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## GoolRC EJP9372597007788JI

# GoolRC Surpass Hobby 60A Brushless ESC User Manual

Model: EJP9372597007788JI

Brand: GoolRC

## INTRODUCTION

This manual provides detailed instructions for the GoolRC Surpass Hobby 60A Brushless Electronic Speed Controller (ESC). This ESC is designed for 1/10 scale RC cars, trucks, and off-road vehicles, offering reliable performance and advanced features.

Key features of this ESC include:

- Compatibility with sensorless brushless motors.
- Waterproof and dustproof design for enhanced durability.
- Strong resistant current capability and efficient heat dissipation.
- Integrated protection functions: low voltage cut-off, over-heat, throttle signal loss, and motor blocked protection.
- Programmable via a pocket-sized program card.
- High-frequency drive system and low-resistance field effect tube for improved load capacity and power utilization.
- 60A continuous current and 360A burst current for stable driving in various conditions.



The GoolRC Surpass Hobby 60A Brushless ESC, showing its compact design with integrated cooling fan, power wires, and receiver connection.

## SETUP INSTRUCTIONS

Proper installation and connection are crucial for the optimal performance and longevity of your ESC. Follow these steps carefully:

- 1. Motor Connection:** Connect the three motor wires from the ESC to your sensorless 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 motor wires.
- 2. Battery Connection:** Connect the ESC's battery connector (typically a T-plug) to your battery pack. Ensure correct polarity: red to positive (+), black to negative (-). This ESC supports 4-9S Ni-MH batteries or 2-3S Li-po batteries.
- 3. Receiver Connection:** Plug the small servo-style connector from the ESC into the throttle channel (usually Channel 2) of your RC receiver.
- 4. Power Switch:** Ensure the ESC's power switch is accessible for easy operation.
- 5. Mounting:** Securely mount the ESC in your RC vehicle using double-sided tape or other appropriate methods. Ensure adequate airflow around the ESC for cooling.
- 6. Initial Calibration:** After all connections are made, perform a throttle range calibration with your radio transmitter according to your transmitter's instructions. This ensures the ESC correctly interprets throttle signals.



Detailed view of the ESC's various connectors: battery connector (T-plug), motor connectors (bullet connectors), and receiver connector (servo plug) with the power switch.

## OPERATING INSTRUCTIONS

Once the ESC is properly installed and calibrated, you can begin operating your RC vehicle.

1. **Power On:** Turn on your radio transmitter first, then switch on the ESC using its integrated power switch.
2. **Operation:** Use your transmitter's throttle stick to control the motor speed. The ESC will provide smooth acceleration and braking.
3. **Programming:** The ESC can be programmed using a compatible pocket-sized program card (sold separately). Refer to the program card's manual for specific programming steps to adjust parameters such as brake force, punch, and cut-off voltage.
4. **Power Off:** Always switch off the ESC first, then turn off your radio transmitter. This prevents accidental throttle input.

# 60A Brushless ESC with 5.8V/3A BEC



for 1/10 RC Car



The 60A Brushless ESC with 5.8V/3A BEC, designed for 1/10 scale RC cars, highlighting its application.

## MAINTENANCE

Regular maintenance helps ensure the longevity and performance of your ESC.

- **Cleaning:** After use, especially in dusty or dirty conditions, gently clean the ESC to remove debris. Use a soft brush or compressed air.
- **Waterproof Feature:** The ESC is designed to be waterproof and dustproof. However, it is important **not to dismantle the cooling fan before using the ESC in water**. Disassembling the fan may compromise the waterproofing. After use in wet conditions, ensure the ESC is thoroughly dried before storage.
- **Cooling Fan:** Periodically check the cooling fan for obstructions or damage. A properly functioning fan is essential for effective heat dissipation. If the fan makes unusual noises or stops working, inspect it for debris or consider replacement if necessary to prevent overheating.
- **Connections:** Regularly inspect all wire connections for signs of wear, corrosion, or looseness. Secure any loose connections.

# 60A Waterproof Brushless ESC



Illustration demonstrating the waterproof capability of the 60A ESC, suitable for use in wet conditions.

## TROUBLESHOOTING

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

- **No Power/No Response:**

- Check battery connections and ensure the battery is charged.
- Verify the ESC's power switch is in the 'ON' position.
- Ensure the receiver is powered and correctly connected to the ESC's throttle channel.
- Check for throttle signal loss protection activation; re-calibrate if necessary.

- **Motor Not Spinning/Erratic Behavior:**

- Confirm motor wire connections are secure and correct.
- Check for motor blocked protection activation; ensure the motor is free to rotate.

- Re-calibrate the throttle range.
- Ensure the motor type (sensorless brushless) is compatible.
- **ESC Overheating:**
  - Ensure adequate airflow around the ESC.
  - Check if the cooling fan is operating correctly and is free of obstructions.
  - Verify that the motor and battery combination is within the ESC's specifications (refer to the Specifications section). Over-gearing or using an incompatible motor can cause excessive heat.
  - Over-heat protection will activate to prevent damage; allow the ESC to cool down.
- **Low Voltage Cut-off:**
  - The ESC will reduce or cut power when the battery voltage drops below a safe level to protect the battery. Recharge your battery.
  - Ensure the correct battery type (Li-po/Ni-MH) is selected in the ESC's programming if adjustable.

## SPECIFICATIONS

Detailed technical specifications for the GoolRC Surpass Hobby 60A Brushless ESC:

Feature	Specification
Model	60A
Continuous Current	60A
Burst Current	360A
Battery Compatibility	4-9S Ni-MH battery / 2-3S Li-po battery
Motor Type	Sensorless Brushless Motor
Motor Limit (2S Li-po or 6S Ni-MH)	On-road Car: 3660-size or smaller motor with KV<6000 Off-road/Buggy: 3660-size or smaller motor with KV<4000
Motor Limit (3S Li-po or 9S Ni-MH)	On-road Car: 3660-size or smaller motor with KV<4000 Off-road/Buggy: 3660-size or smaller motor with KV<3000
BEC Output Voltage	5.8V/3A
Resistance	0.0007ohm
Suitable For	1:10 RC car
Item Size	51 x 40 x 40 mm
Item Weight	76g
Manufacturer Recommended Age	12 years and up
Manufacturer	GoolRC



Dimensional diagram of the ESC, indicating its length (51mm), width (40mm), and height (40mm).

## WARRANTY AND SUPPORT

**Warranty Information:** Please refer to the retailer or manufacturer's official website for specific warranty details and terms applicable to this product.

**Customer Support:** Should you encounter any problems or require assistance with your GoolRC Surpass Hobby 60A Brushless ESC, please do not hesitate to contact our store or the manufacturer's customer service. We are committed to serving you.