Hobbywing 38020367

HOBBYWING EZRUN Mini28 Combo User Manual

Model: MINI28 ESC + 1626SD 5000KV

1. Introduction

This manual provides detailed instructions for the proper use, setup, and maintenance of your HOBBYWING EZRUN Mini28 Combo. This high-performance system includes the Mini28 ESC and the 1626 Sensored Motor, designed for precision control and efficiency in RC applications.
The EZRUN Mini28 Combo offers improved top speed, precise response, and high efficiency with cool operation. When paired, the timing advance feature can significantly boost top speeds. It ensures zero cogging, consistent torque, and excellent low-speed response for superior driveability. The modular design allows for convenient cleaning and maintenance.

2. Safety Information

Adherence to the following safety guidelines is crucial for preventing damage to the product and ensuring user safety:

- To avoid short circuits, ensure that all wires and connections are well insulated before connecting the ESC to related devices.
- Ensure all devices are well connected to prevent poor connections and avoid damage to your electronic devices.
- Read through the manuals of all power devices and chassis and ensure the power configuration is rational before using this unit.
- Please use a soldering iron with a power of at least 60W to solder all input/output wires and connectors.
- Stop immediate usage once the casing of the ESC exceeds 90°C / 194°F as this may cause damage to both the ESC and motor. Hobbywing recommends setting the "ESC Thermal Protection" to 105°C / 221°F (this refers to the internal temperature of the ESC).
- Users must always disconnect the batteries after use as the current on the ESC is consuming continuously if it is connected to the batteries (even if the ESC is turned off). The battery will completely be discharged and may result in damage to the battery or ESC when it is connected for a long period of time. This WILL NOT be covered under warranty.

3. What's in the Box

Upon opening the package, verify that all components are present:

- (1) EZRUN Mini28 ESC
- (1) EZRUN 1626 Sensored Motor
- (1) User's manual
- (1) EZRUN Mini wiring Kit
- Supportive accessories (double-sided tape, etc.)

