Ortur Laser Master 2 S2 LU2-2, YRR2.0

ORTUR Laser Master 2 S2 LU2-2 and Rotary Roller Instruction Manual

Model: Laser Master 2 S2 LU2-2, YRR2.0

Brand: Ortur

1. INTRODUCTION

This manual provides essential instructions for the safe and effective operation of your ORTUR Laser Master 2 S2 LU2-2 laser engraver and the ORTUR Laser Rotary Roller (YRR2.0). Please read this manual thoroughly before use to ensure proper setup, operation, and maintenance.

2. SAFETY INFORMATION

WARNING: This product is a Class 4 laser device. Direct exposure to the laser beam can cause severe eye and skin damage. Always wear appropriate laser safety goggles during operation.

The ORTUR Laser Master 2 S2 LU2-2 incorporates several safety features:

- **G-sensor Protection:** If the engraving machine is displaced or tilted during operation, the laser will automatically stop.

- **Laser Beam Stop Protection:** If the computer system halts or the USB cable disconnects, causing the engraver to stop moving, the laser beam will automatically cease to prevent fire hazards.

- **Idle Laser Shutdown:** If the machine is powered on but remains stationary for an extended period, the laser will automatically turn off.

- **Eye Protection Design:** The panoramic filter glass protective cover filters 97% of ultraviolet light, reducing the need for additional goggles. However, wearing safety goggles is still highly recommended.
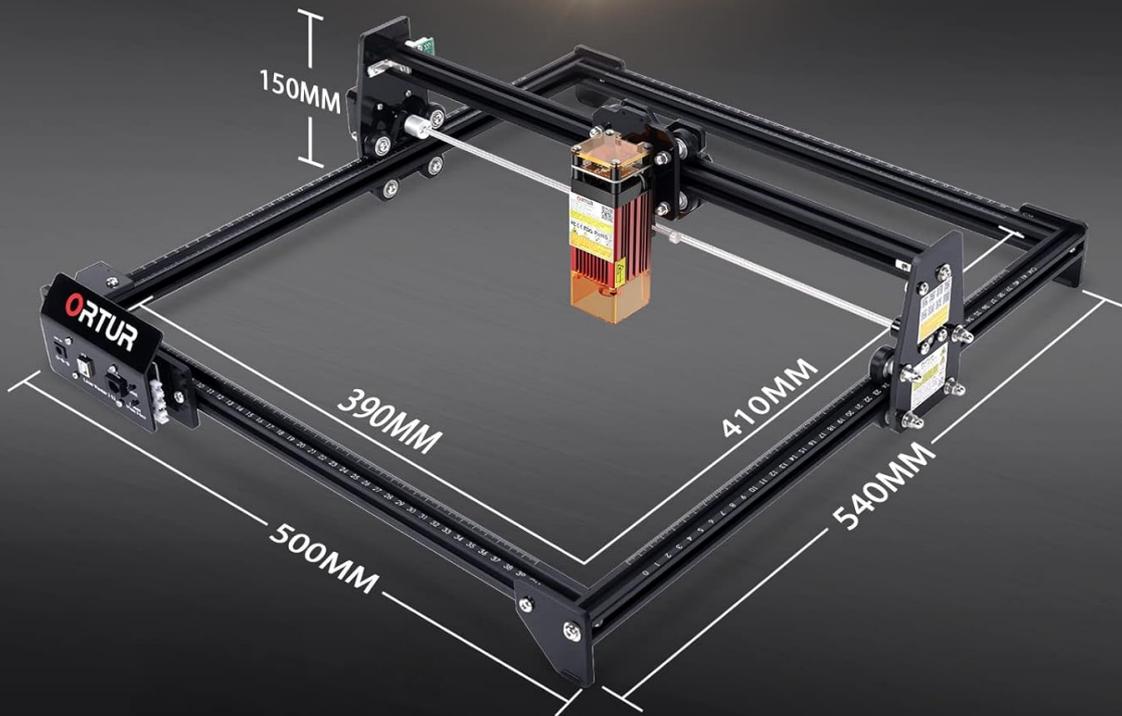
Image: ORTUR Laser Master 2 S2 LU2-2 showing dimensions (390x410mm engraving area) and four key safety features: Exposure Duration Detection, Laser Beam Safety Guard, Power Control System, and Position Movement Protection.

