Hobbywing 38010602 | 38010603 | 38010604

HOBBYWING EZRUN MAX5 HV G2-56118SD G2 Combo User Manual

Model: EZRUN MAX5 HV G2-56118SD G2 Combo
Brand: Hobbywing

1. Introduction

This manual provides essential information for the proper setup, operation, and maintenance of your HOBBYWING EZRUN MAX5 HV G2-56118SD G2 Combo. Please read this manual thoroughly before using the product to ensure optimal performance and safety.
The EZRUN MAX5 HV G2 ESC and 56118-1100KV SD G2 Motor are designed for high-performance RC applications, offering advanced features such as intelligent freewheeling technology, high protection levels, and turbo timing technology.

2. Safety Precautions

- Always disconnect the battery from the ESC after use.
- Ensure all connections are secure and properly insulated to prevent 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 IP-67 rating).
- Do not modify the product in any way not specified in this manual.
- Adult supervision is recommended for users under the age of 18.
- Avoid direct contact with rotating parts of the motor during operation.

3. What's in the Box

The HOBBYWING EZRUN MAX5 HV G2-56118SD G2 Combo package includes the following components:

- (1) Ezrun Max5 ESC
- (1) Ezrun 56118SD Motor

- (2) Manuals (this document and possibly a quick start guide)



Image: The HOBBYWING EZRUN MAX5 HV G2 ESC (bottom right) and the 56118SD G2 Motor (top left). The ESC is a black rectangular unit with a fan on top and multiple wire connections. The motor is a cylindrical black and silver unit with cooling fins.

4. Product Features

- **Sensored Mode:** Designed to work in full-sensored mode when paired with HOBBYWING EzRun 56118 SD G2 motors, ensuring stable output and excellent low-speed linearity.
- **Intelligent Freewheeling Technology:** Reduces heat generation and improves driving efficiency, leading to lower operating temperatures and enhanced reliability.
- **High Protection Level (IP-67):** Guarantees excellent waterproofing and dustproof protection, allowing operation in various harsh conditions including mud, sand, ice, snow, and water.
- **Turbo Timing Technology:** Supports up to 24 degrees of Turbo Timing adjustment, providing an approximate 18% increase in performance when paired with compatible HOBBYWING EzRun 56118 SD G2 motors.
- **Powerful BEC:** Built-in super BEC with a maximum output current of up to 25A, with switchable output voltages (6V/7.4V/8.4V) to support high-torque servos.
- **Real-time Data Logging:** Connects to the OTA Bluetooth module for viewing real-time data and operating status (throttle, voltage, current, temperature, speed) via the HW LINK app.
- **Upgraded Sensor Wire Interface:** Enhances the ESC's protection level and addresses waterproofing concerns of traditional interfaces.

5. Setup

5.1 Component Installation

1. **Mount the ESC:** Securely mount the EZRUN MAX5 HV G2 ESC in your vehicle using double-sided tape or screws, ensuring adequate airflow for cooling.
2. **Mount the Motor:** Install the 56118SD G2 Motor into the motor mount of your vehicle. Ensure proper gear mesh between the motor pinion and the spur gear.
3. **Connect Motor to ESC:** Connect the three motor phase wires (A, B, C) from the motor to the corresponding output terminals on the ESC. Ensure correct polarity for sensored operation.
4. **Connect Sensor Wire:** Connect the sensor wire from the motor to the sensor port on the ESC.
5. **Connect Battery:** Connect your LiPo battery (6-12S LiPo supported) to the battery input wires of the ESC. Ensure correct polarity (red to positive, black to negative).
6. **Connect Receiver:** Plug the BEC output cable from the ESC into the throttle channel (usually Channel 2) of your RC receiver.

5.2 Initial Calibration

Before first use, it is crucial to calibrate the ESC with your radio system to ensure proper throttle response.

1. Turn on your transmitter and ensure the throttle trim is at neutral.
2. With the ESC turned off, connect the battery.
3. Press and hold the SET button on the ESC, then turn on the ESC. Release the SET button when the LED flashes red.
4. **Neutral Position:** Leave the throttle trigger at neutral. Press the SET button once. The LED will flash green once.
5. **Full Throttle Position:** Pull the throttle trigger to the full throttle position. Press the SET button once. The LED will flash green twice.
6. **Full Brake Position:** Push the throttle trigger to the full brake position. Press the SET button once. The LED will flash green three times.
7. The ESC is now calibrated and ready for use.

6. Operating

6.1 Powering On/Off

- **To Power On:** Ensure all connections are secure. Turn on your transmitter first, then turn on the ESC.
- **To Power Off:** Turn off the ESC first, then turn off your transmitter. Disconnect the battery from the ESC.

6.2 Driving Tips

- Start with gentle throttle inputs, especially if you are new to high-power RC systems.
- Monitor motor and ESC temperatures during operation. If temperatures become excessively high, allow the system to cool down.
- Utilize the real-time data logging feature via the HW LINK app to monitor performance and identify potential issues.
- Adjust Turbo Timing settings cautiously, as higher settings can increase motor temperature.

7. Maintenance

- **Cleaning:** Regularly clean the ESC and motor to remove dirt, dust, and debris. Use a soft brush or compressed air. For the waterproof ESC, it can be rinsed with water, but ensure it is thoroughly dried afterwards.
- **Inspections:** Periodically inspect all wires and connectors for signs of wear, damage, or loose connections.
- **Firmware Updates:** Keep the ESC firmware updated to the latest version using the multi-function LCD G2 program box or OTA Programmer (sold separately) to access new features and improvements.
- **Storage:** When not in use for extended periods, store the combo in a cool, dry place away from direct sunlight.

8. Troubleshooting

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, faulty switch.	Check battery connection and charge level. Inspect switch for damage.
Motor not responding to throttle.	Incorrect ESC calibration, loose motor/sensor wires, signal loss.	Recalibrate ESC. Check all wire connections. Ensure transmitter is on and bound.
Overheating of ESC or Motor.	Improper gearing, excessive load, insufficient airflow, aggressive timing settings.	Adjust gearing. Reduce load. Ensure proper ventilation. Reduce Turbo Timing.
Erratic or inconsistent performance.	Interference, loose connections, damaged sensor wire.	Check for radio interference. Secure all connections. Replace sensor wire if damaged.

9. Specifications

Feature	Detail
Brand	Hobbywing
Model Name	EZRUN MAX5 HV G2-56118SD G2 COMBO
ESC Continuous Current	250A (Max5 HV G2 ESC)
Lipo Cells Supported	6-12S LiPo
BEC Output	8A continuous, 25A instant (6V/7.4V/8.4V switchable)
Motor KV	1100KV (56118-1100KV SD G2 Motor)
Waterproof Rating	IP-67
Connectivity Technology	Bluetooth (via OTA module)
Dimensions (Product)	9.4 x 7.9 x 3.25 inches
Item Weight	3.4 Pounds
Material	CNC machined aluminum housing, high purity copper windings, etc.

10. Warranty and Support

For warranty information and technical support, please refer to the official Hobbywing website or contact Hobbywing North America directly. Keep your proof of purchase for warranty claims.

Online Resources: www.hobbywing.com

Manufacturer: Hobbywing Technology

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