Hobbywing HWI30104002

HOBBYWING EZRUN MAX4 HV (6-12S) 1/4th Scale ESC User Manual

Model: HWI30104002 | Brand: Hobbywing

1. Product Overview

The HOBBYWING EZRUN MAX4 HV is a high-performance Electronic Speed Controller (ESC) designed for 1/4th scale RC vehicles. It features robust construction and advanced technology to deliver reliable power and control.
Key features include:

- Wide voltage input: Supports 6-12S LiPo cells.
- High current capability: 300A continuous / 2000A burst.
- Powerful BEC: Adjustable 6V/7.4V/8.4V with 10A continuous (25A instant) for high-voltage servos.
- Innovative waterproof and dust-proof design for harsh conditions.
- Equipped with advanced and safe electronic switches, replacing traditional mechanical switches.
- Built-in fire-proof circuitry to protect battery plugs and prevent electrical sparks.
- Multiple protection functions: battery low voltage, ESC/motor overheat, signal loss, current protection.
- Supports various programming methods: LED program card, LCD program box, OTA programmer (optional).
- Real-time data recording via HW LINK app with OTA Bluetooth module.

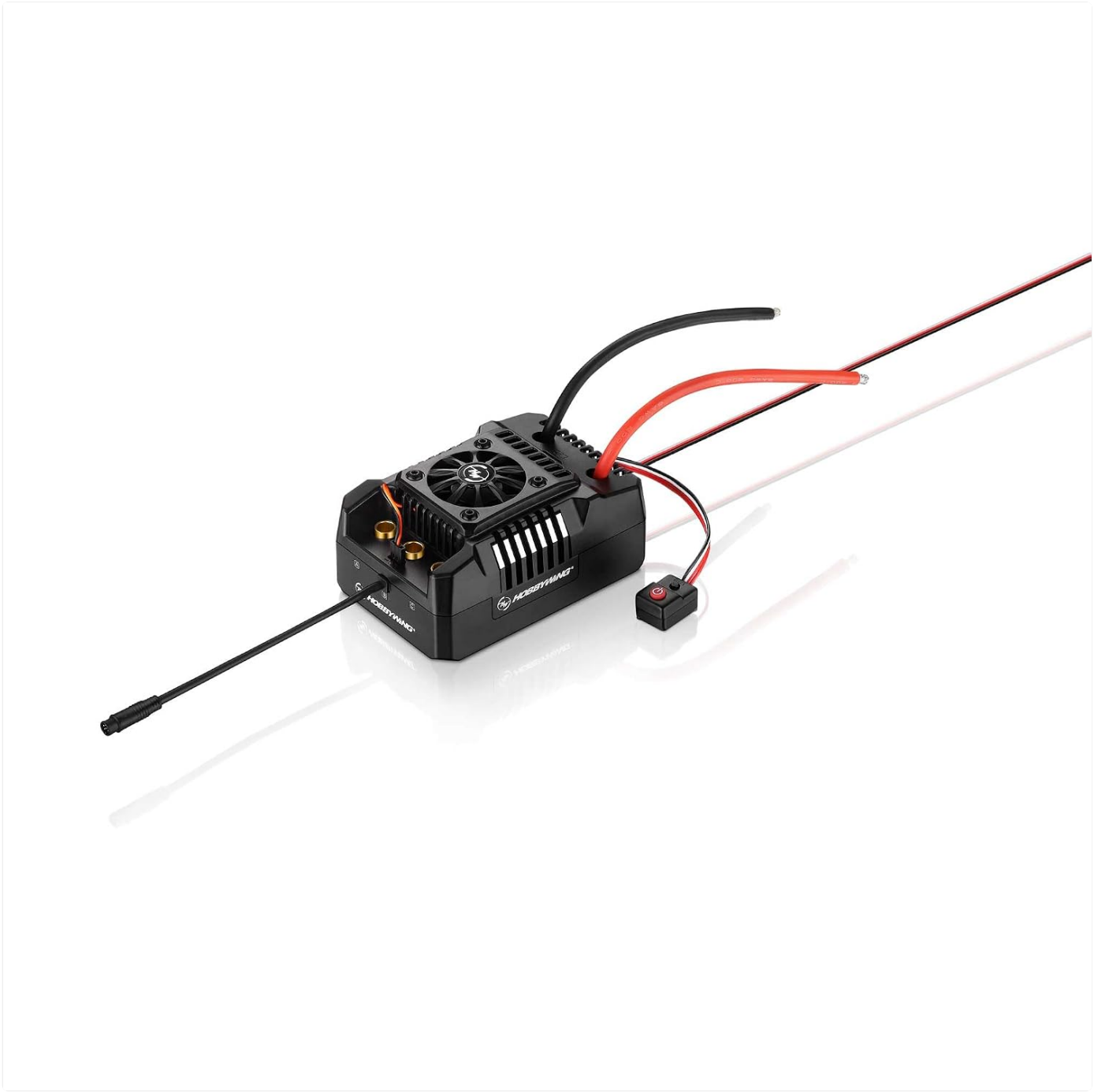


Figure 1.1: The HOBBYWING EZRUN MAX4 HV ESC, showcasing its compact design and integrated wiring.

2. Setup and Installation

Proper installation is crucial for optimal performance and safety. Always ensure your vehicle's power system components are compatible with the EZRUN MAX4 HV ESC.

2.1 Wiring Diagram

Connect the ESC to your motor, battery, and receiver according to the following guidelines:

- **Motor Connection:** Connect the three motor wires to the corresponding output terminals on the ESC. Ensure correct phase matching for sensored motors.
- **Battery Connection:** Connect your 6-12S LiPo battery to the ESC's input wires. The ESC features built-in fire-proof circuitry for enhanced safety.
- **Receiver Connection:** Plug the BEC output cable from the ESC into the throttle channel of your RC receiver.
- **Electronic Switch:** The integrated electronic switch replaces traditional mechanical switches, offering improved

reliability in various environments.

