

Firecore FRL300R

Firecore FRL300R Rotary Laser Level Kit User Manual

Model: FRL300R

1. INTRODUCTION

The Firecore FRL300R Rotary Laser Level Kit is a professional-grade tool designed for a wide range of construction and leveling applications. This self-leveling horizontal rotary laser provides precise elevation control over large areas, enhancing productivity for tasks such as grading, excavating, patio decks, terraces, swimming pools, landscaping, and septic systems. Its robust design ensures durability and reliability in demanding jobsite environments.



Figure 1: The Firecore FRL300R Rotary Laser Level Kit, including the main unit, receiver, and hard carrying case.

2. SAFETY INFORMATION

Always read and understand all safety warnings and instructions before operating the Firecore FRL300R Rotary Laser Level. Failure to follow these instructions may result in serious injury.

2.1 Laser Safety

This product emits a Class 2 laser beam (IEC/EN60825-1/2014 <1mW). Observe the following precautions:

- **DO NOT** stare directly into the laser beam.
- **DO NOT** intentionally direct the laser beam at other people or reflective surfaces.
- Always use the provided red laser glasses to enhance visibility and protect your eyes when working with the laser.
- Ensure the laser is positioned so that the beam is above or below eye level whenever possible.

2.2 Battery Safety

- Use only the specified Li-ion battery and charging accessories provided with the kit.
- Do not expose the battery to extreme temperatures, direct sunlight, or fire.
- Do not disassemble, crush, or puncture the battery.
- Dispose of batteries according to local regulations.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your Firecore FRL300R Rotary Laser Level Kit:

- 1x FRL300R Rotary Laser
- 1x Remote Control
- 1x Red Laser Glasses
- 1x Li-ion Battery with Type-C Charging Port
- 1x 5V/1A Adapter
- 1x Charging Cable
- 1x Red Target Plate
- 1x Receiver with a Clamp
- 1x User Manual
- 1x Hard Carrying Case

PACKAGE INCLUDED

1×FRL300R Rotary Laser Level
1×Hard Carrying Case
1×Laser Receiver with Clamp
1×Remote Control
1×Li-ion Battery

1×Charging Cable
1×5V 1A Adapter
1×Target Card
1×Laser Glasses
1×User Manual



Figure 2: All included components of the FRL300R kit.

4. SETUP

4.1 Charging the Battery

The FRL300R is powered by a rechargeable Li-ion battery. Before first use, fully charge the battery. Connect the provided charging cable to the Type-C charging port on the laser level and plug the 5V/1A adapter into a power outlet. A full charge provides up to 15 hours of working time.

Multiple Charging Methods

15+ hours of runtime



Figure 3: The FRL300R supports multiple charging methods via its Type-C port.

4.2 Initial Placement and Mounting

Place the FRL300R on a stable, level surface or mount it securely onto a tripod. Ensure the area is clear of obstructions that might interfere with the laser beam. The unit is designed with a robust 4-handle ergonomic design for easy handling.



Figure 4: The FRL300R features a robust 4-handle ergonomic design for secure handling.

5. OPERATING INSTRUCTIONS

5.1 Powering On and Self-Leveling

Press the power button to turn on the FRL300R. The unit features electronic horizontal self-leveling, automatically leveling itself within 5° in approximately 15 seconds. If the device is disturbed during operation, it will automatically re-level. The self-leveling motors are accurate to ± 10 seconds.



Figure 5: Close-up view of the FRL300R in operation, showing the emitted red laser beam.

5.2 Adjusting Rotation Speed and Scanning Angle

The FRL300R offers variable rotation speeds (0-300-600rpm) and scanning angle options (0°-10°-45°-90°-180°-0°). Use the controls on the unit or the remote control to adjust these settings according to your application needs.



Figure 6: The remote control allows for convenient adjustment of laser settings.

5.3 Vibrate Mode

For use in windy or vibrating conditions, activate the vibrate mode. In this mode, the self-leveling function is deactivated, and the laser cross is locked, allowing the device to be used at any angle without constant re-leveling due to minor disturbances.

5.4 Using the Receiver

The included laser receiver extends the working range and improves visibility in bright conditions. It can be used in a handheld position or mounted on a rod using the provided clamp. The receiver is IP55 waterproof and dustproof, ensuring reliable performance in various environments.



Figure 7: The FRL300R in use with its receiver and a measuring rod on a construction site.



Figure 8: The FRL300R positioned on a tripod, demonstrating its use for long-range leveling tasks.

6. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your Firecore FRL300R Rotary Laser Level.

6.1 Cleaning

Wipe the unit with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners. Keep the laser output window clean to ensure optimal beam clarity.

6.2 Storage

When not in use, store the FRL300R and its accessories in the provided hard carrying case. Store in a dry place, away from direct sunlight and extreme temperatures.

6.3 Durability and Protection

The FRL300R is designed to be tough and impact-resistant, with an IP55 rating for water and dust resistance. It can withstand drops from a height of 1m (3.3 ft.) onto concrete surfaces. While rugged, always handle the device with care to maintain its precision.

7. TROUBLESHOOTING

If you encounter issues with your FRL300R, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Laser does not turn on	Low or depleted battery	Charge the Li-ion battery fully.
Laser does not self-level	Unit is outside of $\pm 5^\circ$ self-leveling range	Place the unit on a more level surface or adjust tripod.
Inaccurate readings	Unit disturbed during operation; Calibration needed	Allow unit to re-level; If persistent, contact support for calibration.
Laser beam not visible	Too much ambient light; Long distance	Use the laser receiver; Use red laser glasses; Work in lower light conditions if possible.

8. SPECIFICATIONS

Feature	Specification
Model	FRL300R
Laser Class	Class 2 (IEC/EN60825-1/2014) <1mW
Accuracy	$\pm 1/8"$ at 100ft
Working Range (Diameter)	600m (1,969 ft.) with receiver
Self-Leveling Range	$\pm 5^\circ$
Self-Leveling Time	Within 15 seconds
Rotation Speed	0, 300, 600 rpm
Scanning Angle	0°, 10°, 45°, 90°, 180°
IP Rating	IP55 (Water and Dust Resistant)
Drop Resistance	1m (3.3 ft.) onto concrete
Battery Type	Li-ion (rechargeable)
Operating Time	Up to 15 hours

Feature	Specification
Item Weight	9.2 pounds
Material	Acrylonitrile Butadiene Styrene

9. WARRANTY AND SUPPORT

9.1 Warranty Information

Firecore laser levels are covered by a **ONE-YEAR warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.



9.2 Customer Support


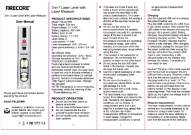
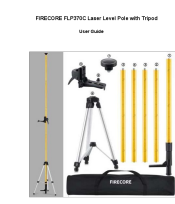

For any product questions, technical assistance, or warranty claims, please do not hesitate to contact Firecore customer support. We are committed to responding to your inquiry within 24 hours.

Please refer to the contact information provided in your purchase documentation or visit the official Firecore website for support details.

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Related Documents - FRL300R

	<p>FIRECORE G60 Green Beam Self-Leveling 4 x 360 Laser Level User Manual</p> <p>User manual for the FIRECORE G60 Green Beam Self-Leveling 4 x 360 Laser Level. Provides detailed information on product features, operation, safety guidelines, specifications, maintenance, and warranty.</p>
	<p>FIRECORE G30 Self-Leveling 360-Degree Cross Line Laser User Manual</p> <p>Comprehensive user manual for the FIRECORE G30 Self-Leveling 360-Degree Cross Line Laser, covering specifications, safety instructions, operation, maintenance, and troubleshooting.</p>

	<p>Firecore 3x360° Line Laser User Manual - F95T-XG</p> <p>Comprehensive user manual for the Firecore F95T-XG 3x360° Line Laser. Includes safety instructions, product overview, operating modes, specifications, maintenance, troubleshooting, and warranty information.</p>
	<p>FIRECORE FSL201MR 3-in-1 Laser Level with Laser Measure User Manual</p> <p>Comprehensive user manual for the FIRECORE FSL201MR 3-in-1 Laser Level with Laser Measure, detailing product specifications, operation, charging, maintenance, and safety instructions.</p>
	<p>FIRECORE FLP370C Laser Level Pole with Tripod User Guide</p> <p>A user guide for the FIRECORE FLP370C Laser Level Pole with Tripod, detailing its specifications, installation steps, and maintenance care.</p>
	<p>FIRECORE G50 Green Beam Self-Leveling 3x360 Laser Level User Manual</p> <p>Comprehensive user manual for the FIRECORE G50 Green Beam Self-Leveling 3x360 Laser Level, covering safety instructions, product overview, operating modes, specifications, maintenance, troubleshooting, and warranty information.</p>