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Hobbywing MAX8 G2S & 4278SD 2250KV G2R Combo

User Manual

HOBBYWING EZRUN MAX8 G2S & 4278SD 2250KV G2R Combo

Model: MAX8 G2S & 4278SD 2250KV G2R Combo

Product Overview

The HOBBYWING EZRUN MAX8 G2S & 4278SD 2250KV G2R Combo is a high-performance electronic speed controller (ESC) and motor system designed for 1/8 scale RC vehicles. This combo features advanced waterproofing and dust-proofing, a powerful built-in BEC, and intelligent electronic switches for enhanced durability and reliability in various conditions.
The system supports real-time data logging and firmware updates via the HW LINK app using its integrated Bluetooth module, offering convenient parameter settings and monitoring.



Image: The HOBBYWING EZRUN MAX8 G2S Electronic Speed Controller (ESC) and the 4278SD 2250KV G2R Motor. The ESC is a black unit with a fan on top and multiple ports for connections, while the motor is a cylindrical black unit with cooling fins.

Safety Information

Important Safety Precautions:

- Ensure all wires and connections are well insulated before connecting the ESC to related devices, as a short circuit will damage your ESC.
- Ensure all devices are well connected to prevent poor connections that may cause your vehicle to lose control or other unpredictable issues like damage to the device.
- Carefully check the power devices and the car frame manual to ensure the power pairing is reasonable. Avoid incorrect pairing to overload the motor and damage the ESC.
- Use a soldering iron with a power of at least 50W to solder all input/output wires and connectors.
- Stop using the ESC when its outer temperature exceeds 90°C/194°F; otherwise, your ESC will be damaged and may also damage your motor.

- Always disconnect and remove batteries after use, as the ESC will continue to consume current if it’s still connected to batteries (even if the ESC is turned off). Long-time contact will cause batteries to completely discharge and result in damage to batteries, ESC, or both. This will not be covered under warranty.

Product Features

- Optimized hardware design with intelligent freewheeling technology for improved stability and reliability.
- Capacitor protection to prevent damage from overheating due to overloads or extreme conditions.
- Built-in Bluetooth module for direct connection to the mobile APP (HW LINK) for parameter settings, data reading, and firmware upgrades without additional devices.
- Waterproof and dust-proof design for reliable performance in various climates, including conditions with sediment, ice, snow, and water accumulation.
- Built-in ultra-powerful switch mode BEC with 6A continuous current, 15A instant current, and support for 6V/7.4V/8.4V switching, compatible with powerful and high-voltage servos.
- Equipped with advanced and safe electronic switches, protecting against dust, humidity, contact rust, and accidental closure from impacts.
- Supports 32-degree turbo timing setting, increasing maximum RPM by approximately 25% when used with matching motors like the EZRUN 4278SD.
- Multiple protection functions: battery low voltage protection, ESC and motor overheat protection, signal loss protection, and current protection.
- Real-time data logging to view various running data on the HW LINK app using the OTA Bluetooth module.

Setup Guide

Proper setup is crucial for optimal performance and longevity of your HOBBYWING EZRUN MAX8 G2S & 4278SD 2250KV G2R Combo. Follow these steps for installation:

1. **Mounting the ESC and Motor:** Securely mount the EZRUN MAX8 G2S ESC and 4278SD 2250KV G2R Motor in your RC vehicle chassis. Ensure adequate airflow around the ESC for cooling.
2. **Motor Connection:** Connect the three motor wires from the ESC to the motor. Ensure correct phase connection (A-A, B-B, C-C). If the motor spins in the wrong direction, you can reverse two of the motor wires or adjust the motor direction in the HW LINK app.
3. **Battery Connection:** Connect your battery pack to the ESC's battery input wires. Ensure the polarity is correct (red to positive, black to negative). Use high-quality connectors that can handle the current draw.
4. **Receiver Connection:** Plug the ESC's throttle cable into the throttle channel (usually channel 2) of your RC receiver.
5. **Sensor Wire Connection (if applicable):** If your motor is sensored, connect the sensor wire from the motor to the sensor port on the ESC. Ensure the connector is oriented correctly.
6. **Initial Calibration:** Perform the ESC's throttle range calibration with your radio system. Refer to the detailed ESC manual for specific calibration steps.
7. **App Connection:** Download the HW LINK app on your smartphone. Turn on the ESC, then open the app and connect to the ESC via Bluetooth for initial parameter settings and adjustments.

