INJORA MBL32-INM19-4M

INJORA MBL32 G2 Waterproof Brushless ESC & 1721 Purple Viper Outrunner Motor User Manual

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your INJORA MBL32 G2 Waterproof Brushless Electronic Speed Controller (ESC) and 1721 Purple Viper Outrunner Motor. This high-performance combination is designed for 1/18 scale RC vehicles, such as the TRX4M Ascent-18, offering enhanced power and control.

Please read this manual thoroughly before using the product to ensure proper function and longevity.



Image: The INJORA MBL32 G2 ESC and 1721 Purple Viper Outrunner Motor, presented with its retail packaging.

Package Contents

Verify that all items listed below are included in your package:

- 1 x Micro Brushless ESC (MBL32 G2)
- 1 x 1721 Purple Viper Motor
- 1 x Receiver Connector Cable
- 1 x Battery Adapter Cable (Female XT30 to Male TRX-4M)
- 1 x Battery Adapter Cable (Female XT30 to Male JST-PH2.0)
- 1 x Instruction Manual
- Mounting Plate and Hardware (for 1721 motor)

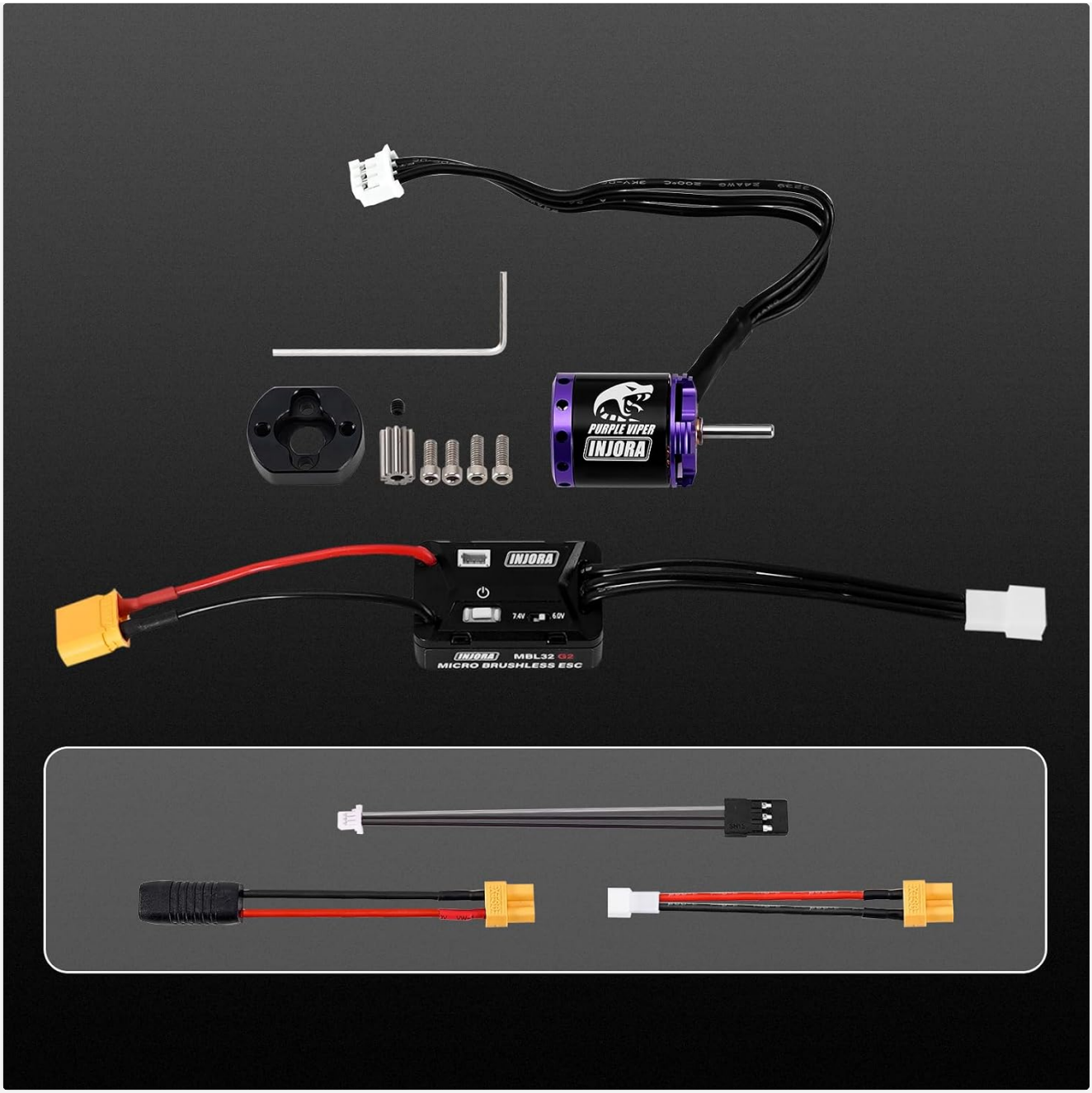


Image: A complete view of all components included in the product package, laid out for inspection.

