Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

GoolRC CAP6763296279610NV

GoolRC Surpass Hobby 3660 Brushless Motor and 60A ESC Combo Instruction Manual

Model: CAP6763296279610NV

1. Introduction

Thank you for choosing the GoolRC Surpass Hobby 3660 Brushless Motor and 60A ESC Combo. This high-performance system is designed for 1/10 scale RC cars, offering a balance of power and control for various terrains. This manual provides essential information for the proper setup, operation, maintenance, and troubleshooting of your new motor and ESC. Please read it thoroughly before use to ensure optimal performance and longevity of your product.



Figure 1: GoolRC Surpass Hobby 3660 Brushless Motor and 60A ESC Combo.

2. Product Features

- **Precision Design:** 4-pole, 12-slot high-torque brushless motor optimized for 1/10 scale RC cars, providing excellent power and control.
- **High-Quality Materials:** CNC machined 6061 T6 billet aluminum heatsink for enhanced durability, longevity, and efficient heat dissipation.
- **Efficient Motor:** High-purity copper windings maximize efficiency and energy conversion. A precision-balanced rotor ensures smooth operation and reliability at high speeds.
- **Integrated Combo:** Motor and ESC are offered as a matched combo for seamless compatibility and optimal performance, simplifying selection.
- **Waterproof Design:** Both the motor and ESC are designed with waterproof features for use in various conditions.

3. Package Contents

Upon opening the package, please verify that all components are present and undamaged.

- 1x GoolRC Surpass Hobby 3660 2600KV Brushless Motor
- 1x GoolRC Surpass Hobby 60A Brushless Electronic Speed Controller (ESC)
- 1x User Manual (this document)



Figure 2: Included components: motor, ESC, and user manual.

4. Setup and Installation

Proper installation is crucial for the performance and safety of your RC vehicle. Follow these steps carefully.

4.1 Motor Installation

1. **Mount the Motor:** Securely attach the 3660 brushless motor to your RC car's motor mount using appropriate screws. Ensure the motor is firmly seated to prevent movement during operation.
2. **Gear Mesh Adjustment:** Adjust the pinion gear on the motor shaft to ensure proper gear mesh with the spur gear. There should be a small amount of play (about the thickness of a piece of paper) between the teeth to prevent binding and excessive wear.
3. **Connect Motor Wires:** Connect the three motor wires from the brushless motor to the corresponding motor output terminals on the ESC. While brushless motors are typically sensorless and wire order can be swapped to change rotation direction, ensure a secure connection.