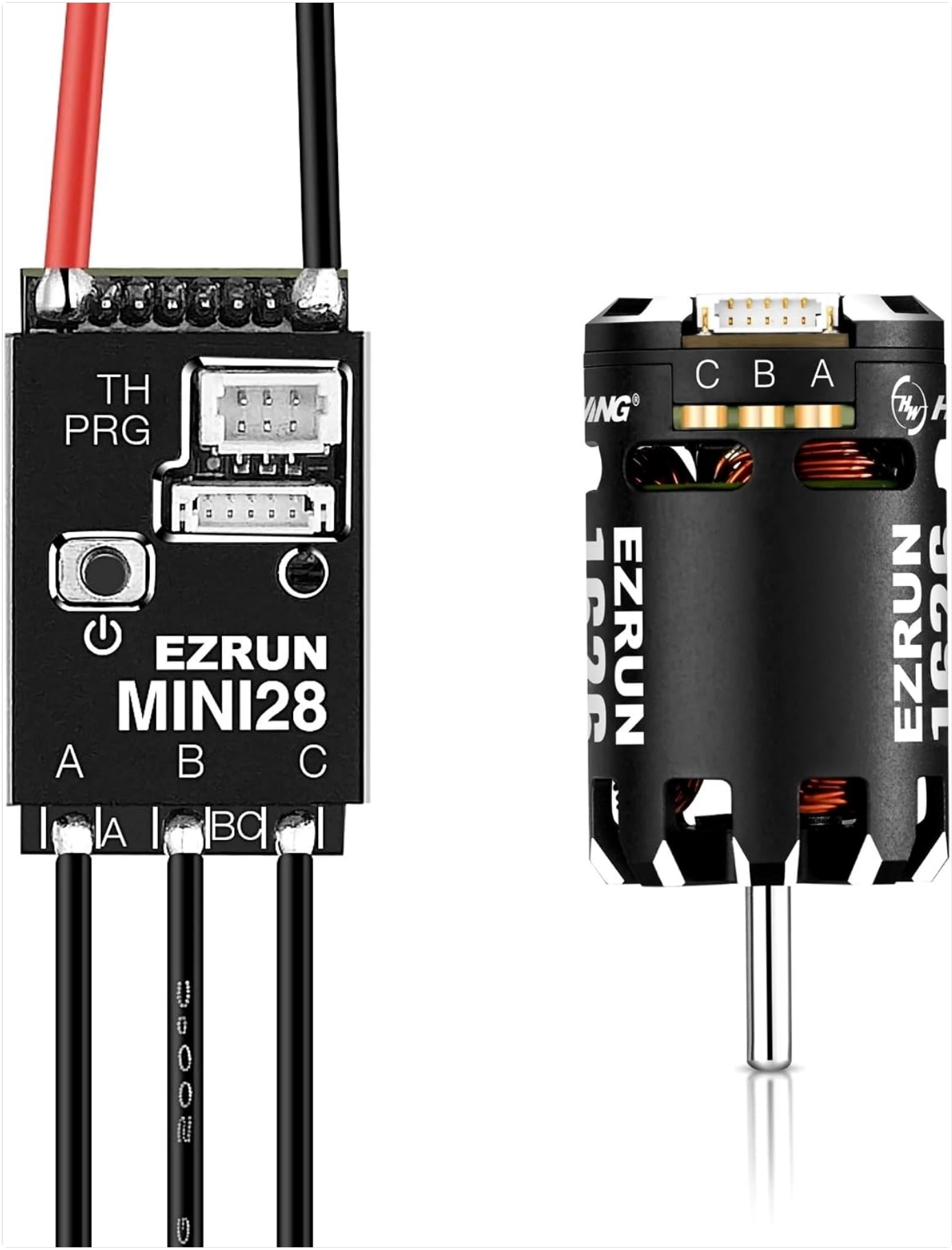


Image: The EZRUN Mini28 ESC and 1626 Sensored Motor, showing their compact design and connection points.

4. Key Features

- Special program for Mini Z racing, offering rich and exquisite adjustable parameters to meet diverse track and control needs.

- Adjustable throttle driving frequency, brake frequency, and initial throttle force for precise motor driving and braking adjustments.
- Multiple protection functions: low battery voltage protection, ESC overheat protection, and fail-safe protection (throttle signal loss protection).
- Supports LCD G2 program box and OTA programmer for setting ESC parameters (purchased separately).
- Supports firmware upgrades for the ESC (via LCD G2 program box or OTA programmer) to access the latest functions.

5. Setup and Installation

5.1 Component Identification



Image: A closer view of the EZRUN Mini28 ESC and 1626 Sensored Motor, highlighting the various connection ports and wiring.

Familiarize yourself with the ESC and motor components. The ESC features ports for throttle (TH), programming (PRG), and motor phases (A, B, C). The motor has corresponding terminals for connection.

5.2 Wiring Connections

1. **Motor Connection:** Connect the three phase wires (A, B, C) from the ESC to the corresponding terminals on the 1626 Sensored Motor. Ensure secure and insulated connections.
2. **Receiver Connection:** Plug the throttle cable from the ESC into the throttle channel (usually channel 2) of your RC receiver.
3. **Battery Connection:** Connect your battery pack to the power input wires of the ESC. Observe correct polarity (red to positive, black to negative).
4. **Programming Port:** The PRG port is used for connecting an optional LCD G2 program box or OTA programmer for advanced settings.

Note: Always double-check all connections before powering on the system to prevent damage.

5.3 ESC Calibration (Throttle Range)

For optimal performance, calibrate the ESC's throttle range with your transmitter. Refer to the detailed instructions in the full user manual provided with the product for the specific calibration procedure.

6. Operating Instructions

6.1 Powering On/Off

- To power on, ensure all connections are secure, then connect the battery to the ESC. The ESC will emit a series of tones indicating readiness.
- To power off, disconnect the battery from the ESC. Always disconnect the battery after use to prevent discharge.

6.2 Basic Operation

Once powered on and calibrated, the system is ready for operation. Use your transmitter's throttle stick to control the motor speed. The sensored motor provides smooth and consistent power delivery, even at low speeds.

6.3 Advanced Parameter Adjustment

The EZRUN Mini28 ESC offers extensive adjustable parameters for fine-tuning performance. These include throttle driving frequency, brake frequency, initial throttle force, and more. These settings can be adjusted using an optional LCD G2 program box or OTA programmer. Refer to the dedicated programming guide for detailed instructions on each parameter.