Specifications

ESC Specifications (MBL32 G2)

- **Part Number:** MBL32 G2
- **LiPo Cells:** 2-3S
- **Continuous Current:** 25A
- **Peak Current:** 60A
- **BEC Output:** 6.0V/7.4V adjustable
- **BEC Current:** 3A
- **Dimensions (L*W*H):** 30*19*12mm
- **Waterproof:** Yes
- **App Tuning:** Not Supported
- **Weight:** 0.45oz (13g)

Motor Specifications (1721 Purple Viper)

- **Model Number:** 1721
- **Motor Type:** Sensorless Brushless Outrunner
- **RPM/Volt:** 2800KV
- **Motor Poles:** 14
- **Sine Mode Power:** 7
- **No-Load Current (11.1V):** 0.7A
- **Max Peak Current:** 30A
- **Motor Connectors:** PH2.0 3Pin
- **Dimensions:** 16.7*20.9mm
- **Motor Output Shaft:** 2mm
- **Motor Pinion:** 0.4mod 11T
- **Weight:** 19g
- **Waterproof:** Yes

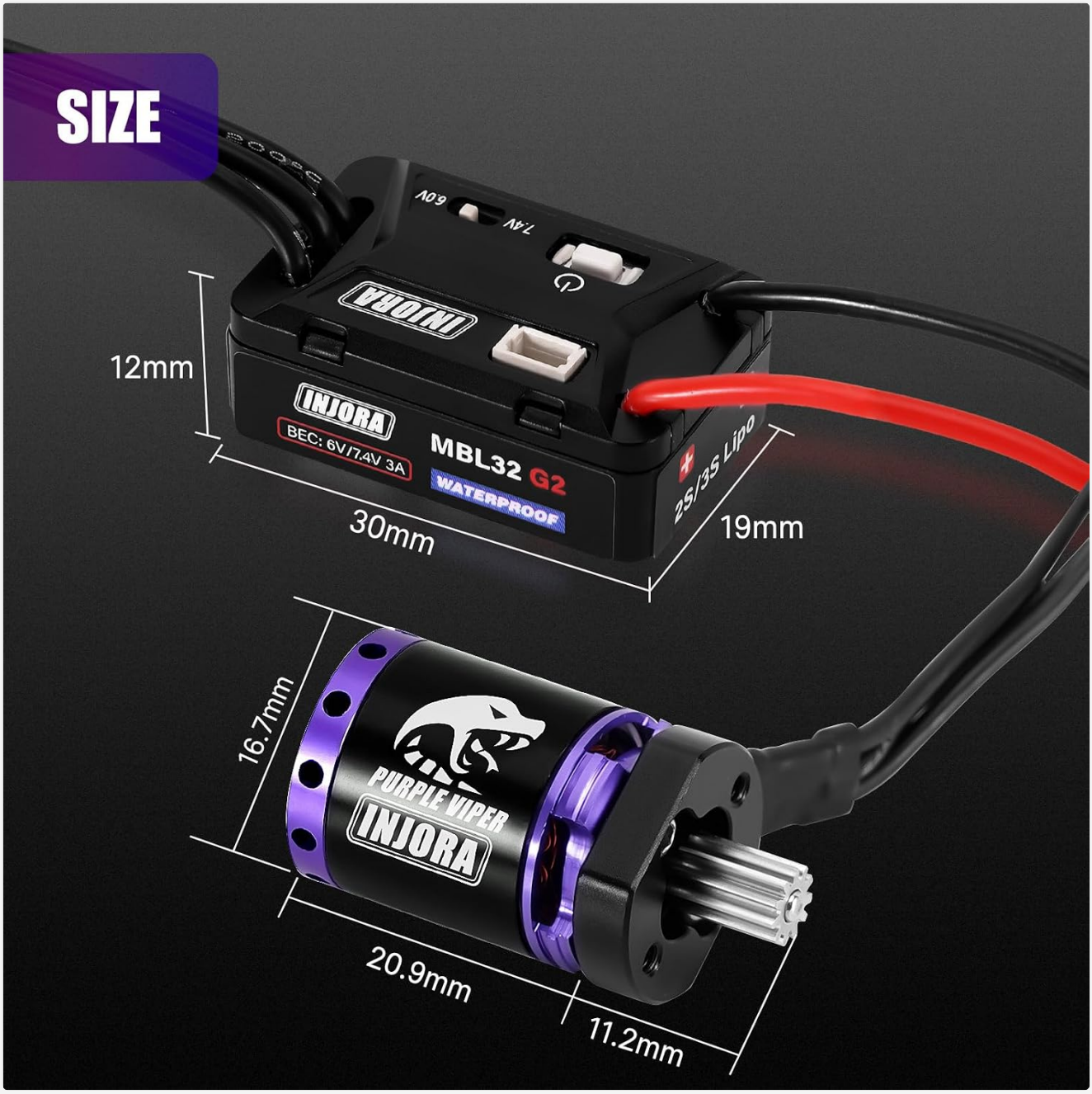


Image: Visual representation of the dimensions for both the MBL32 G2 ESC and the 1721 Purple Viper Motor.

Setup

1. Installation

1. **Mount the Motor:** Secure the 1721 Purple Viper motor to your vehicle's transmission using the provided mounting plate and hardware. Ensure the pinion gear aligns correctly with the spur gear. The 1721 Purple Viper motor is designed to fit standard 180 motor gearboxes.
2. **Mount the ESC:** Find a suitable location in your vehicle to mount the MBL32 G2 ESC. Use double-sided tape or other secure methods to prevent movement during operation.



Image: The MBL32 G2 ESC and 1721 Purple Viper Motor shown installed within an RC vehicle chassis, demonstrating typical placement.

2. Wiring Connections

Follow these steps to connect the components:

1. **Motor to ESC:** Connect the 3-pin PH2.0 connector from the 1721 motor to the corresponding motor port on the MBL32 G2 ESC.
2. **ESC to Receiver:** Use the provided receiver connector cable to plug the ESC into Channel 2 (throttle) of your

RC receiver.

3. **Battery to ESC:** Connect your 2S or 3S LiPo battery to the ESC's power input. Use the appropriate adapter cable (XT30 to TRX-4M or XT30 to JST-PH2.0) if your battery connector differs from the ESC's XT30.

