timing settings if consistently overheating.
- **Sudden Shutdowns:**
  - This could indicate low battery voltage cutoff. Ensure your battery is fully charged and healthy.
  - Check for thermal protection activation due to overheating. Allow the ESC to cool down.
  - Inspect all power connections for intermittent contact.

Warranty and Support

HOBBYWING products are manufactured to high standards and undergo rigorous testing. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official HOBBYWING website.
For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact HOBBYWING customer support through their official channels. Providing your product model number (30113400) and purchase details will help expedite your request.
You can often find additional resources, FAQs, and firmware updates on theHobbywing Official Website.

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