Hobbywing 30120202

Hobbywing QUICRUN WP 1080 G2 Brushed 2-3s ESC User Manual

Model: 30120202

1. Introduction

Congratulations on your purchase of the Hobbywing QUICRUN WP 1080 G2 Brushed 2-3s Electronic Speed Controller (ESC). This high-performance ESC is designed for various RC applications, offering advanced features and robust reliability. Please read this manual thoroughly to ensure proper setup, operation, and maintenance of your ESC.
The QUICRUN WP 1080 G2 features a fully waterproof and dust-proof design, making it suitable for all-weather racing and crawling. It includes a built-in capacitor module for a compact form factor.

2. Key Features

- **Waterproof and Dust-proof:** Suitable for all-weather races, with built-in capacitor module.
- **Operating Modes:** Four modes available (Real Car Operating / FWD with Brake / FWD and REV with Brake / FWD and REV).
- **Real Car Mode:** Motor direction is switchable in real time by using the idle channel on the remote control.
- **Real-Time Drag Brake Adjustment:** Adjust the drag brake force on the fly with an open channel on the receiver.
- **Programmable Parameters:** 15 programmable items for easy tuning with an LED Programming Box. Includes PWM Frequency (1K/2K/4K/8K/16K Adjustable) and 9 levels of Drag Brake Rate.
- **BEC Upgrade:** Maximum output to 6A and provides 6V/7.4V/8.4V output options to support most servos.
- **Temperature Control Upgrade:** New design reduces operating temperatures by about 15 degrees, improving reliability. Includes a fan mount.
- **Multiple Protections:** Over Voltage Protection, Low Voltage Cut-off Protection for battery, Over-heating Protection, Throttle Signal Loss Protection.

3. What's in the Box

- (1) Hobbywing QUICRUN WP 1080 G2 ESC
- (1) Instruction Manual Sheet

4. Safety Information

Congratulations and thank you for your trust in Hobbywing products. By purchasing the QUICRUN WP 1080 G2 BRUSHED, you have chosen a high-performance brushed electronic speed controller! Please observe the following safety guidelines:

- Always disconnect the battery from the ESC when not in use.
- Ensure all connections are secure and properly insulated.
- Do not expose the ESC to extreme temperatures or moisture beyond its waterproof rating.
- Verify battery voltage and type compatibility with the ESC.
- Keep the ESC away from children and pets.

5. Setup and Installation

Follow these steps for proper installation of your Hobbywing QUICRUN WP 1080 G2 ESC:

1. **Mounting the ESC:** Securely mount the ESC in your RC vehicle. Ensure adequate airflow around the ESC for cooling, especially if not using a fan.
2. **Motor Connection:** Connect the motor wires to the ESC's motor output terminals (M+ and M-). Ensure correct polarity for brushed motors.
3. **Battery Connection:** Connect your battery to the ESC's battery input wires. Ensure correct polarity (red to positive, black to negative). The ESC supports 2-3s LiPo batteries.
4. **Receiver Connection:** Plug the ESC's throttle cable into the throttle channel (typically Channel 2) of your RC receiver. For real-time motor direction or drag brake adjustment, connect the respective signal wires to an open channel on your receiver.
5. **Power Switch:** Connect the power switch to the designated port on the ESC.

