Hobbywing HWI38010405

HOBBYWING Ezrun MAX8 G2 Combo 4278SD-2250KV User Manual

Model: HWI38010405

Brand: Hobbywing

1. Introduction

This manual provides detailed instructions for the proper setup, operation, and maintenance of your HOBBYWING Ezrun MAX8 G2 Combo 4278SD-2250KV. This high-performance brushless system is designed for demanding RC applications, featuring an efficient cooling system, advanced turbo technology, and robust protection features. Please read this manual thoroughly before using the product to ensure optimal performance and safety.



Figure 1.1: The HOBBYWING Ezrun MAX8 G2 ESC and 4278SD-2250KV motor, showcasing their compact design and integrated wiring. The ESC features a cooling fan and multiple ports, while the motor has a ribbed casing for heat dissipation.

2. Safety Precautions

- Always disconnect the battery from the ESC when not in use to prevent accidental operation and potential damage.
- Ensure all connections are secure and properly insulated to avoid short circuits.
- Operate the product in a well-ventilated area to prevent overheating.
- Keep the product away from water and moisture unless specifically designed for waterproof operation (this product has enhanced waterproofing, but extreme conditions should still be avoided).
- Do not modify the product in any way, as this may void the warranty and create safety hazards.
- Always use appropriate battery types and configurations as recommended for the ESC and motor.
- Supervise children when they are operating RC vehicles equipped with this product.

3. Setup Guide

1. **Motor and ESC Connection:** Connect the three motor wires to the corresponding output terminals on the ESC. For sensored operation, connect the sensored cable from the motor to the ESC's sensored port. The MAX8 G2 ESC features a new type of sensored cable interface for enhanced reliability.

2. **Battery Connection:** Connect your battery pack to the ESC's power input wires. Ensure correct polarity. The ESC has built-in 680uF capacitors, reducing the need for external capacitors.
3. **Receiver Connection:** Connect the BEC output cable from the ESC to the throttle channel of your receiver.
4. **BEC Voltage Adjustment:** The built-in switch mode BEC offers adjustable voltage from 6V to 8.4V (0.1V step) with a maximum output of 15A. This allows compatibility with various standard and high-voltage servos. Adjust the BEC voltage using a program box or OTA programmer.
5. **Electronic Switch:** The ESC is equipped with an advanced electronic switch, providing reliable power control and protection against dust, humidity, and impact, which can affect traditional mechanical switches.
6. **Parameter Setting:** Use a compatible program device (LED program card, LCD G2 program box, or OTA programmer) to set ESC parameters such as throttle range, brake force, and turbo timing. The OTA Bluetooth module allows real-time data logging and parameter adjustment via the HW LINK app.



Figure 3.1: A closer view of the HOBBYWING Ezrun MAX8 G2 Combo components, highlighting the robust connectors and the integrated cooling fan on the ESC.

4. Operating Instructions

- **Power On/Off:** Use the electronic switch to power on or off the ESC.
- **Throttle Calibration:** Perform throttle calibration with your radio system according to the ESC's specific

instructions (refer to the full Hobbywing manual for detailed steps, usually involving holding the set button while powering on).

- **Turbo Timing:** The ESC supports up to 32-degree turbo timing settings. When paired with compatible motors like the EzRun 4278SD, this can increase the maximum RPM by approximately 25%, enhancing performance.
- **Real-time Data Logging:** Connect the optional OTA module box to enable real-time data recording. This allows you to monitor operating status and performance data via the HW LINK app.
- **Protection Functions:** The ESC is equipped with multiple protection features including:
  - Battery Low Voltage Protection
  - ESC and Motor Overheat Protection
  - Signal Loss Protection
  - Current Protection
  - Capacitor Thermal Protection (prevents irreversible damage due to overload)

5. Maintenance

- **Cleaning:** Regularly clean the ESC and motor to remove dirt, dust, and debris. Use a soft brush or compressed air.
- **Waterproofing:** The ESC features an innovative waterproof design (IP67 when used with Hobbywing motors) for enhanced performance in various climates and harsh conditions (sediment, ice, snow, water). However, always dry the unit thoroughly after exposure to moisture.
- **Connections:** Periodically check all wire connections for looseness or damage. Ensure connectors are clean and free of corrosion.
- **Firmware Updates:** Keep the ESC firmware updated to enjoy the latest functions and improvements. Firmware updates can be performed using the multi-function LCD G2 program box or OTA Programmer (purchased separately).
- **Storage:** Store the product in a dry, cool place away from direct sunlight and extreme temperatures.

6. Troubleshooting

This section provides general guidance for common issues. For detailed troubleshooting, refer to the comprehensive Hobbywing user manual available on their official website.

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, faulty switch.	Check battery connection and charge level. Ensure the electronic switch is functioning.
Motor not responding or erratic.	Incorrect throttle calibration, loose motor wires, sensored cable issue, motor/ESC overheat.	Recalibrate throttle. Check all motor and sensored cable connections. Allow components to cool down.
Vehicle runs slowly or lacks power.	Low battery, incorrect ESC settings, motor issue.	Charge battery. Verify ESC parameters (e.g., timing, punch). Inspect motor for damage.
ESC overheats frequently.	Insufficient cooling, excessive load, incorrect gearing, high ambient temperature.	Ensure proper airflow. Check gearing. Reduce load or adjust driving style.

7. Specifications

Feature	Detail
Brand	Hobbywing
Model Name	HWI38010405
Speed (Motor)	2250 RPM (KV)
Voltage (Motor)	7.4 Volts (Nominal)
Horsepower	15 hp
Material	Plastic
Item Weight	1.98 pounds
Product Dimensions	7.75 x 6 x 2.5 inches
ESC Size	60(L)x48(W)x40.5(H)mm
BEC Output	Switch mode, 6V/7.4V/8.4V adjustable, 15A peak
Capacitors	Built-in 3x 680uF
Waterproof Level	IP67 (when paired with Hobbywing motors)
Turbo Timing	Up to 32 degrees adjustable

This manual is for informational purposes only. Specifications are subject to change without notice.
For further assistance, please visit the official Hobbywing website.