

Redcat Racing HW-WP-1040-BRUSHED

Redcat Racing Hobbywing 1/10 Brushed Waterproof Electronic Speed Control User Manual

Model: HW-WP-1040-BRUSHED

1. INTRODUCTION

This manual provides essential instructions for the proper installation, operation, and maintenance of your Redcat Racing Hobbywing 1/10 Brushed Waterproof Electronic Speed Control (ESC). Please read this manual thoroughly before using the product to ensure safe and optimal performance.

2. SAFETY PRECAUTIONS

- Always disconnect the battery from the ESC when not in use to prevent accidental operation and potential damage.
- Ensure all connections are secure and correctly polarized before applying power. Incorrect connections can damage the ESC, battery, or motor.
- Keep the ESC away from extreme temperatures, direct sunlight, and corrosive materials.
- Do not attempt to modify or disassemble the ESC. This will void the warranty and may lead to malfunction or injury.
- Operate your RC vehicle in a safe environment, away from people, pets, and obstacles.
- This product is not a toy and is recommended for users aged 14 years and up.

3. PRODUCT OVERVIEW

The Redcat Racing Hobbywing 1/10 Brushed Waterproof Electronic Speed Control (ESC) is designed for 1/10 scale brushed RC vehicles. It features a waterproof design, making it suitable for various operating conditions. This ESC provides reliable power delivery and control for your brushed motor.



Figure 3.1: Redcat Racing Hobbywing 1/10 Brushed Waterproof Electronic Speed Control. This image displays the ESC unit with its black heat sink, red and black power wires connected to the battery and motor, and a smaller signal wire for the receiver. A power switch is also visible.

4. SETUP

4.1 Component Connections

1. **Motor Connection:** Connect the ESC's motor wires to your brushed motor. Ensure correct polarity if specified by your motor manufacturer. Typically, the red wire connects to the positive (+) terminal and the black wire to the negative (-) terminal of the motor.
2. **Receiver Connection:** Plug the ESC's signal cable (usually a three-wire connector: black, red, white) into the throttle channel (CH2) of your RC receiver.
3. **Battery Connection:** Connect your battery pack to the ESC's power input wires. Ensure the battery connector matches the ESC's connector type and observe correct polarity (red to positive, black to negative).

4.2 ESC Calibration

Before first use, or if you change your radio system, the ESC must be calibrated to your transmitter's throttle range. Refer to your specific radio system's manual for detailed calibration procedures. A typical

calibration process involves:

- Turn on your transmitter and ensure throttle trim is at neutral.
- Hold the throttle trigger at full throttle, then power on the ESC.
- Wait for the ESC to emit a specific tone or LED flash, then move the throttle trigger to full brake (reverse).
- Wait for another tone/flash, then return the throttle trigger to neutral.
- The ESC should now be calibrated and ready for use.

5. OPERATING INSTRUCTIONS

1. **Power On:** Ensure all connections are correct. Turn on your transmitter first, then switch on the ESC using its integrated power switch.
2. **Driving:** Use the throttle trigger on your transmitter to control the motor speed. Pushing forward typically engages forward motion, pulling back engages brake, and further pulling back from brake engages reverse.
3. **Power Off:** Always switch off the ESC first, then turn off your transmitter. Disconnect the battery from the ESC after use.

The ESC is designed to be waterproof, allowing operation in wet conditions. However, it is important to note that "waterproof" does not mean "submersible." Avoid prolonged submersion or operation in extremely deep water. Always clean and dry the ESC thoroughly after wet use.

6. MAINTENANCE

- **Cleaning:** After each use, especially in dirty or wet conditions, clean the ESC with a soft brush or compressed air to remove dirt and debris. For wet conditions, rinse with fresh water and allow to air dry completely before storage or next use.
- **Inspection:** Regularly inspect all wires and connectors for signs of wear, fraying, or corrosion. Ensure the heat sink is free of obstructions for proper cooling.
- **Storage:** Store the ESC in a cool, dry place, away from direct sunlight and extreme temperatures. Disconnect it from the battery during storage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Motor does not run, no response.	• Battery not connected or discharged. • ESC not powered on. • Receiver not powered or connected. • Throttle channel not calibrated. • Motor wires disconnected.	• Check battery connection and charge level. • Ensure ESC power switch is ON. • Verify receiver connection and power. • Perform ESC calibration (Section 4.2). • Check motor wire connections.

Problem	Possible Cause	Solution
Erratic motor behavior or no full throttle.	• Incorrect throttle calibration. • Interference with radio signal. • Low battery voltage.	• Recalibrate the ESC (Section 4.2). • Check radio system for interference. • Charge or replace battery.
ESC overheats.	• Motor is too large or geared too high. • Poor ventilation. • Continuous heavy load.	• Check motor compatibility and gearing. • Ensure adequate airflow around the ESC. • Reduce continuous heavy load operation.

8. SPECIFICATIONS

Feature	Detail
Model Number	HW-WP-1040-BRUSHED
Product Dimensions	5 x 2 x 1.25 inches
Item Weight	2.4 ounces
Manufacturer	Redcat Racing
Recommended Age	14 years and up
Type	Brushed, Waterproof Electronic Speed Control
BEC Output	6V/2A

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Redcat Racing website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

Redcat Racing Official Website: www.redcatracing.com