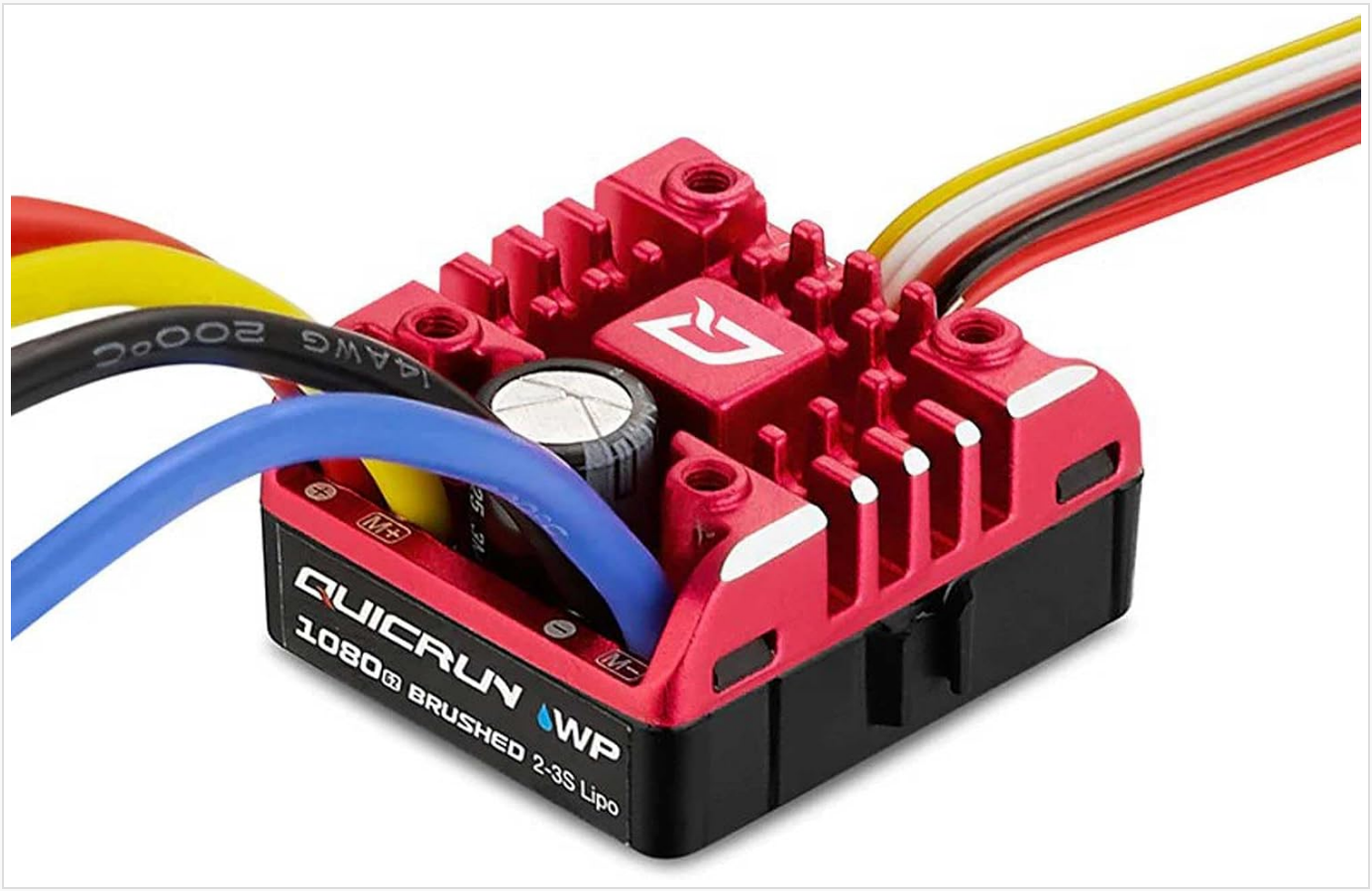


Figure 5.1: Top view of the Hobbywing QUICRUN WP 1080 G2 ESC, showing the red heatsink, capacitor, and various colored wires for motor, battery, and signal connections.

