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Hobbywing Xerun XD10 Pro - Purple

HOBBYWING Xerun XD10 Pro ESC Series User Manual

Model: Xerun XD10 Pro - Purple

1. INTRODUCTION

Congratulations on your purchase of the HOBBYWING Xerun XD10 Pro Electronic Speed Controller (ESC). This high-performance sensored brushless ESC is designed to enhance your experience with Hobbywing brushless power systems. Please read this manual thoroughly to ensure proper setup, operation, and maintenance of your new ESC.



Image: The HOBBYWING Xerun XD10 Pro ESC in purple, showcasing its compact design, cooling fins, and various connection ports for power and programming. The main power cables are visible on the left, and motor output terminals are on the right.

2. SAFETY PRECAUTIONS AND WARNINGS

It is crucial to observe the following safety precautions to prevent damage to the ESC, other electronic devices, and to avoid personal injury:

- **Insulation:** Ensure all wires and connections are well insulated before connecting the ESC to related devices to avoid short circuits.
- **Secure Connections:** Verify all devices are securely connected to prevent poor connections, which can lead to damage to your electronic components.
- **Power Configuration:** Before using this unit, read through the manuals of all power devices and chassis and ensure the power configuration is rational and safe.
- **Soldering:** Use a soldering iron with a power of at least 60W to properly solder all input/output wires and connectors.

- **Vehicle Operation:** Do not hold the vehicle in the air and rev it up to full throttle. Rubber tires can expand to extreme sizes or even crack, potentially causing serious injury.
- **Overheating:** Stop immediate usage if the casing of the ESC exceeds 90°C (194°F), as this may cause damage to both the ESC and the motor.
- **Thermal Protection:** Hobbywing recommends setting the "ESC Thermal Protection" to 105°C (221°F), which refers to the internal temperature of the ESC.
- **Battery Disconnection:** Always disconnect the batteries after use. The ESC continuously consumes current if connected to batteries, even when turned off. Prolonged connection can completely discharge the battery and may result in damage to the battery or ESC. Damage due to prolonged battery connection will not be covered under warranty.
- **Reverse Polarity:** While the ESC has reverse polarity protection, the external standard capacitor pack may still be damaged if battery reversal occurs.

3. PRODUCT FEATURES

- **High Current Capacity:** Cont./Peak Current of 100A/800A, supporting 2S LiPo/4-6S NiMH Cells.
- **Adjustable BEC Output:** Built-in switch mode BEC with a maximum output of 10A and voltage adjustable from 5V to 7.4V (step: 0.1V) for various servos and devices.
- **Dedicated PRG/FAN Port:** A separate port for powering an external cooling fan, or connecting an LCD program box or WiFi module for programming.
- **Advanced Frequency Regulation:** Variable frequency regulation of PWM and brake frequencies allows precise control over driving and braking forces.
- **Multiple Protections:** Includes low-voltage cutoff protection, ESC and motor thermal protection, and fail-safe (throttle signal loss protection).
- **Data Logging:** Records real-time data such as maximum ESC/motor temperature, motor speed/RPM, and other parameters.
- **Firmware Upgradeable:** Firmware can be upgraded via Hobbywing multifunction LCD program box or OTA Programmer (sold separately).

4. SETUP GUIDE

Follow these steps for initial setup of your Xerun XD10 Pro ESC:

1. **Motor Connection:** Connect the three motor wires (A, B, C) from the ESC to the corresponding motor terminals. Ensure correct phasing for sensored motors.
2. **Battery Connection:** Connect your LiPo or NiMH battery pack to the ESC's battery input wires. Ensure correct polarity (red to positive, black to negative).
3. **Receiver Connection:** Plug the ESC's throttle cable (usually a three-wire servo connector) into the throttle channel (CH2 or CH3, depending on your radio system) of your RC receiver.
4. **Cooling Fan (Optional):** If using an external cooling fan, connect it to the dedicated PRG/FAN port on the ESC.
5. **Throttle Range Calibration:**
 - Turn on your transmitter and set throttle trim to neutral.
 - Hold the ESC's SET button, then turn on the ESC. Release the SET button when the LED flashes.
 - Pull the throttle trigger to full throttle and hold. The LED will flash.