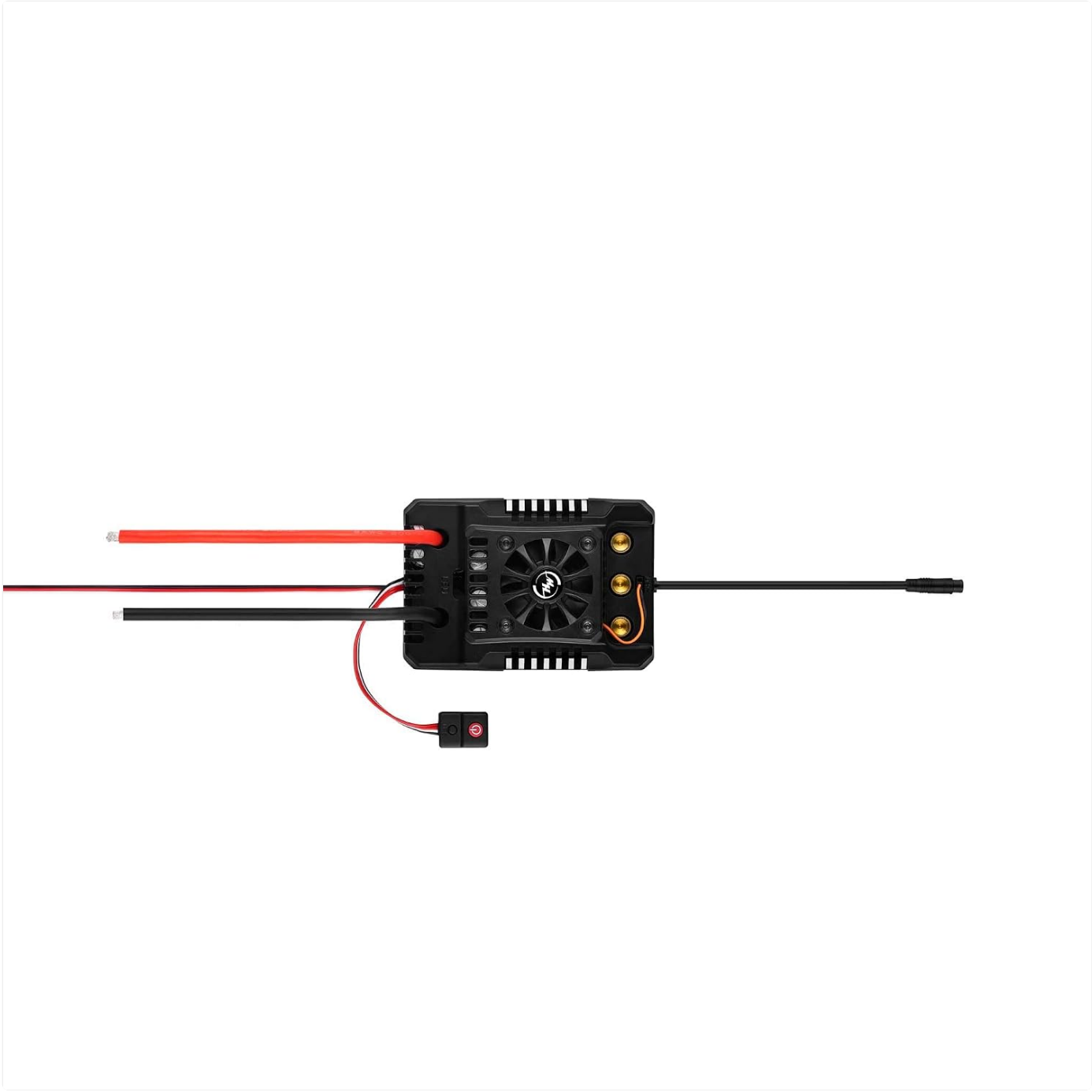


Figure 2.1: Top view of the EZRUN MAX4 HV, showing the main power leads and receiver cable connection points.

2.2 Mounting the ESC

Securely mount the ESC in your vehicle using double-sided tape or screws. Ensure adequate airflow around the ESC for cooling. The waterproof design allows for operation in wet conditions, but proper sealing of other electronic components in your vehicle is still recommended.



Figure 2.2: The EZRUN MAX4 HV demonstrating its waterproof capabilities, suitable for various climates and terrains.

3. Operating Instructions

3.1 Powering On/Off

To power on the ESC, connect the battery and press the electronic switch. To power off, press and hold the electronic switch until the ESC powers down.

3.2 ESC Calibration

Before first use, or if you change your radio system, you must calibrate the ESC to your transmitter's throttle range. Refer to the detailed calibration procedure in the full Hobbywing manual (available online) for precise steps.

3.3 Programming Parameters

The EZRUN MAX4 HV offers extensive programming options to fine-tune performance. Parameters can be adjusted using:

- **LED Program Card:** A simple, portable device for basic adjustments.
- **LCD Program Box:** Provides a more comprehensive interface for detailed parameter settings.
- **OTA Programmer (Optional):** Connects via Bluetooth to the HW LINK app on your smartphone for wireless programming and real-time data monitoring.

Consult the respective programmer's manual for specific instructions on parameter adjustment.

4. Maintenance and Care

To ensure the longevity and optimal performance of your EZRUN MAX4 HV ESC, follow these maintenance guidelines:

- **Cleaning:** After use, especially in dusty or wet conditions, gently clean the ESC with a soft brush or compressed air. While waterproof, avoid prolonged submersion or high-pressure washing.
- **Inspection:** Regularly inspect all wires and connectors for signs of wear, fraying, or corrosion. Ensure all connections are secure.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Check the Hobbywing website periodically for firmware updates. Keeping your ESC's firmware up-to-date can improve performance and add new features.