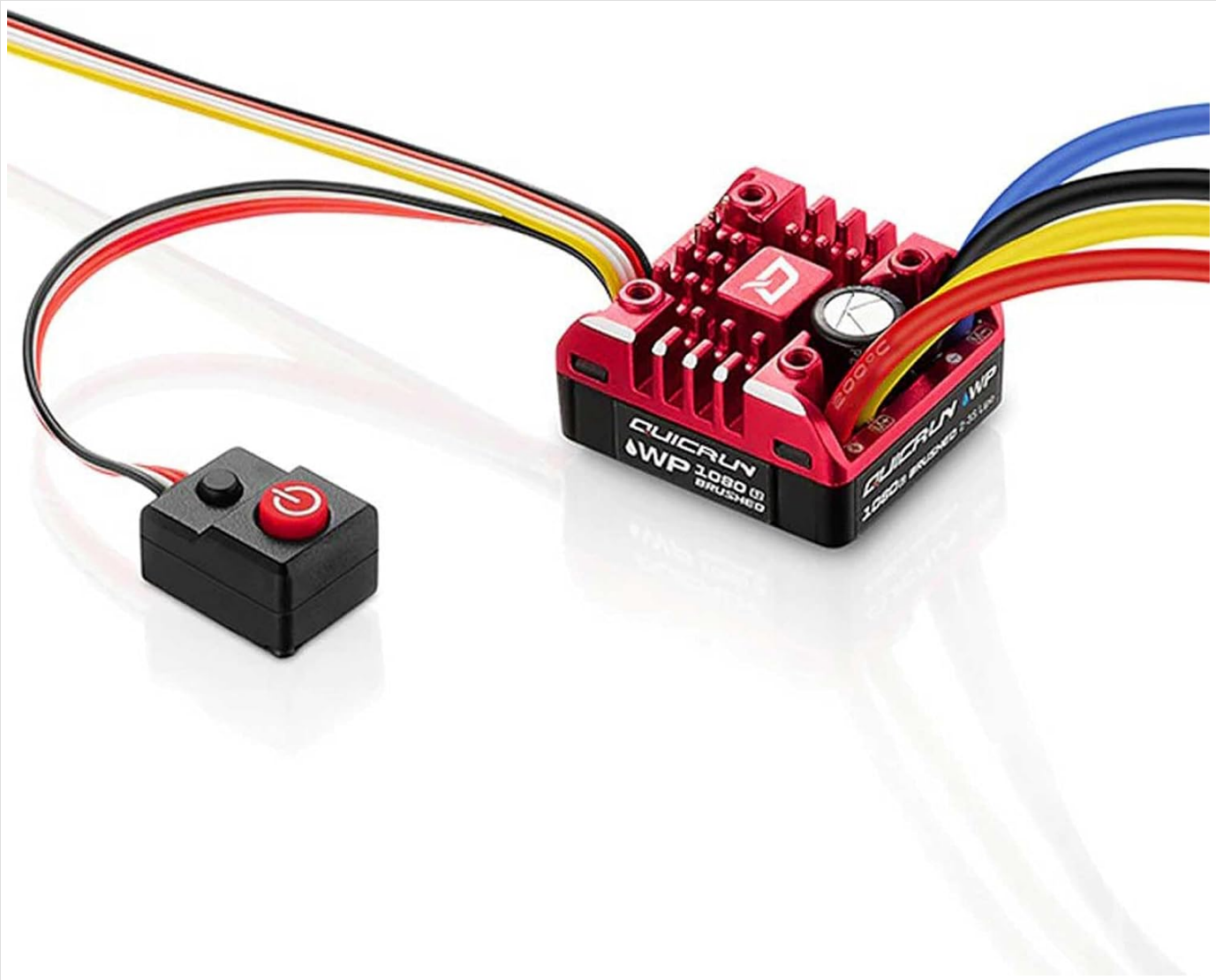


Figure 5.2: The Hobbywing QUICRUN WP 1080 G2 ESC alongside its external power switch module, illustrating the compact design and connection points.



Figure 5.3: An overhead view of the Hobbywing QUICRUN WP 1080 G2 ESC with all its connecting cables fully extended, including battery, motor, and signal wires, demonstrating its complete wiring harness.