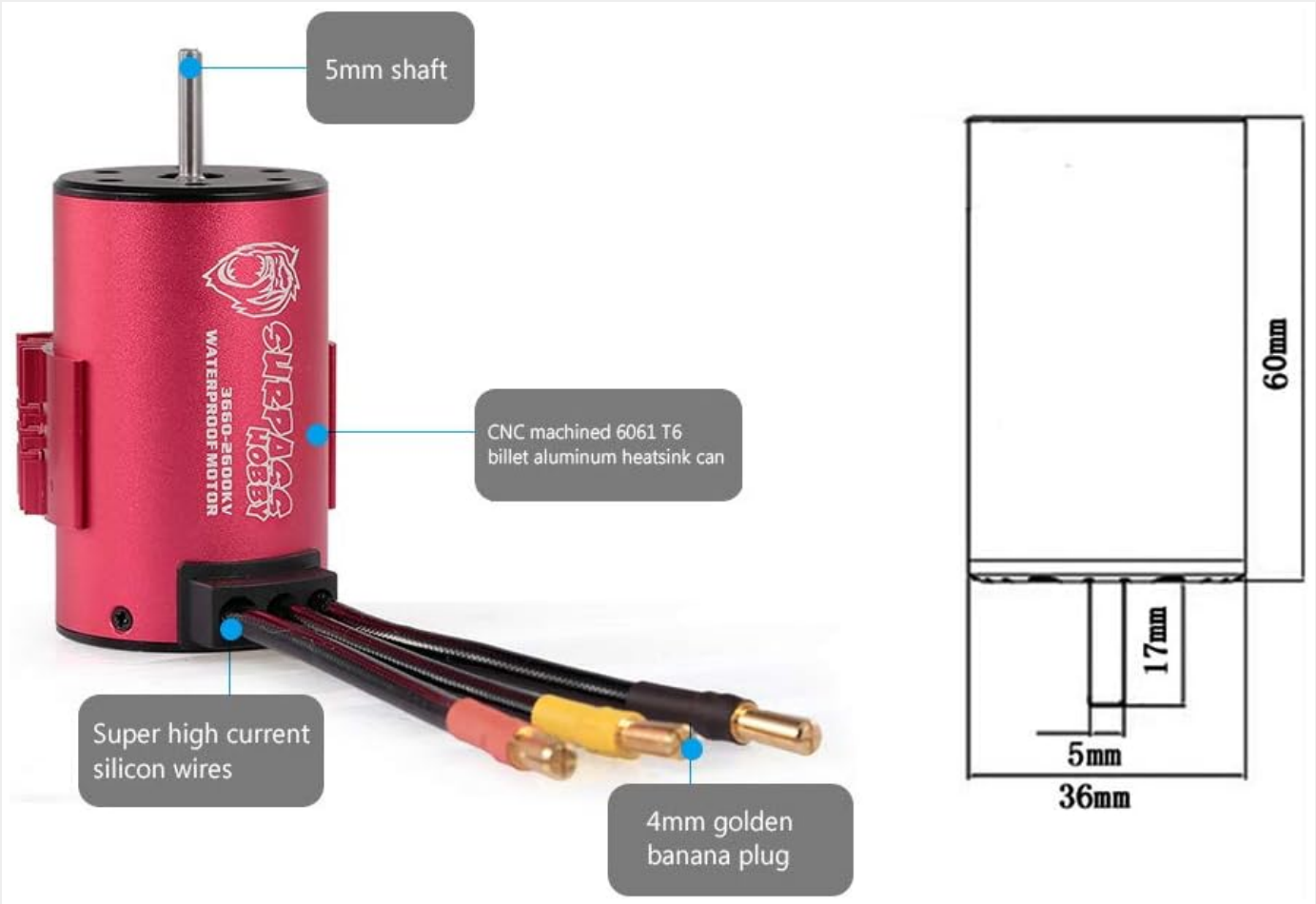


Figure 3: Motor components and dimensions. Note the 5mm shaft and 4mm golden banana plugs.

4.2 ESC Installation and Wiring

1. **Mount the ESC:** Find a suitable location in your RC car chassis to mount the 60A ESC. Use double-sided tape or zip ties to secure it, ensuring good airflow for cooling.
2. **Connect to Receiver:** Plug the ESC's signal cable (usually a three-wire servo connector) into the throttle channel (typically channel 2) of your RC receiver.
3. **Connect to Battery:** Connect the ESC's power input wires (red and black) to your battery pack. Ensure correct polarity (red to positive, black to negative). The ESC is equipped with a T-plug connector.
4. **Power On Sequence:** Always turn on your transmitter first, then the RC car. When turning off, disconnect the battery from the ESC first, then turn off the transmitter.



Figure 4: General wiring diagram for connecting the ESC, motor, battery, and receiver.



Figure 5: GoolRC 60A Brushless ESC with integrated cooling fan.

Important Notice:

1. Before purchasing, determine the motor model and current efficiency based on the model ratio.
2. Then determine the ESC based on the maximum efficiency current of the motor.
3. Finally, determine the battery.

5. Operating Instructions

Once the motor and ESC are correctly installed and connected, you can begin operating your RC car.

1. **Initial Calibration:** Most ESCs require a one-time calibration with your transmitter to learn the throttle endpoints.

Refer to your ESC's specific manual for calibration steps if needed.

2. **Power On:** Turn on your RC transmitter first, then connect the battery to the ESC. The ESC will typically emit a series of beeps indicating it has powered on and is ready.
3. **Driving:** Use the throttle trigger on your transmitter to control the speed and direction of your RC car. Start with gentle throttle inputs to get a feel for the power.
4. **Monitoring:** Pay attention to the motor and ESC temperatures during operation. Excessive heat can damage components. If components become too hot to touch, allow them to cool down before continuing.
5. **Power Off:** Always disconnect the battery from the ESC first, then turn off your transmitter.