3. PRODUCT FEATURES

3.1. Laser Engraver (Laser Master 2 S2 LU2-2)

- **High-Performance Motherboard:** Equipped with a 32-bit professional motherboard and ORTUR Laser 1.8 firmware, enabling faster and more precise operations with stepper motor speeds up to 5000 mm/min.

- **Ultra-Fine Compression Laser:** Features a 2100mW output laser with an ultra-fine focal area reduced to 0.07*0.06mm, allowing for detailed engraving.

- **Large Engraving Area:** Provides a generous engraving area of 390*410mm.
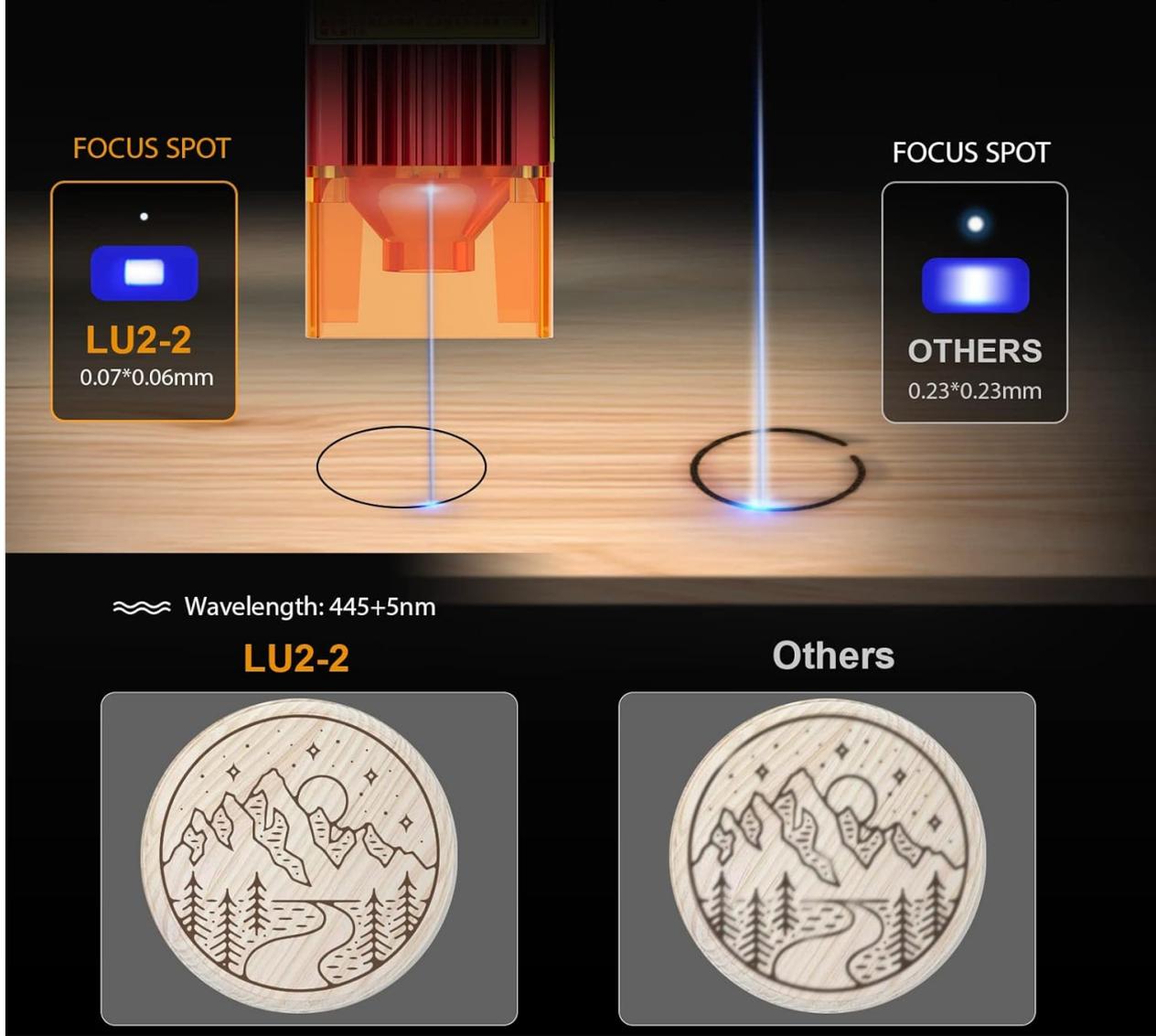
Image: Comparison of the LU2-2's new compressed spot technology (0.07*0.06mm) versus other lasers (0.23*0.23mm), demonstrating finer detail in engraving results.