6. Operating Instructions

The QUICRUN WP 1080 G2 offers versatile operating modes and real-time adjustments for an enhanced RC experience.

6.1 Powering On/Off

To power on the ESC, ensure the battery is connected, then press the power button on the external switch module. To power off, press and hold the power button until the ESC shuts down.

6.2 Operating Modes

The ESC supports four operating modes, selectable via programming:

- **Real Car Operating:** Provides realistic driving behavior. Motor direction can be switched in real-time using an idle channel on your transmitter. Pulling the trigger provides "forward" motion, pushing it provides "brake," and pulling with the "reverse channel" engaged provides "reverse."
- **FWD with Brake:** Standard forward motion with braking capability.

- **FWD and REV with Brake:** Allows forward, reverse, and braking.
- **FWD and REV:** Allows forward and reverse motion without braking.

6.3 Real-Time Adjustments

The ESC allows for real-time adjustment of drag braking force. By connecting the Drag Brake Force Signal to an open channel on your receiver, you can adjust the drag brake force on the fly without needing to connect a programmer. This provides dynamic control during operation.

6.4 Programming Parameters

The ESC features 15 programmable items for fine-tuning performance. These parameters can be easily set using an LED Programming Box (sold separately) connected to the programming port. Refer to the programming box manual for detailed instructions on parameter adjustment, including PWM Frequency and Drag Brake Rate.

