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HOBBYWING 30408011

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Model: 30408011 (17.5T G2.1)

1. PRODUCT OVERVIEW

The HOBBYWING JUSTOCK Black G2.1 brushless motor is engineered for high-performance in 1/10th and 1/12th scale RC vehicles. It is specifically designed for Stock or Sport Class racing, normal training, and rock crawlers. This motor features a built-in hall sensor and a non-adjustable end bell, combined with a high-precision and balanced rotor for consistent performance. A silicone O-ring seal is integrated between the end bell and stator to enhance durability and protection. The motor is IFMAR and ROAR approved, ensuring compliance with competitive racing standards.



Image showing the HOBBYWING JUSTOCK Black G2.1 brushless motor, a sensed motor designed for RC vehicles.

2. KEY FEATURES

- **Built-in Hall Sensor:** Provides precise motor position feedback for smooth operation.
- **Non-adjustable End Bell:** Ensures consistent timing and performance, ideal for spec racing.
- **High Precision and Balanced Rotor:** Contributes to efficient power delivery and reduced vibration.
- **Silicone O-ring Seal:** Fitted between the end bell and stator for enhanced protection.
- **IFMAR and ROAR Approved:** Certified for use in sanctioned racing events.
- **Model Number:** 30408013 (XeRun Justock 3650 SD G2.1 17.5T Sensed Brushless Motor).

3. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and longevity of your motor. Follow these steps carefully:

1. **Mounting the Motor:** Securely attach the motor to your vehicle's motor mount using appropriate screws. Ensure the motor is aligned correctly with the pinion gear and spur gear to prevent binding.
2. **Gear Mesh Adjustment:** Set the gear mesh between the pinion and spur gear. There should be a small amount of play, similar to a piece of paper thickness, to allow for smooth operation without excessive wear.
3. **Connecting to ESC:** Connect the three motor wires (A, B, C) to the corresponding output wires on your Electronic Speed Controller (ESC). Ensure correct polarity if your ESC requires it, though most brushless systems are self-sensing.
4. **Sensor Cable Connection:** Connect the sensor cable from the motor to the sensor port on your ESC. This is essential for sensed operation, providing smoother low-speed control and consistent power delivery.
5. **Power Source:** Ensure your LiPo battery (2-3S recommended) is fully charged and properly connected to

the ESC.

4. OPERATING INSTRUCTIONS

Once installed, follow these guidelines for operating your HOBBYWING JUSTOCK motor:

- **ESC Calibration:** Always calibrate your ESC with your radio system before the first use and after any changes to your radio settings. Refer to your ESC's manual for specific calibration procedures.
- **Initial Run:** Perform a short, low-speed test run to ensure all components are functioning correctly and there are no unusual noises or binding.
- **Temperature Monitoring:** Regularly monitor the motor's temperature during operation. Excessive heat can damage the motor. If the motor becomes too hot to touch (typically above 80°C / 176°F), reduce gearing or adjust driving style.
- **Zero Timing Operation:** This motor is designed for zero timing spec racing. Avoid attempting to adjust motor timing, as the end bell is non-adjustable.
- **Environmental Considerations:** Avoid operating the motor in excessively wet or dusty conditions unless the vehicle is specifically designed for such environments.

5. MAINTENANCE

Regular maintenance helps extend the life and maintain the performance of your motor:

- **Cleaning:** After each use, especially in dirty conditions, clean the motor exterior to remove dirt, dust, and debris. Use a soft brush or compressed air.
- **Bearing Inspection:** Periodically check the motor bearings for smooth rotation. If bearings feel rough or noisy, they may need cleaning or replacement.
- **Sensor Cable Check:** Inspect the sensor cable for any signs of damage, kinks, or loose connections. A damaged sensor cable can lead to inconsistent motor performance.
- **Wire Connections:** Ensure all motor and ESC wire connections are secure and free from corrosion.
- **Storage:** Store the motor in a clean, dry environment away from extreme temperatures.

6. TROUBLESHOOTING

If you encounter issues with your motor, consider the following common troubleshooting steps:

- **Motor Not Spinning:**
 - Check battery charge level.
 - Verify all wire connections between motor, ESC, and battery are secure.
 - Ensure ESC is properly calibrated with the radio.
 - Inspect sensor cable for damage or incorrect connection.
- **Motor Overheating:**
 - Check gear mesh for binding or excessive tightness.
 - Reduce pinion gear size or increase spur gear size (lower gearing).
 - Ensure adequate airflow around the motor.
 - Verify battery voltage is within the recommended range (2-3S LiPo).
- **Inconsistent Performance / Cogging:**

- Check sensor cable for damage or loose connection.
 - Ensure motor wires are securely connected to the ESC.
 - Verify ESC settings are appropriate for a sensored brushless motor.
 - Inspect motor for internal damage or debris.
- **Unusual Noises:**
 - Check gear mesh.
 - Inspect motor bearings for wear or damage.
 - Ensure no foreign objects are interfering with the motor's rotation.

7. SPECIFICATIONS

| Specification | Value |
|--------------------|--------------------|
| Model Name | HWI30408011 |
| LiPo Compatibility | 2-3S |
| Diameter | 35.9mm |
| Length | 52.5mm |
| Weight | 176g |
| No-Load Current | 3.5A |
| Max Output Power | 157W |
| Speed | 1550 RPM |
| Voltage | 12 Volts (Nominal) |
| Material Type | Plastic (Housing) |
| UPC | 088718519236 |

8. WARRANTY AND SUPPORT

HOBBYWING products are manufactured with quality and performance in mind. Please note the following regarding warranty and support:

- Because HOBBYWING has no control over the use, installation, or maintenance of this product, no liability may be assumed for any damage or losses resulting from the use of the product.
- HOBBYWING does not assume responsibility for any losses caused by unauthorized modifications to its products.
- HOBBYWING reserves the right to modify product design, appearance, features, and usage requirements without prior notification.
- HOBBYWING is only responsible for the cost of its product.
- Products purchased from Hong Kong / Chinese retailers may not conform to CE / North America regulations and may be deemed non-warranty.
- Products purchased from discount/auction stores such as eBay are considered "non-authorized sales channels" in North America and may be deemed non-warranty.

For technical support or further inquiries, please contact your authorized HOBBYWING dealer or visit the official HOBBYWING website for contact information.