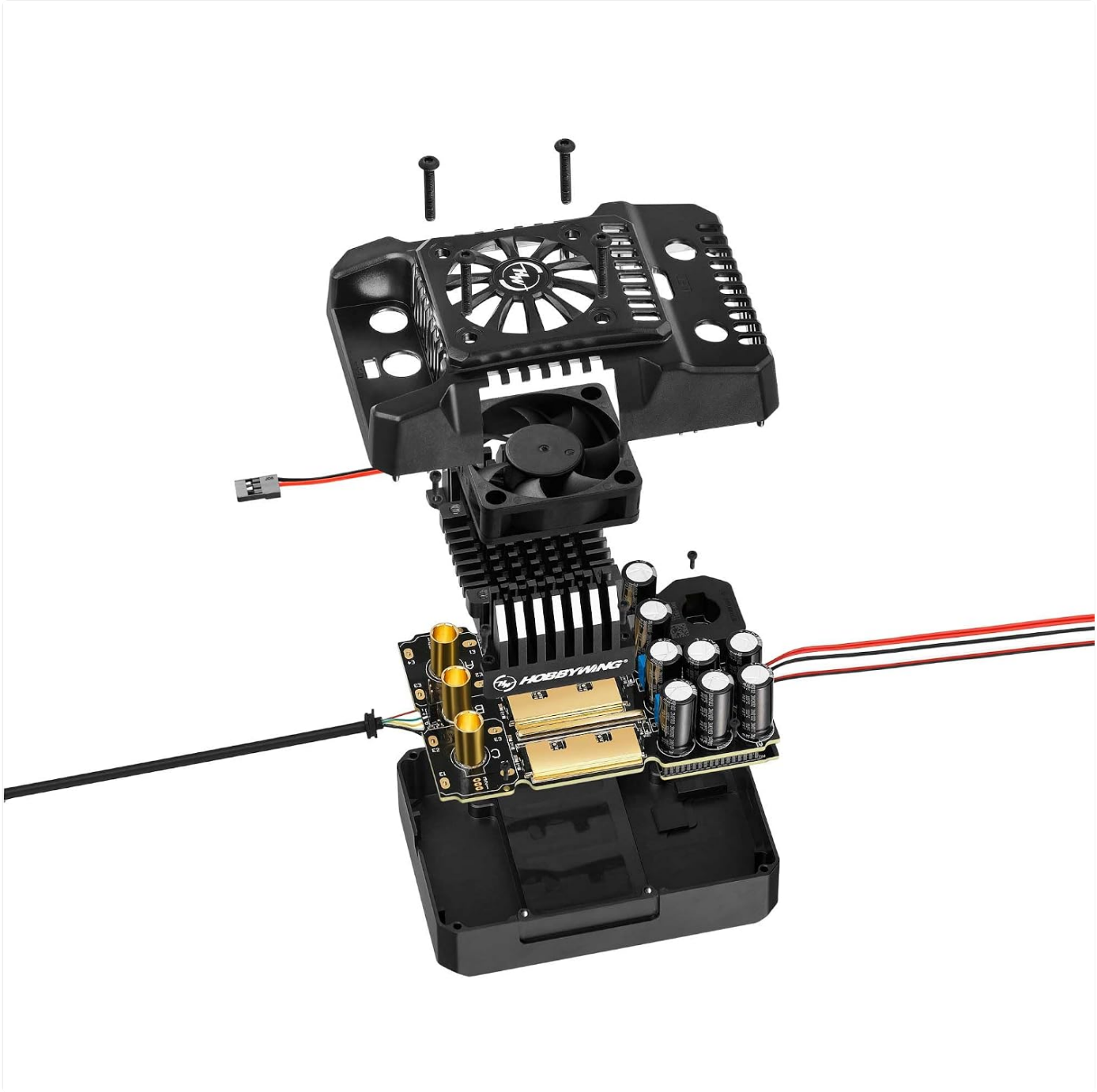


Figure 4.1: Exploded view of the EZRUN MAX4 HV, showing internal components and cooling fan assembly.

5. Troubleshooting

This section provides general guidance for common issues. For detailed troubleshooting, refer to the comprehensive manual or contact Hobbywing support.

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, faulty switch.	Check battery connection and charge level. Ensure electronic switch is pressed correctly.
Motor stutters or runs erratically.	Incorrect motor wiring, sensor cable issue, incorrect ESC settings.	Verify motor wire connections. Check sensor cable. Reset ESC to default settings or re-program.
ESC overheats.	Overgearing, insufficient cooling, motor too large/small, low battery voltage.	Adjust gearing. Ensure proper airflow. Check motor compatibility. Use fully charged batteries.

Problem	Possible Cause	Solution
No response from throttle.	ESC not calibrated, receiver not powered, signal loss.	Perform ESC calibration. Check receiver power and connection. Ensure transmitter is on and bound.

6. Specifications

Detailed technical specifications for the HOBBYWING EZRUN MAX4 HV ESC:

Feature	Detail
Model Name	HWI30104002
Continuous/Peak Current	300A / 2000A
Input Voltage	6-12S LiPo
BEC Output	6V / 7.4V / 8.4V adjustable, 10A continuous (25A instant)
Motor Limit (with 12S LiPo)	KV≤600 (70125 size motor)
Dimensions (L x W x H)	7.5 x 4.5 x 3.75 inches (Product Dimensions)
Weight	2.18 Pounds (approx. 0.99 kg)
Material	Plastic
Manufacturer Recommended Age	18 years and up

7. Warranty and Support

For warranty information and technical support, please refer to the official Hobbywing website or contact Hobbywing North America directly. Warranty terms may vary based on region and purchase location. It is recommended to register your product upon purchase.
For the most up-to-date support resources, visit: www.hobbywing.com

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Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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