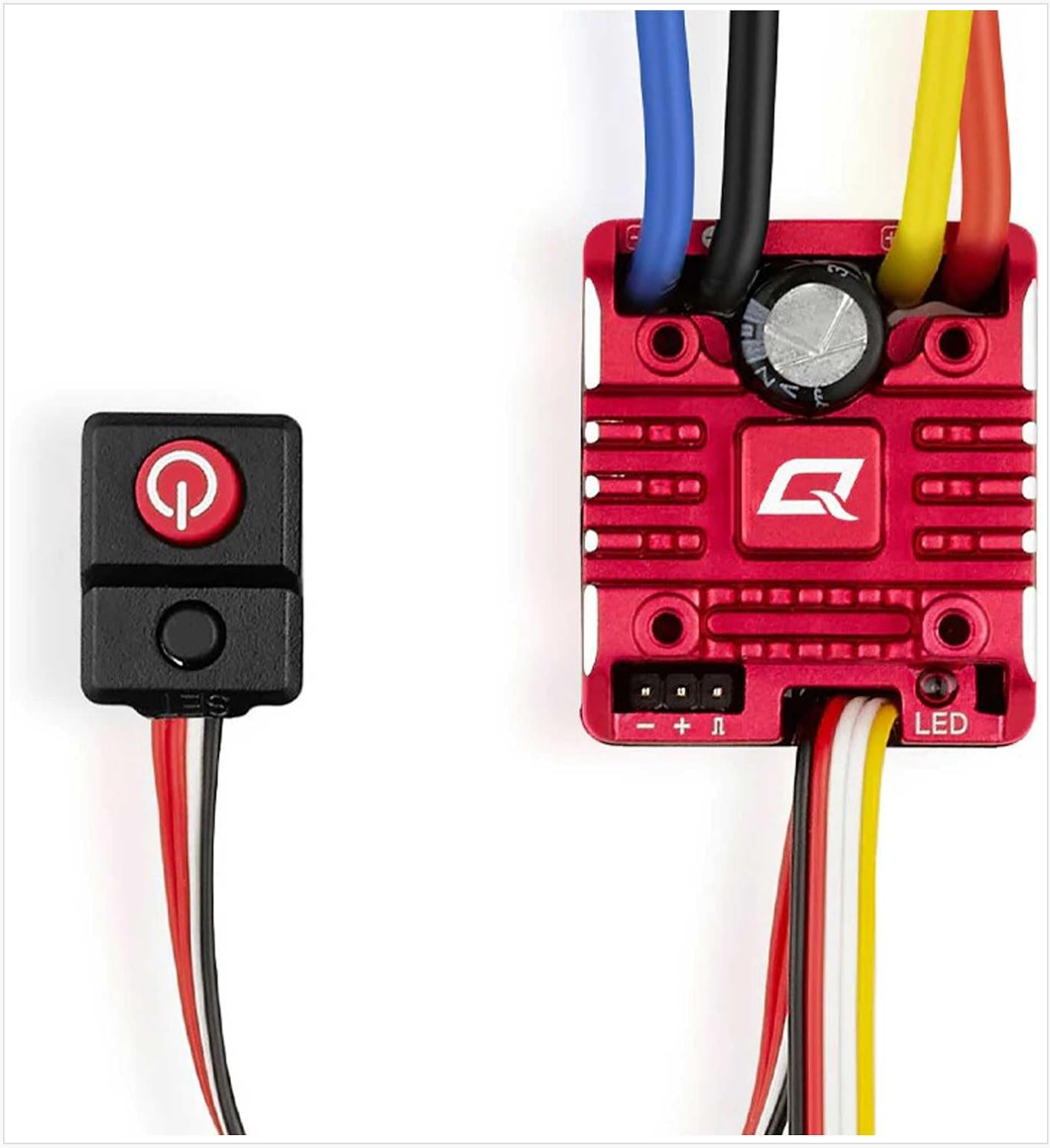


Figure 6.1: A close-up view of the Hobbywing QUICRUN WP 1080 G2 ESC and its power switch, highlighting the LED indicator and

connection ports for clear identification during setup and operation.

7. Maintenance and Care

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

- **Cleaning:** Despite being waterproof, it is recommended to clean the ESC after use, especially if exposed to dirt, mud, or saltwater. Use a soft brush and clean water, then dry thoroughly.
- **Inspection:** Regularly inspect all wires and connectors for signs of wear, damage, or corrosion. Replace any damaged components immediately.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cooling:** Ensure the ESC's heatsink remains clear of debris to allow for efficient heat dissipation. Consider installing a fan if operating in high-temperature environments or under heavy loads, as the ESC has a fan mount.



Figure 7.1: The Hobbywing QUICRUN WP 1080 G2 ESC partially submerged in water, visually demonstrating its waterproof capability.

8. Troubleshooting

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

Problem	Possible Cause	Solution
ESC does not power on.	Battery not connected, low battery voltage, faulty power switch, incorrect wiring.	Check battery connection and charge level. Inspect power switch and all wiring for proper connection and damage.
Motor not responding or erratic.	Incorrect motor wiring, throttle signal loss, motor damage, ESC in wrong operating mode.	Verify motor wire connections. Check receiver and transmitter. Ensure ESC is in the correct operating mode. Inspect motor for damage.
ESC overheats.	Insufficient cooling, excessive load on motor, incorrect gearing, low battery voltage.	Ensure proper airflow around ESC. Reduce load or adjust gearing. Check battery health. Consider adding a cooling fan.
Vehicle moves in reverse when throttle is forward.	Motor polarity reversed, transmitter throttle channel reversed.	Reverse motor wire connections (swap M+ and M-). Reverse throttle channel on your transmitter.

9. Specifications

Feature	Detail
Model Number	30120202
Product Dimensions	4 x 3 x 2 inches
Item Weight	4.2 ounces
Input Voltage	2-3s LiPo
BEC Output	6V/7.4V/8.4V @ 6A (Max)
Waterproof/Dust-proof	Yes
Programmable Items	15
PWM Frequency	1K/2K/4K/8K/16K Adjustable
Drag Brake Rate	9 Levels Adjustable

10. Warranty and Support

For warranty information and technical support, please contact Hobbywing North America directly. Details can typically be found on their official website or through the retailer where the product was purchased.
For additional resources and product updates, visit the official Hobbywing website:www.hobbywing.com

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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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