Image: Close-up of the 32-bit professional motherboard, highlighting its advanced components for increased speed and accuracy.

3.2. Laser Rotary Roller (YRR2.0)

- **Cylindrical Object Engraving:** Designed for engraving on cylindrical or small-diameter objects such as round wood, cups, bottles, pipes, bowls, guitars, drums, and tubes.
- **Adjustable Diameters:** Features 7 adjustable diameters, accommodating objects from 8mm to 100mm.
- **Bracket Support:** Includes a bracket with wheels to provide stable support for items like wine glasses during engraving.
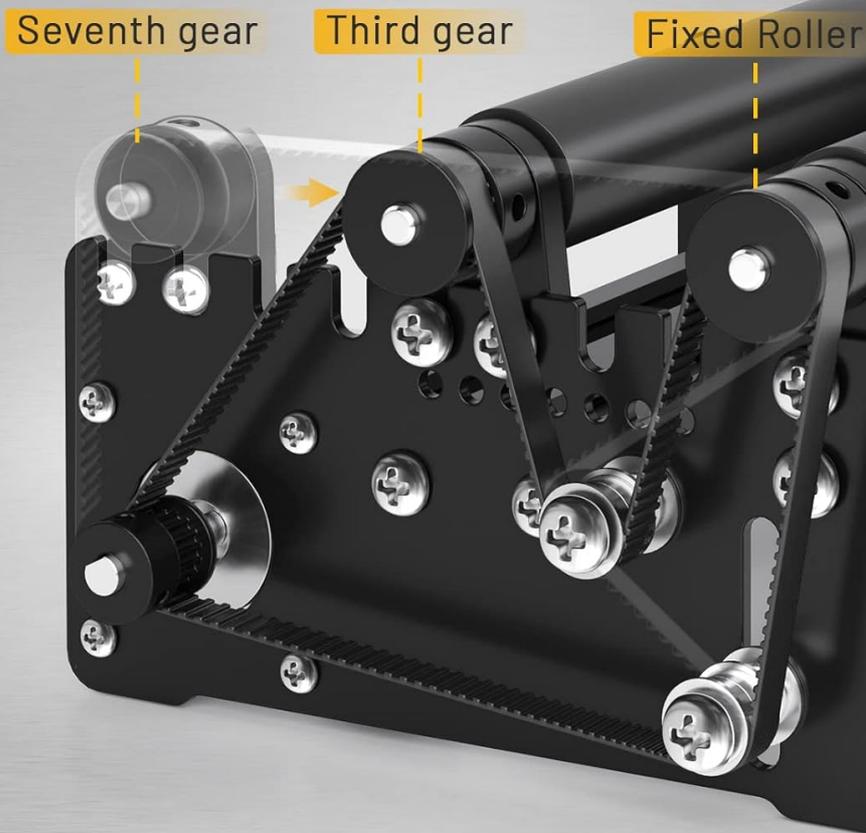
Image: Diagram illustrating the 7 adjustable gear positions on the rotary roller, allowing for engraving on objects with diameters from 8mm to 100mm.

4. SETUP

4.1. Laser Engraver Assembly

The ORTUR Laser Master 2 S2 LU2-2 requires assembly. Follow the detailed instructions provided in the separate assembly guide included with your product. Ensure all components are securely fastened before proceeding.

4.2. Rotary Roller Installation (Optional)

To use the rotary roller, connect it to the laser engraver according to the rotary roller's specific installation instructions. Ensure it is properly aligned and secured for stable operation.

4.3. Software Installation

The ORTUR laser engraver is compatible with various engraving software:

- **LaserGRBL:** Free software, widely used for basic engraving tasks.
- **LightBurn:** Paid software, offering advanced features and greater control.

