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GoolRC RGZ4291688720473PE

GoolRC Brushless Motor and ESC Combo User Manual

Model: RGZ4291688720473PE



Image: The GoolRC 3650 4300KV Brushless Motor and 60A Waterproof ESC are shown alongside their product packaging, highlighting the complete combo set.

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GoolRC Brushless Motor and ESC Combo. This high-performance system is designed for 1/10 scale RC cars, trucks, and boats, offering a balance of power and control. Please read this manual thoroughly before use to ensure proper function and safety.

2. PRODUCT FEATURES

- **Precision Design:** 4-pole 12-slot high-torque brushless motor optimized for 1/10 scale RC vehicles, providing excellent power and control for challenging terrains.
- **High Quality Materials:** CNC machined 6061 T6 billet aluminum heatsink for enhanced durability and efficient heat dissipation. Includes low voltage cut-off, over-heat, and throttle signal loss protection.
- **Optimal Performance:** High purity copper windings maximize efficiency and energy conversion. 4300KV motor with a Max RPM of 50000 and a precision-balanced rotor ensures smooth operation and reliability at high speeds.
- **Waterproof ESC:** The 60A ESC is waterproof, allowing for operation in various conditions.
- **Integrated Combo:** Motor and 60A ESC are perfectly matched for seamless compatibility and optimal performance.

GOOLRC

60A Brushless ESC

Waterproof

With BEC output 5.5-5.8V/3A

for 1/10 RC Car



Image: Close-up of the GoolRC 60A Waterproof Brushless ESC, highlighting its robust design and waterproof capabilities.

GOOLRC

WATERPROOF Brushless Motor



**3650 4300KV High Performance
for 1/10 RC Car Truck**

Image: The GoolRC 3650 4300KV Waterproof Brushless Motor, emphasizing its high-performance design for RC vehicles.

3. SPECIFICATIONS

Attribute	Value
Product Dimensions	4.13 x 3.15 x 2.36 inches (Motor: 0.59"W x 1.96"H)
Weight	9.14 ounces
Item Model Number	RGZ4291688720473PE
Manufacturer Recommended Age	14 years and up
Brand	GoolRC
Motor KV	4300KV
Max RPM	50000 RPM
Voltage	12 Volts

Attribute	Value
Horsepower	900 Watts
ESC Current	60A

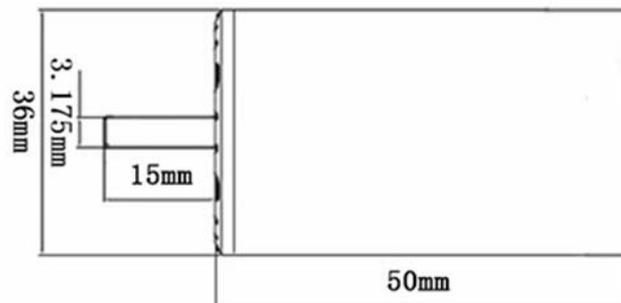


Image: Detailed diagram showing the dimensions of the GoolRC brushless motor and highlighting key components like the 4mm banana plug, 3.175mm shaft, super high current silicon wires, and CNC machined 6061 T6 billet aluminum heatsink can.

4. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. Follow these steps carefully:

- Mounting the Motor:** Securely mount the brushless motor to your RC vehicle's motor mount using appropriate screws. Ensure proper gear mesh between the motor pinion and the vehicle's spur gear.
- Connecting the ESC to the Motor:** Connect the three motor wires from the ESC to the three motor wires on the brushless motor. The order of connection may affect motor rotation direction. If the motor spins in the wrong direction, swap any two of the three wires.

2. **Throttle Control:** Use the throttle stick on your transmitter to control the motor speed. Push forward for acceleration, pull back for braking/reverse (if configured).
3. **Monitoring:** Pay attention to the motor and ESC temperatures during operation. While the heatsink helps, prolonged high-stress operation can lead to overheating.
4. **Power Off Sequence:**
 - Disconnect the battery from the ESC first.
 - Turn off your radio transmitter.