Your browser does not support the video tag.

Video 1: A demonstration of the Surpass Hobby Motor Set, showcasing the motor unit. This video is provided by the seller and offers a visual overview of the product.

6. Maintenance

Regular maintenance will extend the lifespan and ensure consistent performance of your motor and ESC combo.

- **Cleaning:** After each use, especially in dusty or wet conditions, clean the motor and ESC. Use compressed air to remove dust and debris from the motor's cooling fins and the ESC's fan. For waterproof components, a gentle rinse with clean water followed by thorough drying is acceptable.
- **Inspect Connections:** Regularly check all electrical connections (motor wires, battery connectors, receiver cable) for looseness, corrosion, or damage. Secure any loose connections.
- **Motor Bearings:** Periodically check motor bearings for smooth operation. If they feel gritty or noisy, they may need cleaning or replacement.
- **ESC Fan:** Ensure the ESC's cooling fan is free from obstructions and spins freely. Replace if damaged or not functioning.
- **Storage:** Store the motor and ESC in a clean, dry environment away from extreme temperatures and direct sunlight.



Figure 6: The waterproof design of the GoolRC 3660 Brushless Motor allows for operation in wet conditions.



Figure 7: The waterproof GoolRC 60A Brushless ESC is designed to withstand splashes and wet environments.

7. Troubleshooting

If you encounter issues, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
Motor not running / No response	• Loose connections • Battery discharged • ESC not calibrated • Transmitter/receiver issue	• Check all wiring for secure connections. • Charge battery fully. • Perform ESC calibration with your transmitter. • Ensure transmitter is on and bound to receiver.

Problem	Possible Cause	Solution
Motor stutters or runs rough	• Incorrect motor wire connection • Poor gear mesh • Damaged motor or ESC	• Verify motor wire connections. Try swapping two motor wires if rotation is incorrect. • Adjust gear mesh for proper clearance. • Inspect motor and ESC for visible damage.
Motor/ESC overheating	• Overgearing • Excessive load • Insufficient cooling • Damaged fan	• Reduce pinion gear size or increase spur gear size. • Avoid continuous high-stress operation. • Ensure ESC fan is clear and functional. Improve airflow if possible. • Replace damaged fan.
Loss of power / Short run time	• Battery discharged or faulty • Poor connections • ESC low voltage cutoff activated	• Charge battery fully or replace if faulty. • Check all power connections. • This is normal behavior to protect the battery. Recharge the battery.

8. Specifications

8.1 Motor Specifications (3660 2600KV)

- **KV (RPM/Volt):** 2600KV
- **Max RPM:** 50000
- **Max Voltage:** 19V
- **Max Amps:** 60A (estimated from ESC)
- **Watts:** 1200W
- **Rotor Poles:** 4
- **Resistance:** Not specified for 2600KV, but typically low for efficiency.
- **Shaft Diameter:** 5mm
- **Shaft Length:** 17mm
- **Motor Diameter:** 36mm
- **Motor Length:** 60mm
- **Connector:** 4mm Golden Banana Plug
- **Material:** Aluminum (CNC machined 6061 T6 billet heatsink)
- **Weight:** Approximately 0.38 kg (for the combo)

8.2 ESC Specifications (60A Brushless)

- **Continuous Current:** 60A
- **Burst Current:** Not specified, but typically higher for short durations.
- **Battery Compatibility:** 2-3S LiPo / 4-9S NiMH (common for 60A ESCs, inferring from similar products)
- **BEC Output:** 5.8V / 3A (Switch Mode)
- **Waterproof:** Yes
- **Cooling:** Integrated Fan

