Hobbywing 30102603

HOBBYWING EZRUN MAX10 G2 140A ESC User Manual

Model: 30102603

1. Introduction

The HOBBYWING EZRUN MAX10 G2 140A ESC is an advanced electronic speed controller designed for remote-controlled vehicles. It features an improved waterproof sensored cable interface and an upgraded sensored mode for precise control. This ESC supports Turbo timing adjustment, enhancing motor performance and speed. It incorporates smart start-stop fan technology for efficient cooling and reduced noise, along with increased capacitance for stable power delivery and overheating protection. The smart freewheeling technology contributes to higher drive efficiency and lower operating temperatures. With its IP-67 waterproof system, the EZRUN MAX10 G2 is built to withstand various challenging environments, including mud, sand, snow, and water.

2. Features

- Improved waterproof sensored cable interface and upgraded sensored mode for precise control, perfectly matching EzRun 3652/3665 SD G3 motors.
- Supports Turbo timing adjustment up to 32 degrees, increasing maximum speed by 25% when combined with EzRun 3652/3665 G3 motors.
- Smart start-stop technology for the frameless fan, reducing noise and saving power by activating only when temperature rises.
- 74% increase in total capacitor capacitance compared to the previous generation, with overheating protection to improve power delivery and prevent capacitor issues.
- Smart freewheeling technology for higher drive efficiency, resulting in lower operating temperatures (approximately 25°C lower than previous generation).
- Real-time data viewing (throttle, voltage, current, temperature, speed) and data logging history via mobile app when connected with an OTA Bluetooth module.
- IP-67 waterproof and dustproof system ensures reliable operation in mud, sand, ice, snow, and water.

3. What's in the Box

- (1) Ezrun MAX10 140A G2 ESC
- (1) User's manual
- (1) HOBBYWING decal

4. Setup Guide

Before operating your HOBBYWING EZRUN MAX10 G2 140A ESC, please follow these steps carefully to ensure proper installation and functionality.



Image: The HOBBYWING EZRUN MAX10 G2 140A ESC, showing its compact black casing, integrated fan, and various colored wires for motor, battery, and receiver connections. The label clearly indicates 'EZRUN MAX10 G2 2-4S LiPo 140A'.

4.1 Mounting the ESC

Securely mount the ESC in your vehicle using double-sided tape or screws, ensuring good airflow around the unit for optimal cooling. Avoid mounting in enclosed spaces that could trap heat.

4.2 Connecting the Motor

Connect the three motor wires from the ESC to the corresponding motor terminals. For sensored motors, ensure the sensor cable is also connected between the ESC and the motor. Verify the correct polarity and connection for proper motor rotation.

4.3 Connecting the Battery

Connect the battery connector from the ESC to your LiPo battery. Ensure the battery voltage is within the supported range of 2-4S LiPo. Always double-check polarity before connecting to prevent damage.

4.4 Connecting the Receiver

Plug the ESC's throttle cable into the throttle channel (usually Channel 2) of your receiver. Ensure the signal, positive, and negative wires are correctly aligned.

4.5 ESC Calibration

Perform the throttle range calibration as per the detailed instructions in the included user manual. This step is crucial for the ESC to correctly recognize the throttle signals from your radio system.

5. Operating Instructions

Once the ESC is properly installed and calibrated, you can begin operation. Always ensure your battery is fully charged and securely connected.

5.1 Powering On/Off

To power on the ESC, connect the battery and then press the power button on the ESC. To power off, press and hold the power button until the ESC shuts down. Always disconnect the battery after use.

5.2 Basic Operation

Control the vehicle's speed and direction using your radio transmitter. The ESC will respond to your throttle inputs, providing smooth acceleration and braking. Familiarize yourself with the vehicle's handling in a safe, open area.

5.3 Real-time Data Monitoring

For advanced monitoring, connect the ESC to an OTA Bluetooth module (sold separately). Use the Hobbywing mobile application to view real-time data such as throttle amount, voltage, current, temperature, and speed. The app also allows for data logging to review past performance.

5.4 Environmental Considerations

The EZRUN MAX10 G2 features an IP-67 waterproof system, allowing operation in wet and dusty conditions. However, always ensure all connections are secure and sealed before exposing the ESC to water or excessive dust. After operating in wet conditions, clean and dry the ESC thoroughly.

6. Maintenance

Regular maintenance helps prolong the life and performance of your ESC.

- **Cleaning:** After each use, especially in dirty or wet conditions, clean the ESC. Use a soft brush or compressed air to remove dust and debris. For wet conditions, rinse with clean water and allow to air dry completely before storage or next use.
- **Connection Check:** Periodically inspect all wire connections (motor, battery, receiver) for signs of wear, corrosion, or looseness. Ensure all plugs are securely seated.

- **Fan Inspection:** Check the cooling fan for any obstructions or damage. The smart start-stop fan technology means the fan will only operate when needed, so its inactivity during low temperatures is normal.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures. Disconnect the battery when storing the vehicle or ESC for extended periods.

7. Troubleshooting

If you encounter issues with your EZRUN MAX10 G2 ESC, refer to the following common troubleshooting steps:

- **No Power:** Ensure the battery is fully charged and properly connected. Check all power connections for continuity and secure fit.
- **Motor Not Responding:** Verify that the ESC is correctly calibrated to your radio transmitter. Check motor wire connections and ensure the motor is not seized.
- **Overheating:** While the ESC has overheating protection, persistent overheating can indicate issues. Ensure adequate airflow around the ESC. Check for excessive load on the motor or incorrect gearing. The smart start-stop fan should activate when temperatures rise.
- **Erratic Operation:** Re-calibrate the ESC. Check for radio interference or loose receiver connections. Ensure the battery voltage is stable and not dropping too low under load.
- **Beeping Codes:** Refer to the detailed beeping code explanations in the full user manual for specific error indications.

If problems persist after following these steps, please contact Hobbywing customer support or refer to the comprehensive troubleshooting section in the complete user manual.

8. Specifications

Specification	Value
Product Dimensions	2.08 x 1.5 x 1.46 inches
Item Weight	6.4 ounces
Item Model Number	30102603
Manufacturer	Hobbywing Technology
Recommended Age	4 - 8 years

9. Warranty and Support

For detailed warranty information and customer support, please refer to the documentation included with your product or visit the official Hobbywing website. For purchases made through Amazon, HOBBYWING North America is the listed seller and can be contacted for support related to your product.

It is recommended to retain your proof of purchase for warranty claims.

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