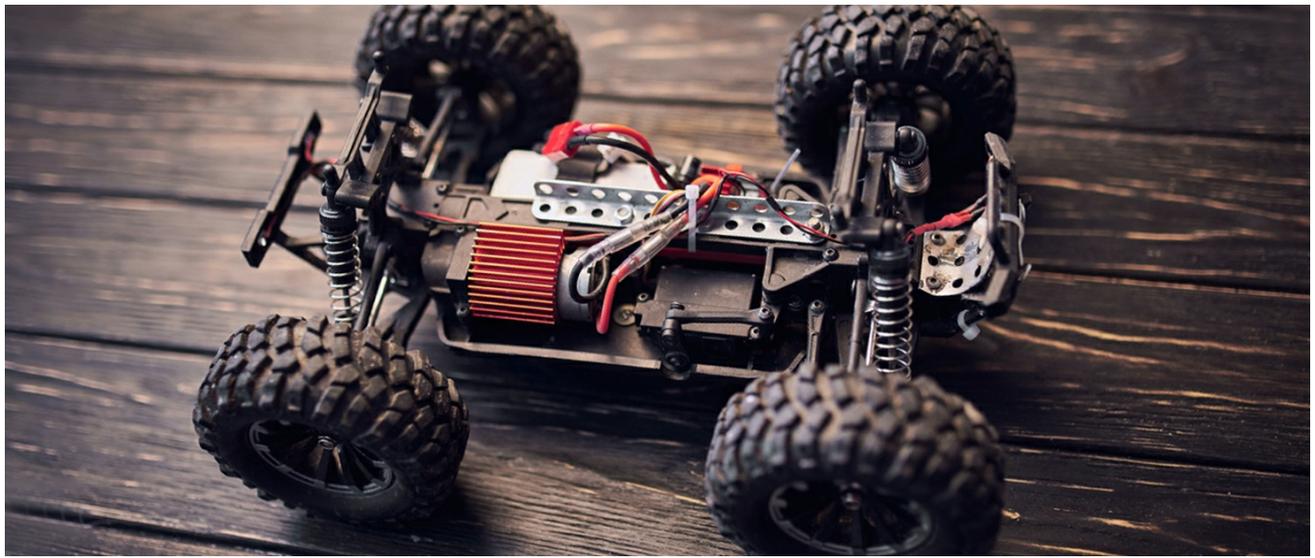


Image: An RC car chassis with the motor and ESC components visible, illustrating a typical installation for operation.

6. MAINTENANCE

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

- **Cleaning:** After each use, especially in dusty or wet conditions, clean the motor and ESC. Use a soft brush or compressed air to remove dirt and debris. For the waterproof ESC, ensure it is dry before storage.
- **Inspecting Wires and Connectors:** Periodically check all wires and connectors for signs of wear, fraying, or corrosion. Replace damaged components immediately.
- **Motor Bearings:** While brushless motors require less maintenance than brushed motors, inspect the motor bearings for smooth operation. If they feel rough, they may need cleaning or replacement.
- **Storage:** Store the motor and ESC in a dry, cool place away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Motor not spinning / No response	<ul style="list-style-type: none"> • Battery not connected or low voltage • ESC not calibrated • Throttle trim/reverse incorrect • Loose wire connections 	<ul style="list-style-type: none"> • Check battery charge and connection • Perform ESC calibration • Adjust transmitter throttle trim and reverse settings • Verify all connections are secure
Motor runs in wrong direction	Motor wire connection order incorrect	Swap any two of the three motor wires between the ESC and motor.
Motor/ESC overheating	<ul style="list-style-type: none"> • Incorrect gearing (too high) • Excessive load on motor • Poor ventilation 	<ul style="list-style-type: none"> • Reduce pinion gear size or increase spur gear size • Reduce load or run time • Ensure adequate airflow around components
Intermittent power/glitching	<ul style="list-style-type: none"> • Loose connections • Interference • Damaged components 	<ul style="list-style-type: none"> • Check all wiring and solder joints • Ensure receiver antenna is properly positioned • Inspect for physical damage to motor or ESC

8. SAFETY PRECAUTIONS

Always observe the following safety precautions to prevent injury or damage:

- Keep hands, hair, and loose clothing away from rotating parts.
- Always disconnect the battery from the ESC when not in use or during maintenance.
- Never short-circuit the battery or motor wires.
- Do not operate the motor or ESC if they are damaged.
- Ensure proper ventilation to prevent overheating.
- Use only compatible batteries and chargers.
- This product is not a toy. Recommended for ages 14 and up.

9. CUSTOMER SUPPORT

If you have any problems or questions regarding your GoolRC brushless motor and ESC combo, please do not hesitate to communicate with us. Our professional support team is ready to assist you with any inquiries. For further assistance, please visit the official GoolRC store or contact customer service through your purchase platform.

[Visit the GoolRC Store](#)