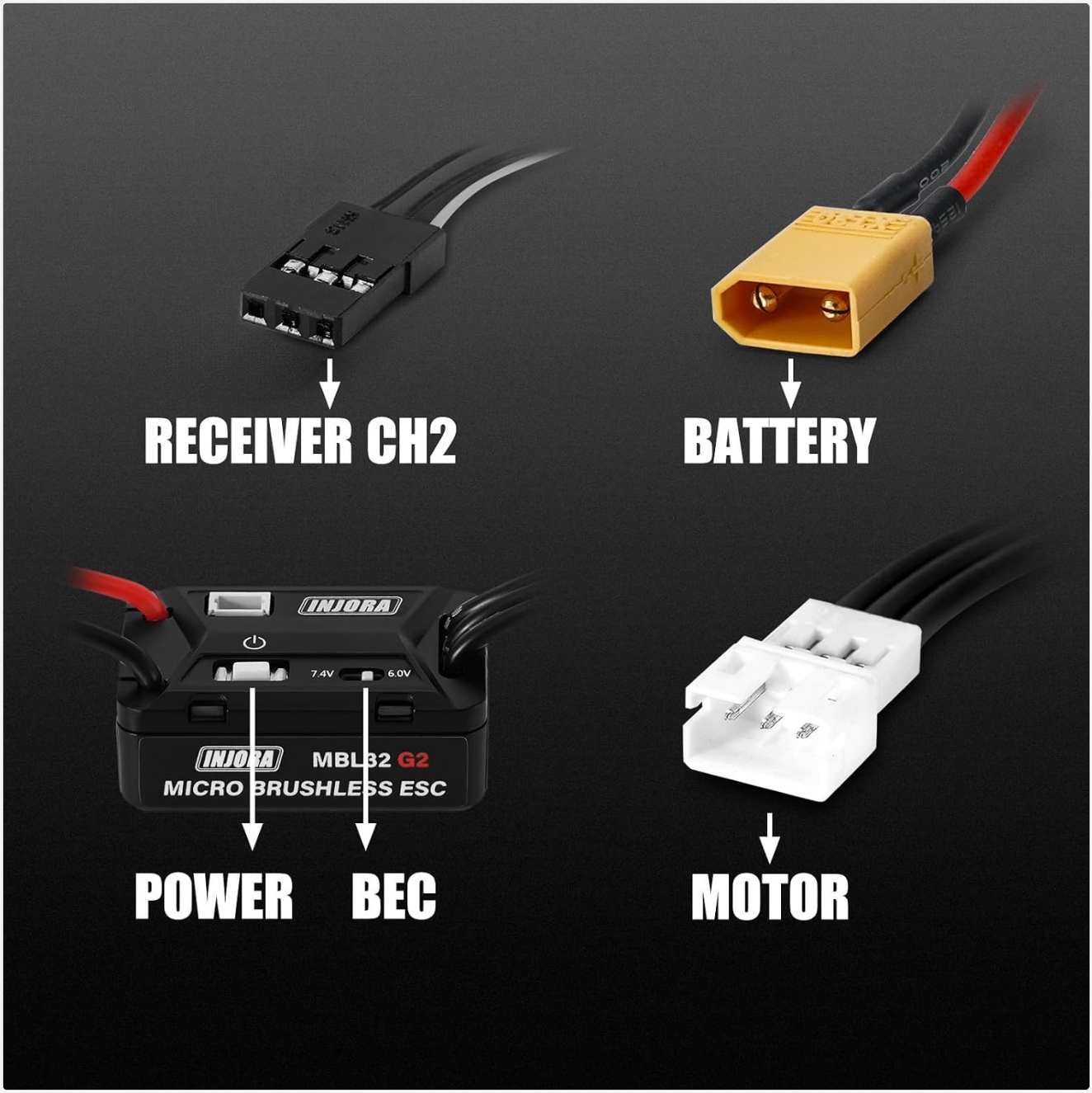


Image: A clear diagram illustrating the correct wiring connections between the ESC, motor, receiver, and battery.

3. Initial Power-Up

Before powering on, ensure all connections are secure and there are no loose wires. Turn on your transmitter first, then connect the battery to the ESC. The ESC will initialize, and you should hear a series of beeps indicating it's ready for operation.

Operating Instructions

Basic Operation

The MBL32 G2 ESC provides smooth and linear throttle response at low speeds, transitioning to powerful and aggressive performance at higher speeds. It operates quietly compared to brushed systems.

BEC Voltage Adjustment

The MBL32 G2 features a built-in BEC with adjustable output. You can switch between 6.0V and 7.4V output to power your receiver and servos. Refer to the switch on the ESC for adjustment.



Image: A detailed view of the MBL32 G2 ESC, showing the switch for adjusting the BEC output voltage between 6.0V and 7.4V.

Programming

The MBL32 G2 ESC supports PC programming via a USB programmer card (sold separately). Factory settings are optimized for INJORA 1721/2204 motors, and adjustments are generally not recommended unless you have specific tuning requirements and experience.

Important Operating Notes

- **Motor Noise:** Some noise at mid-throttle is normal for the 1721 motor due to its high-speed, open-rotor design. This does not indicate a defect.
- **Vehicle Weight:** The 1721 Purple Viper motor is best suited for rigs under 700g. For heavier rigs requiring stronger drag brake performance, the INJORA 2204 Fat Viper motor is recommended.
- **Waterproof Design:** Both the ESC and motor feature a waterproof design for all-weather performance.

However, prolonged submersion is not recommended.

- **Multiple Protections:** The ESC includes low-voltage protection, fail-safe, and rotor lock protection to safeguard your components.



Image: A detailed close-up of the 1721 Purple Viper Outrunner Motor, showcasing its design and branding.

Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your ESC and motor:

- **Cleaning:** After each use, especially in dusty or wet conditions, gently clean the ESC and motor to remove dirt, debris, and moisture. Use a soft brush or compressed air.
- **Inspection:** Periodically inspect all wires and connectors for signs of wear, damage, or corrosion. Ensure all mounting screws are tight.
- **Storage:** Store the components in a dry, cool place away from direct sunlight and extreme temperatures.

Troubleshooting

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

- **No Power:**
  - Check battery connection and charge level.
  - Ensure ESC is properly connected to the receiver (Channel 2).
  - Verify the ESC's power button is pressed.
- **Motor Not Responding or Erratic Behavior:**
  - Confirm motor wires are securely connected to the ESC.
  - Check for any obstructions preventing motor rotation.
  - Ensure your transmitter is powered on and bound to the receiver.
  - If experiencing 'jumpy' acceleration at low throttle, ensure factory settings are used or consult advanced programming guides if you have a USB programmer.
- **Overheating:**
  - Ensure proper ventilation around the ESC and motor.
  - Verify the vehicle's weight is within the recommended range for the 1721 motor (under 700g).
  - Check for excessive friction in the drivetrain.
- **Motor Runs in Reverse:**
  - Adjust the throttle reverse setting on your transmitter.
  - If using a programmable ESC, motor direction can be adjusted via the programming interface.

Warranty and Support

Specific warranty information for this product is not provided in the available documentation. For any support inquiries, technical assistance, or to inquire about warranty details, please contact INJORA customer service or visit the official INJORA store on Amazon:

Visit the INJORA Store on Amazon

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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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.

Submit question