Hobbywing Xerun XR10 Pro G3

HOBBYWING Xerun XR10 Pro G3 Modified ESC User Manual

Model: Xerun XR10 Pro G3 | Brand: Hobbywing

1. Safety Information

Thank you for purchasing this HOBBYWING product! Please read this instruction manual carefully before use. Once you use the product, we will assume that you have read and agreed with all the content. Brushless power systems can be very dangerous and any improper use may cause personal injury and damage to the product and related devices, so please strictly follow the instruction during installation and use. Because we have no control over the use, installation, or maintenance of this product, no liability may be assumed for any damages or losses resulting from the use of the product. We do not assume responsibility for any losses caused by unauthorized modifications to our product. We have the right to modify our product design, appearance, features and usage requirements without notification. We, HOBBYWING, are only responsible for our product cost and nothing else as a result of using our product. With the possible differences between the two versions of the manual, for users in mainland China, please take the Chinese version as standard; for users in other regions, please take the English version as standard.

2. Product Overview and Features

The HOBBYWING Xerun XR10 Pro G3 Modified ESC is an advanced Electronic Speed Controller designed for 1/10th scale RC car racing, including Touring cars, Buggies, Drift cars, F1, and Rally vehicles. It offers precise control and robust performance for competitive applications.

Key Features:

- **Multiple Profiles:** Three selectable profiles optimized for various 1/10th RC car racing scenarios.
- **Electronic Key Switch:** Internal electronic key switch for enhanced reliability and extended service life.
- **Separate Programming Port:** Dedicated port for connecting an external fan or programming devices like the LCD Program Box Pro or OTA Programmer.
- **Variable Frequency Regulation:** Allows precise adjustment of PWM and brake frequencies to fine-tune driving and braking forces.
- **Softening Function 2.0:** Innovative technology for power delivery tuning, improving drivability and efficiency, especially in the initial phase.
- **Disc Brake Mode:** Provides smoother and stronger braking performance.
- **Comprehensive Protections:** Includes low-voltage cutoff, ESC and motor thermal protection, and fail-safe (throttle

signal loss protection).

- **Built-in Data Logging:** Records up to 19 sessions of 20-minute data, totaling 380 minutes, viewable via the HW Link mobile app with an OTA Bluetooth module.
- **Freewheeling Function:** Reduces operating temperature by approximately 15°C compared to previous models, enhancing consistency and reliability.
- **Low Center of Gravity Design:** Reduced height (2mm lower than XR10 Pro G2S) for improved car balance. Detachable fan assembly for further CG reduction if cooling fan is not required.



Image 1: Top view of the HOBBYWING Xerun XR10 Pro G3 ESC, showing the fan assembly and connection ports.



Image 2: Bottom view of the HOBBYWING Xerun XR10 Pro G3 ESC, displaying regulatory markings and model information.



Image 3: Exploded view of the HOBBYWING Xerun XR10 Pro G3 ESC, illustrating the detachable fan assembly and main unit.

3. Setup and Installation

Proper installation of your Xerun XR10 Pro G3 ESC is crucial for optimal performance and safety. Follow these guidelines for setup:

1. **Mounting the ESC:** Securely mount the ESC in your vehicle using double-sided tape or screws. Ensure good airflow around the unit for effective cooling.
2. **Motor Connection:** Connect the three motor wires from the ESC to your brushless motor. Ensure correct phase matching (A-A, B-B, C-C) for proper rotation. If the motor rotates in the wrong direction, swap any two of the motor wires.
3. **Battery Connection:** Connect the ESC's battery input wires to your 2S LiPo battery. Observe correct polarity: red to positive (+), black to negative (-). Incorrect polarity will damage the ESC.

4. **Receiver Connection:** Plug the ESC's throttle cable into the throttle channel (usually channel 2) of your RC receiver.
5. **Cooling Fan:** The cooling fan is powered by the stable BEC voltage. Ensure it is properly connected to the dedicated fan port on the ESC.
6. **External Switch (Optional):** If using an external switch (purchased separately), connect it to the external switch port for alternative power control.
7. **Programming Port:** The independent programming port can be used to connect an external fan or a programming device (LCD Program Box Pro or OTA Programmer) for parameter adjustments.

Important: Always ensure all connections are secure before powering on the system. Refer to your motor and battery manuals for their specific connection requirements.