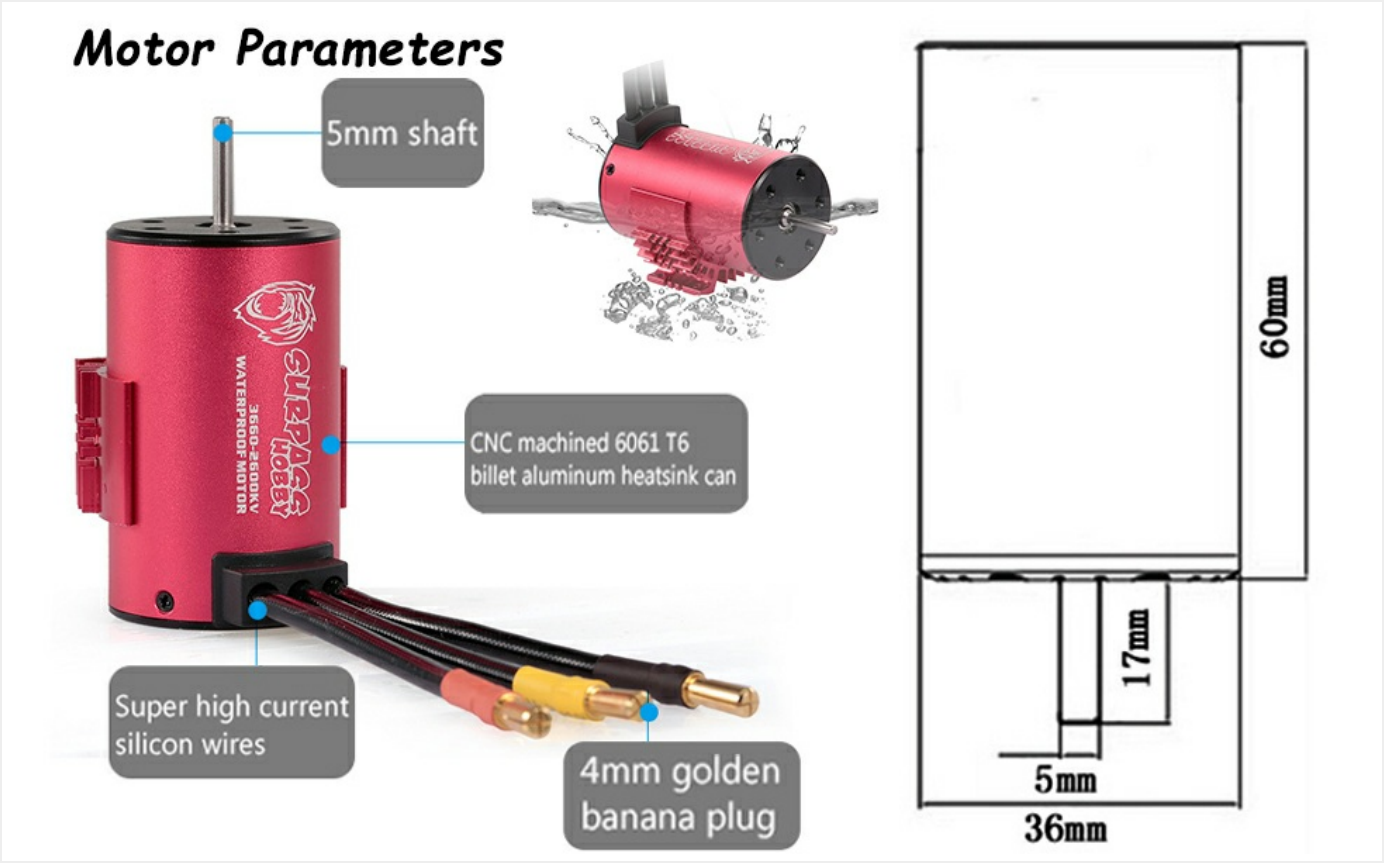


Figure 8: A table showing specifications for various GoolRC motors, including the 3660 series.

9. Warranty and Support

GoolRC is committed to providing high-quality products and excellent customer service.

9.1 After-Sales Service

If you encounter any problems or have questions regarding your GoolRC brushless motor and ESC combo, please communicate with us in a timely manner. Our professional support team is available to answer your questions and assist with any issues you may experience.
Please refer to your purchase documentation or the GoolRC official website for specific warranty terms and contact information.

© 2026 GoolRC. All rights reserved.
This manual is subject to change without notice.

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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.

Submit question

Open the live page

https://manuals.plus/asin/B07RPZ53GF

More documents and user manuals: **https://manuals.plus/**