Operating Instructions

Once the system is set up, you can begin operation. The EZRUN MAX8 G2S offers advanced features accessible via the HW LINK app.

- **Powering On/Off:** Use the electronic switch to power on or off the ESC. This switch is designed to be robust against environmental factors and impacts.
- **Using the HW LINK App:**
  - Connect to the ESC via the built-in Bluetooth module.
  - Adjust various parameters such as throttle curves, brake force, BEC voltage (6V/7.4V/8.4V), and motor timing.
  - Monitor real-time data including ESC temperature, motor RPM, battery voltage, and current.
  - Perform firmware updates to ensure your ESC has the latest features and bug fixes.
- **Turbo Timing:** For advanced users, the 32-degree turbo timing setting can be enabled via the app to significantly boost motor RPM for competitive racing. Ensure your motor and battery can handle the increased load.
- **Protection Functions:** The ESC is equipped with multiple protection features. If any protection is triggered (e.g., low voltage, overheat, signal loss), the ESC will reduce power or shut down to prevent damage. Consult the app for diagnostic information.

Maintenance

Regular maintenance ensures the longevity and consistent performance of your ESC and motor combo.

- **Cleaning:** After each use, especially in dusty or wet conditions, gently clean the ESC and motor. Use a soft brush or compressed air to remove dirt and debris. Avoid using harsh chemicals.
- **Temperature Monitoring:** Regularly check the operating temperature of both the ESC and motor. If temperatures consistently exceed 90°C/194°F, investigate potential issues such as incorrect gearing, insufficient cooling, or excessive load. Ensure the ESC fan is operating correctly.
- **Connections:** Periodically inspect all electrical connections (battery, motor, receiver) for signs of wear, corrosion, or looseness. Re-solder or replace connectors as needed.
- **Storage:** When not in use, store the ESC and motor in a dry, cool place. Always disconnect batteries from the ESC to prevent deep discharge and potential damage.

Troubleshooting

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, battery discharged, faulty electronic switch, incorrect wiring.	Check battery connection and charge level. Ensure all wires are correctly connected. Try pressing the electronic switch firmly.
Motor not spinning or erratic operation.	Incorrect motor wiring, throttle calibration issue, signal loss, motor or ESC damage.	Verify motor wire connections. Re-calibrate throttle range. Check receiver and transmitter for signal. Inspect motor and ESC for visible damage.
ESC or motor overheating.	Incorrect gearing, excessive load, insufficient cooling, faulty fan.	Adjust gearing (smaller pinion, larger spur). Ensure proper ventilation. Check if the ESC fan is spinning. Clean any debris from the fan. Reduce run time.
ESC fan not turning on automatically.	Sensor issue, fan malfunction, software glitch.	Check fan connection to ESC. Manually test the fan if possible. Update ESC firmware via HW LINK app. If issue persists, contact Hobbywing support.

Problem	Possible Cause	Solution
Loss of control during operation.	Signal interference, low battery voltage, loose connections.	Ensure clear line of sight to vehicle. Check battery voltage. Secure all connections.

Specifications

Feature	Detail
Product Dimensions	7 x 5.3 x 2.2 inches
Item Weight	1.86 pounds
ASIN	B0DNRDY758
Manufacturer Recommended Age	18 months and up
Manufacturer	Hobbywing Technology
Included Components	ESC / Motor

Warranty and Support

For warranty information and technical support, please contact Hobbywing North America directly. Keep your proof of purchase for any warranty claims.
You can find more information and contact details on the official Hobbywing website or through their authorized distributors.
Note: Damage resulting from improper use, incorrect wiring, or failure to follow safety guidelines (e.g., continuous operation above recommended temperatures, deep discharge of batteries) may void your warranty.

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