- Push the throttle trigger to full brake/reverse and hold. The LED will flash.
 - Return the throttle trigger to neutral. The LED will stop flashing and the ESC is ready.
6. **Programming (Optional):** Use a Hobbywing LCD program box or WiFi module connected to the PRG/FAN port to adjust advanced parameters such as BEC voltage, PWM frequency, and thermal protection settings.

5. OPERATING INSTRUCTIONS

Once the ESC is properly set up, follow these steps for operation:

1. **Power On:** Ensure your transmitter is turned on first, then connect the battery to the ESC. The ESC will power on and emit a series of tones indicating battery cell count.
2. **Pre-Run Check:** Before driving, perform a quick check of steering and throttle response to ensure everything is functioning correctly.
3. **Driving:** Operate your RC vehicle as desired, utilizing the precise control offered by the Xerun XD10 Pro ESC. Monitor ESC and motor temperatures during operation.
4. **Power Off:** Always disconnect the battery from the ESC first, then turn off your transmitter. This prevents accidental throttle input.

6. MAINTENANCE

Regular maintenance will prolong the life and 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 debris. Avoid using liquids.
- **Inspection:** Periodically inspect all wires, connectors, and the ESC casing for any signs of damage, wear, or loose connections. Ensure cooling fins are clear of obstructions.
- **Storage:** When not in use, store the ESC in a clean, dry, and cool environment, away from direct sunlight and extreme temperatures. Always disconnect batteries before storage.
- **Firmware Updates:** Check the Hobbywing official website periodically for firmware updates that may improve performance or add new features.

7. TROUBLESHOOTING

If you encounter issues with your Xerun XD10 Pro ESC, consider the following common problems and solutions:

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, faulty switch, incorrect polarity.	Check battery connection and charge, inspect switch, verify polarity.
Motor not running or running erratically.	Incorrect motor wiring, throttle calibration issue, faulty motor, receiver signal loss.	Verify motor wire connections, recalibrate throttle, check motor, ensure receiver is powered and bound.
ESC overheats.	Overgearing, insufficient cooling, motor issue, excessive load.	Reduce gearing, ensure proper airflow, check motor for damage, reduce load.

Problem	Possible Cause	Solution
No response from throttle.	Throttle channel incorrect, transmitter not on, fail-safe activated.	Check receiver connection, turn on transmitter, reset fail-safe settings.

8. SPECIFICATIONS

Feature	Detail
Cont./Peak Current	100A/800A
LiPo/NiMH Cells	2S LiPo/4-6S NiMH
BEC Output	5-7.4V Adjustable, Continuous Current of 5A (Switch-mode)
Max BEC Output Current	10A
Display Type	LCD (via external program box)
Operating Temperature (Recommended Max)	90°C / 194°F (Casing), 105°C / 221°F (Internal Thermal Protection)
UPC	088718508612
Manufacturer	Hobbywing Technology
Product Dimensions	5.25 x 3.5 x 2.25 inches (Packaging), 1.6"L x 1.26"H (Unit)
Item Weight	7 ounces
Color	Purple
Material	Plastic (Casing)

9. WARRANTY INFORMATION

Hobbywing products are manufactured to high standards. For specific warranty terms and conditions, please refer to the official Hobbywing website or contact Hobbywing customer support. Please note, as stated in the safety precautions, damage resulting from prolonged connection of the ESC to batteries (leading to complete discharge) will not be covered under warranty.

10. SUPPORT

For further assistance, technical support, or to download the latest firmware and detailed programming guides, please visit the official Hobbywing website:

www.hobbywing.com

You may also contact Hobbywing North America directly for support related to products purchased in North America.