7. Maintenance

- **Cleaning:** The modular detachable structure of the motor and ESC facilitates daily cleaning. Regularly remove dust and debris from the components to ensure optimal performance and heat dissipation.
- **Firmware Updates:** Hobbywing periodically releases firmware updates to improve performance and add new features. It is recommended to keep your ESC firmware updated using an LCD G2 program box or OTA programmer (sold separately).
- **Connection Check:** Periodically inspect all wiring and connections for signs of wear, damage, or loose contacts. Ensure all solder joints are secure.

8. Troubleshooting

This section provides solutions to common issues you might encounter. For more complex problems, please refer to the full user manual or contact Hobbywing support.

Problem	Possible Cause	Solution
ESC does not power on or respond.	◦ Battery not connected or low voltage. ◦ Incorrect polarity. ◦ Loose connections. ◦ Internal damage to ESC.	◦ Check battery connection and charge level. ◦ Verify battery polarity. ◦ Inspect all wires and connectors for secure fit. ◦ If problem persists, contact Hobbywing support.
Motor not spinning or erratic behavior.	◦ Motor phase wires incorrectly connected. ◦ ESC not calibrated with transmitter. ◦ Sensor cable issue. ◦ Motor or ESC overheating.	◦ Verify motor phase wire connections (A, B, C). ◦ Perform ESC throttle range calibration. ◦ Check sensor cable for damage or loose connection. ◦ Allow system to cool down. Check thermal protection settings.
System shuts down unexpectedly.	◦ Low battery voltage protection activated. ◦ ESC overheat protection activated. ◦ Fail-safe protection (signal loss).	◦ Recharge or replace battery. ◦ Allow ESC to cool. Check cooling and load. ◦ Ensure strong signal between transmitter and receiver.

9. Specifications

Detailed technical specifications for the EZRUN Mini28 Combo:

Attribute	Value
Product Dimensions	3.5 x 2.7 x 3 inches
Item Weight	5.6 ounces
Model Number	38020367
Manufacturer	Hobbywing Technology
Recommended Age	3 years and up

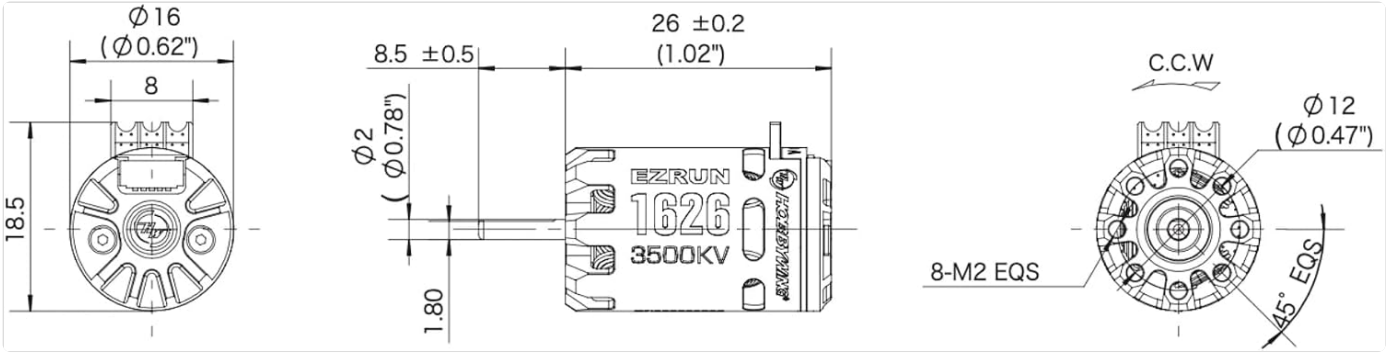


Image: Technical drawing illustrating the dimensions of the EZRUN 1626 motor, including diameter and length measurements.

10. Warranty and Support

For warranty information and technical support, please contact Hobbywing directly. Details regarding specific warranty periods and conditions are typically provided with the product packaging or on the official Hobbywing website.
Important Note: Damage resulting from improper connection, incorrect polarity, or prolonged connection to batteries after use (leading to complete discharge) may not be covered under warranty, as stated in the safety information.
For the most up-to-date support resources, visit the official Hobbywing website:www.hobbywing.com

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Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

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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