4. Operating Instructions

Once the ESC is installed and connected, follow these steps to operate your RC vehicle:

1. **Transmitter On:** Turn on your RC transmitter first. Ensure the throttle trim is at neutral.
2. **ESC On:** Connect the battery to the ESC, then press and hold the power button on the ESC until the LED illuminates. The ESC will perform a self-test and emit a series of beeps.
3. **Throttle Calibration:** If this is the first time using the ESC or if you change your transmitter, you may need to calibrate the throttle range. Refer to the detailed programming manual for specific steps.
4. **Driving:** Use your transmitter's throttle and steering controls to operate the vehicle. The ESC's advanced features like Softening 2.0 and Freewheeling will optimize performance.
5. **Data Logging:** The built-in data logging function automatically records operational data. After a run, connect an OTA Bluetooth module (sold separately) to the programming port and use the HW Link mobile app to review recorded data logs and real-time operational status.
6. **ESC Off:** After use, disconnect the battery from the ESC first, then turn off your transmitter.

Note: For detailed parameter adjustments and profile selection, use a Hobbywing LCD Program Box Pro or OTA Programmer (sold separately) with the HW Link app.

5. Maintenance and Care

Regular maintenance ensures the longevity and optimal performance of your HOBBYWING Xerun XR10 Pro G3 ESC:

- **Cleaning:** After each use, especially in dusty or dirty conditions, gently clean the ESC with a soft brush or compressed air to remove debris. Avoid using solvents or harsh chemicals.
- **Inspections:** Periodically inspect all wires and connectors for signs of wear, fraying, or corrosion. Ensure all connections are secure.
- **Fan Check:** Verify that the cooling fan spins freely and is not obstructed. Clean any dust or debris from the fan blades.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures. Disconnect the battery when storing the vehicle or ESC for extended periods.
- **Firmware Updates:** Check the Hobbywing website periodically for firmware updates. Updating the firmware can improve performance and add new features. Use a Hobbywing LCD Program Box Pro or OTA Programmer for updates.

6. Troubleshooting Guide

If you encounter issues with your Xerun XR10 Pro G3 ESC, consult this guide before seeking technical support:

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected or discharged; faulty power switch; incorrect battery polarity.	Check battery connection and charge level; inspect power switch; verify battery polarity.
Motor does not run or runs erratically.	Incorrect motor wiring; throttle not calibrated; faulty motor; signal loss.	Verify motor phase connections; perform throttle calibration; check motor for damage; ensure transmitter is on and bound.
ESC overheats.	Insufficient cooling; motor gearing too high; excessive load; fan not working.	Ensure proper airflow; reduce motor gearing; check for binding in drivetrain; inspect cooling fan operation.
Vehicle runs in reverse when throttle is applied forward.	Motor phase wires connected incorrectly.	Swap any two of the three motor wires (A, B, C) connected to the ESC.
Issues connecting to WiFi Express module.	Compatibility issue with older WiFi Express modules or specific firmware.	Ensure your WiFi Express module has the latest firmware. Consider using the newer OTA Programmer for full compatibility with G3 ESCs. Contact Hobbywing support for specific compatibility details.

7. Technical Specifications

- **Model:** Xerun XR10 Pro G3
- **Continuous/Peak Current:** 160A / 1200A
- **Applications:** 1/10th Touring car & Buggy racing, 1/10th Drift, F1, Rally
- **LiPo/NiMH Cells:** 2S LiPo (Only 2S)
- **BEC Output:** 5-7.4V Adjustable, Continuous Current of 5A (Switch-mode)
- **Cooling Fan:** Powered by stable BEC voltage
- **Motor Limit:** Touring Car: ≥4.5T, Buggy: ≥5.5T, 3650 (540) size 2-pole motor
- **Dimensions (w/Fan&Fan Shroud):** 35.0 x 33.6 x 30.3mm
- **Weight (w/ wires):** 93g
- **Programming Port:** Independent programming interface
- **Product Dimensions:** 4.2 x 2.85 x 2 inches
- **Item Weight:** 7 ounces
- **Manufacturer:** Hobbywing Technology

8. Warranty and Support

HOBBYWING products are manufactured to the highest quality standards. For warranty information and technical support, please refer to the official HOBBYWING website or contact your local distributor. Please retain your proof of purchase for any warranty claims.
For further assistance, visit: www.hobbywing.com

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