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› GoolRC 60A Brushless ESC User Manual

GoolRC KWE3491448947893LZ

GoolRC 60A Brushless ESC User Manual

Model: KWE3491448947893LZ

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your GoolRC 60A Brushless ESC. This Electronic Speed Controller is specifically designed for 1/10 scale on-road and off-road RC cars, offering reliable performance and advanced features. Please read this manual thoroughly before use to ensure safe and optimal performance.



Figure 1: GoolRC 60A Brushless ESC with wires and connectors.

2. SAFETY PRECAUTIONS

- Always disconnect the battery from the ESC when not in use.
- Ensure all connections are secure and correct before powering on. Incorrect polarity can damage the ESC and battery.
- The ESC is waterproof for slight water exposure. **Do not immerse the ESC in water for extended periods**, as this may cause damage, particularly to the cooling fan.
- Operate in a well-ventilated area to prevent overheating.
- Keep away from children. Recommended age for use is 14 years and up.
- In case of smoke, unusual smells, or excessive heat, immediately disconnect power.

3. PRODUCT FEATURES

- Specifically designed for RC cars with excellent start-up, acceleration, and linearity features.
- Compatible with sensorless brushless motors.
- Strong resistant current capability and excellent heat dissipation.
- Multiple protection features: Low voltage cut-off protection, Over-heat protection, and Throttle signal loss protection.
- High-quality components for big current endurance.
- Easily programmed and compatible with a specific program card (sold separately).

4. SPECIFICATIONS

Parameter	Value
Material	Plastic
Color	Black
Continuous Current (Cont. Current)	60A
Burst Current	320A
Battery Compatibility	2-3 Cells LiPo / 4-9 Cells NiMH
BEC Output	5.5V/3A (Switch Mode)
Power Supply Plugs	T Male
Motor Plugs	Female 4mm Bullet Connector
Compatible Brushless Motor	>= 9T
Size (L*W*H)	50.8 * 38 * 37mm
Weight	77g / 2.7oz
Package Weight	87g / 3.6oz

5. SETUP AND INSTALLATION

Follow these steps for proper installation of the ESC in your RC vehicle:

1. **Mounting the ESC:** Securely mount the ESC in your RC car chassis using double-sided tape or screws, ensuring good airflow for cooling.
2. **Motor Connection:** Connect the three motor wires from the ESC (usually marked A, B, C or Red, Yellow, Blue) to the corresponding wires on your sensorless brushless motor. Ensure a firm connection.
3. **Battery Connection:** Connect the T-Male power supply plug of the ESC to your LiPo or NiMH battery. Ensure correct polarity (Red to Red, Black to Black).
4. **Receiver Connection:** Plug the BEC output cable (usually a standard servo connector) from the ESC into the throttle channel (typically Channel 2) of your RC receiver.
5. **Transmitter Setup:** Ensure your RC transmitter's throttle trim is at neutral and the throttle range is set correctly. Refer to your transmitter's manual for specific instructions.



Figure 2: Close-up of the ESC showing the cooling fan and waterproof label.

6. OPERATING INSTRUCTIONS

Once the ESC is installed and connected, follow these steps to operate your RC vehicle:

1. **Power On:** Turn on your RC transmitter first, then connect the battery to the ESC. The ESC will emit a series of beeps indicating successful initialization.
2. **Throttle Calibration (if needed):** If the throttle response is not correct, you may need to calibrate the ESC with your transmitter. Typically, this involves holding the throttle at full forward, then full reverse, and finally neutral, following the ESC's beeping sequence. Refer to the specific program card manual for detailed calibration steps if using one.
3. **Driving:** Use your transmitter's throttle stick to control the speed and direction of your RC car.
4. **Power Off:** Always disconnect the battery from the ESC first, then turn off your RC transmitter.

Programming the ESC

The GoolRC 60A Brushless ESC can be programmed to adjust various parameters such as cut-off voltage, drag brake, punch, etc. This requires a specific program card, which is sold separately. Refer to the program card's manual for detailed instructions on how to connect and use it to modify ESC settings.



Figure 3: The GoolRC 60A Brushless ESC shown with its accompanying instruction manual.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your ESC:

- **Cleaning:** After use, especially in dusty or dirty conditions, gently clean the ESC with a soft brush or compressed air. Avoid using liquids directly on the ESC.
- **Inspection:** Regularly inspect all wires and connectors for signs of wear, fraying, or corrosion. Replace damaged components immediately.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures.
- **Water Exposure:** While the ESC is designed to be waterproof for slight water, avoid prolonged exposure to water. If

it gets wet, ensure it is completely dry before next use. Do not operate if the cooling fan is wet or damaged.

8. TROUBLESHOOTING

If you encounter issues with your GoolRC 60A Brushless ESC, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, incorrect polarity, damaged ESC.	Check battery connection and charge level. Verify polarity. Inspect ESC for visible damage.
Motor not responding or erratic.	Incorrect motor wiring, throttle trim/range incorrect, receiver not connected, motor damaged.	Verify motor wire connections. Calibrate throttle. Ensure receiver is properly connected to ESC. Test motor separately if possible.
ESC overheats.	Overgearing, insufficient cooling, excessive load, damaged fan.	Reduce pinion gear size. Ensure adequate airflow around ESC. Avoid continuous high-stress operation. Check fan for obstructions or damage.
Low voltage cut-off activates too soon.	Battery voltage too low, incorrect LiPo cell count setting.	Charge battery fully. If using a program card, verify the correct LiPo cell count setting.
ESC beeps continuously.	Throttle signal loss, error code.	Check transmitter and receiver connection. Refer to program card manual for specific beep codes if applicable.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official GoolRC website or contact your retailer. Keep your purchase receipt as proof of purchase for any warranty claims.

For further assistance, you may visit the [GoolRC Store on Amazon](#).

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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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