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GoolRC HRN9616310361626MB

GoolRC 80A Brushless ESC Instruction Manual

For 1/10 RC Truck Off-Road Car

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your GoolRC 80A Brushless Electronic Speed Controller (ESC). Please read this manual thoroughly before use to ensure optimal performance and safety.



Image: The GoolRC 80A Brushless ESC, featuring its compact design and integrated cooling fan.

SAFETY INFORMATION

- Always disconnect the battery from the ESC when not in use.
- Ensure all connections are secure and correctly polarized to prevent damage.
- Avoid operating the ESC in extreme temperatures or conditions beyond its waterproof rating.
- Keep the ESC away from children.
- Refer to your RC vehicle's manual for additional safety guidelines.

PRODUCT FEATURES

The GoolRC 80A Brushless ESC offers the following key features:

- Waterproof and dustproof design, suitable for 1/10 scale RC cars.
- High current capability: 80A continuous, 480A burst.
- Advanced protection functions: Low voltage cut-off, over-heat protection, throttle signal loss protection, and motor blocked protection.
- Efficient power delivery with high-frequency drive system and low-resistance field effect tube.
- Compatible with pocket-sized program cards for easy configuration.
- Excellent heat dissipation for stable operation.



Image: Diagram illustrating the key features of the GoolRC 80A ESC, including high-quality components, strong current capability, excellent heat dissipation, high-frequency drive system, and low-resistance field effect tube.

SURPASS HOBBY

Waterproof

6.1V/3A BEC

80A Brushless ESC



Image: The GoolRC 80A Brushless ESC shown with water splashing, demonstrating its waterproof capability for use in various conditions.

PACKAGE CONTENTS

The package includes:

- 1 x GoolRC 80A Brushless Electronic Speed Controller

SETUP AND INSTALLATION

Connecting the ESC

Follow these steps to correctly connect the ESC to your RC vehicle's components:

1. **Connect to Battery:** Connect the red and black power wires from the ESC to your battery. Ensure correct polarity (red to positive, black to negative). The ESC supports 4-12 cell Ni-MH or 2-4S Li-po batteries.
2. **Connect to Motor:** Connect the three motor wires from the ESC to your 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.
3. **Connect to Receiver:** Plug the small signal cable from the ESC into the throttle channel (usually

channel 2) on your RC receiver.

4. **Power Switch:** Ensure the power switch is accessible for easy on/off control.



Image: A diagram showing the various connection points of the GoolRC 80A ESC, including connections for the battery, receiver, motor, and the power switch.

80A Brushless ESC Waterproof 6.1V/3A BEC

for 1/10 RC Car



Image: The GoolRC 80A Brushless ESC displayed alongside various 1/10 scale RC car types, indicating its compatibility.

OPERATION

Initial Power-Up

1. Ensure all connections are secure.
2. Turn on your RC transmitter.
3. Connect the battery to the ESC.
4. Turn on the ESC using its power switch.
5. The ESC will emit a series of beeps indicating battery cell count (for Li-po) and readiness.
6. Test throttle response gently. If the motor spins in the wrong direction, power off, disconnect the battery, and reverse two of the motor wires.

Protection Functions

The ESC is equipped with several protection features:

- **Low Voltage Cut-off Protection:** Automatically reduces or cuts off power to prevent over-discharge of the battery.
- **Over-Heat Protection:** Reduces power or shuts down if the ESC temperature exceeds safe limits.

- **Throttle Signal Loss Protection:** Shuts down the motor if the throttle signal is lost for a short period.
- **Motor Blocked Protection:** Protects the ESC and motor if the motor becomes jammed.

PROGRAMMING

The GoolRC 80A Brushless ESC can be programmed using a compatible pocket-sized program card (sold separately). Refer to the program card's instruction manual for detailed programming steps and available parameters.

Common programmable parameters may include:

- Battery type (Li-po/Ni-MH)
- Low voltage cut-off threshold
- Start mode (punch)
- Maximum brake force
- Drag brake force
- Neutral range

MAINTENANCE

To ensure the longevity and performance of your ESC:

- Regularly inspect all wires and connectors for damage or loose connections.
- Keep the ESC clean from dirt, dust, and debris. Although waterproof, it is recommended to clean it after use in wet conditions.
- Ensure adequate airflow around the ESC, especially during operation, to aid in heat dissipation.
- Store the ESC in a dry, cool place when not in use.

TROUBLESHOOTING

If you encounter issues with your GoolRC 80A Brushless ESC, consider the following:

- **No Power:** Check battery connection, battery charge level, and ESC power switch.
- **Motor Not Responding:** Verify receiver connection, transmitter power, and throttle trim settings. Ensure motor wires are correctly connected.
- **Motor Runs in Wrong Direction:** Reverse any two of the three motor wires.
- **ESC Overheating:** Check for proper motor sizing, gear ratio, and ensure adequate ventilation. Reduce load if necessary.
- **Sudden Power Cut-off:** This may indicate low voltage cut-off (recharge battery) or over-heat protection (allow ESC to cool).
- **Erratic Behavior:** Check for loose connections, interference, or damaged components.

SPECIFICATIONS

Parameter	Value
Continuous Current	80A

Parameter	Value
Burst Current	480A
Battery Compatibility	4-12 cell Ni-MH / 2-4S Li-po
BEC Output Voltage	6.1V/3A
Resistance	0.0005ohm
Suitable for	1:10 RC car
Dimensions (L*W*H)	51mm * 40mm * 40mm (2.0in * 1.6in * 1.6in)
Weight	84g (3.0oz)
Model Number	HRN9616310361626MB

Motor Compatibility (Sensorless Brushless Motor)

For 2S Li-po or 6S Ni-MH battery:

- Off-road/Buggy/On-road Car: 3670-size or smaller motor with KV < 3000

For 3S Li-po or 9S Ni-MH battery:

- On-road Car: 3670-size or smaller motor with KV < 3000
- Off-road/Buggy: 3670-size or smaller motor with KV < 2500



Image: A diagram showing the physical dimensions of the GoolRC 80A Brushless ESC, with measurements in millimeters and inches.

WARRANTY AND SUPPORT

For warranty information and technical support, please contact GoolRC customer service through the retailer where the product was purchased or visit the official GoolRC website. Please retain your proof of purchase for warranty claims.

GoolRC Official Store: [GoolRC Store on Amazon](#)

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