Download and install your preferred software from the official websites. Ensure your computer meets the system requirements:

- **Operating Systems:** Windows 7 / 8 / XP / 10 / 11, macOS, Linux.

Connect the engraver to your computer via USB after software installation.

5. OPERATING INSTRUCTIONS

5.1. Basic Engraving Process

1. **Prepare Material:** Place your chosen material securely on the engraving bed.
2. **Focus the Laser:** Adjust the laser module height to achieve the optimal focal point on the material surface. Refer to your assembly guide for specific focusing methods.
3. **Load Design:** Open your engraving software (e.g., LaserGRBL, LightBurn) and load your desired design file.
4. **Set Parameters:** Configure engraving parameters such as power, speed, and passes based on the material type and desired effect.
5. **Preview and Position:** Use the software's preview function to ensure the design is correctly positioned on the material.
6. **Start Engraving:** Initiate the engraving process from the software. **Always wear laser safety goggles during operation.**

5.2. Using the Rotary Roller for Cylindrical Engraving

When engraving cylindrical objects, replace the standard engraving bed with the ORTUR Laser Rotary Roller. Ensure the object is securely placed on the rollers and properly aligned.

Image: The ORTUR Laser Rotary Roller in action, demonstrating 360-degree rotating engraving on a cylindrical object (e.g., a can), with a bracket providing support for items like wine glasses.

Adjust the rotary roller's diameter settings to match your object. In your engraving software, select the rotary engraving mode and adjust parameters accordingly. The machine will rotate the object while the laser engraves, creating a seamless design around its circumference.

5.3. Compatible Materials

The ORTUR Laser Master 2 S2 LU2-2 can engrave on a wide range of materials, including but not limited to:

- Paper
- Bamboo
- Wood
- Leather
- PCB board
- Aluminum oxide
- Metal (engraving only, not cutting)
- Glass (with appropriate preparation)

Image: Examples of various items engraved using the ORTUR laser engraver, including wine glasses, bottles, tumblers, rolling pins, rings, and pens, showcasing its wide applicability.

6. MAINTENANCE

- **Clean Laser Lens:** Regularly inspect and clean the laser lens using a soft, lint-free cloth and appropriate lens cleaning solution to maintain optimal engraving quality.
- **Clear Debris:** Remove any dust, smoke residue, or material debris from the engraving area and machine components after each use.
- **Lubricate Moving Parts:** Periodically lubricate the guide rails and lead screws with a suitable lubricant to ensure smooth movement.
- **Check Connections:** Ensure all cables and connections are secure and free from damage.

7. TROUBLESHOOTING

- **Laser Stops Unexpectedly:**
  - Check if the machine was bumped or tilted (G-sensor activated).

- Verify USB cable connection to the computer.
- Ensure the computer system is not halted.
- If idle for too long, the laser will shut off automatically; restart the engraving process.

- **Poor Engraving Quality:**

  - Ensure the laser is properly focused on the material surface.
  - Clean the laser lens for any dust or residue.
  - Adjust engraving power and speed settings for the specific material.

- **Machine Not Responding:**

  - Check power supply and connections.
  - Verify USB connection to the computer.
  - Restart the engraving software and the machine.

8. SPECIFICATIONS

8.1. ORTUR Laser Master 2 S2 LU2-2

Laser Output Power	2100mW
Engraving Area	390mm x 410mm
Ultra-Fine Laser Focal Area	0.07mm x 0.06mm
Engraving Speed	Up to 5000 mm/min
Motherboard	32-bit professional motherboard with ORTUR Laser 1.8 firmware
Software Compatibility	LaserGRBL (Free), LightBurn (Paid)
Operating System Compatibility	Windows 7 / 8 / XP / 10 / 11, macOS, Linux

8.2. ORTUR Laser Rotary Roller (YRR2.0)

Adjustable Diameters	7 gears, 8mm - 100mm
Function	Cylindrical object engraving

Image: Detailed specifications and dimensions of the ORTUR Laser Rotary Roller YRR2.0, showing its physical measurements.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official Ortur website. You can also contact Ortur customer service for assistance with any issues or questions regarding your device.
Ortur Official Website: www.ortur.net