

## Ortur R1

# Ortur R1 5000mW Portable Laser Engraver and Cutter Instruction Manual

Model: R1 | Brand: Ortur

## 1. INTRODUCTION

The Ortur R1 is a portable, foldable laser engraver and cutter designed for various materials such as wood, leather, glass, and cloth. It features a 5W laser module, app control, and comprehensive safety mechanisms, making it suitable for both beginners and experienced users.

## 2. SAFETY INFORMATION

This device is a Class 1 laser product. Adhere to all safety guidelines to prevent injury or damage.

- **Class 1 Laser Safety:** The Ortur R1 is classified as a Class 1 laser product, ensuring reliable protection against laser hazards under normal operating conditions.
- **Watchdog Protection:** The device includes a watchdog feature that monitors operation and can initiate an auto-shutdown if anomalies are detected.
- **Auto Shutdown:** The engraver is equipped with an automatic shutdown function for enhanced safety.
- **Exposure Limits:** Designed with exposure limits to minimize potential risks.
- **Tilt Detection:** If the device is tilted beyond a safe angle (approximately 15 degrees), it will automatically stop operation.
- **Lid-Stop:** The device will cease operation if the protective lid is opened during use.
- **USB Lock Protection:** The machine requires a USB key to be inserted to begin operation, preventing unauthorized use, especially by children.
- **Protective Cover:** The high-definition transparent cover allows observation of the engraving process without the need for additional goggles.

# Comprehensive Safety Protections

Equipped with watchdog, USB lock, auto shutdown, exposure limits, tilt detection, and lid-stop for full protection.



Auto-Stop on  
Cover Open



Tilt Detection  
Auto-Stop



USB Lock Protec-  
tion

Image: Comprehensive safety protections of the Ortur R1, including auto-stop on cover open, tilt detection, and USB lock protection.

# Class 1 for Safer Use

Class 1 laser safety ensures reliable protection against laser hazards

# CLASS 1



Image: The Ortur R1 is a Class 1 laser product, designed for safer use.

### 3. SETUP

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The Ortur R1 features a foldable design for quick and easy setup.

1. **Unfold the Device:** Gently unfold the laser engraver until it locks into its operational position. No tools are required for this step.

2. **Place on a Stable Surface:** Ensure the device is placed on a flat, stable surface. The aluminum alloy base plate protects the desktop during operation.
3. **Connect Power:** Plug the power adapter into the device and a suitable power outlet.
4. **Insert USB Key:** Insert the provided USB key into the designated port to enable operation.

# Instant Setup, Ready in Seconds

Unfold and start engraving—no tools, no wait.

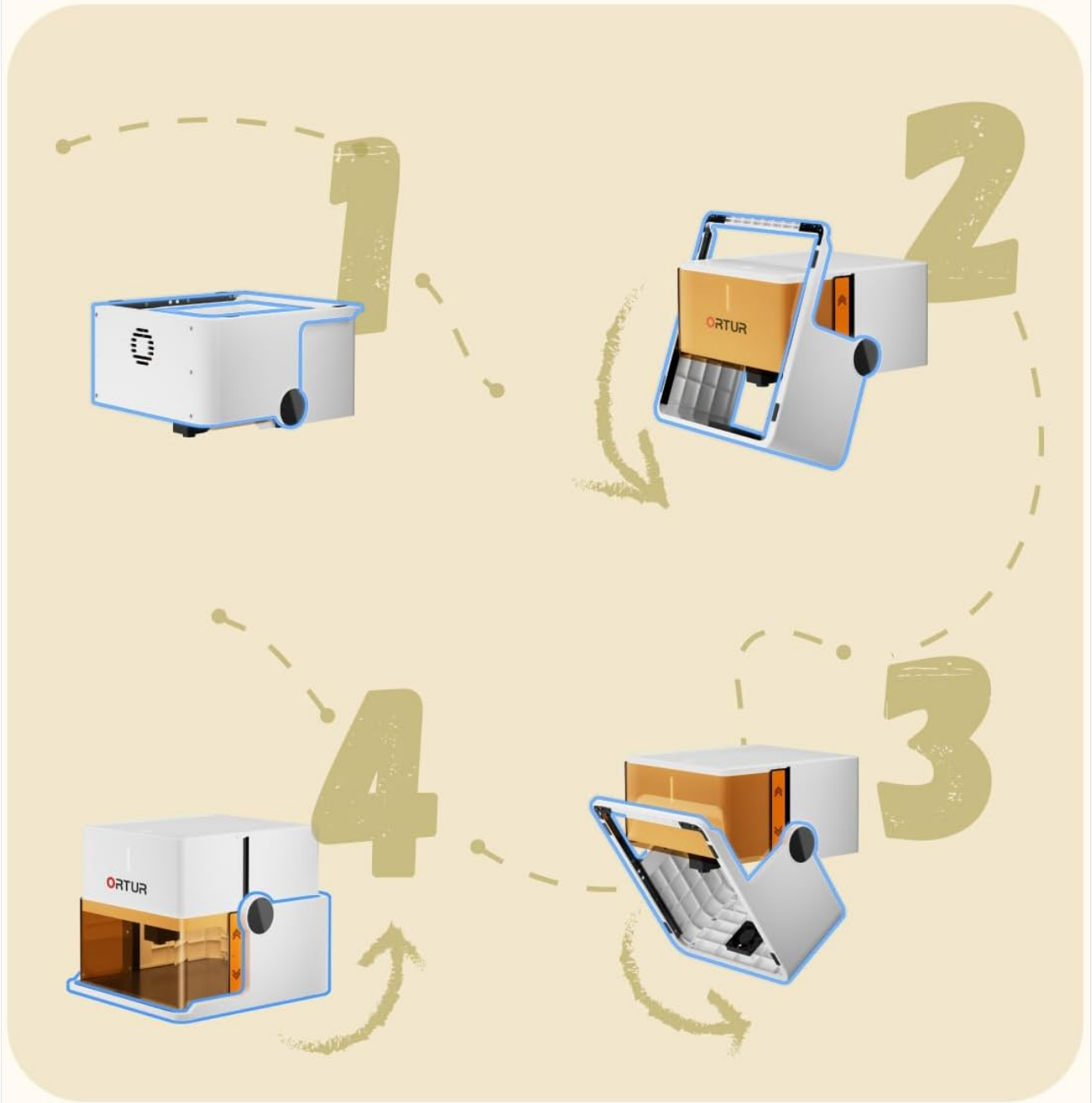


Image: Visual guide for the instant setup of the Ortur R1, showing it unfolds and is ready for use without installation.

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Video: Demonstrates the quick setup process of the Ortur R1, highlighting its readiness for use with minimal steps.

## 4. OPERATING INSTRUCTIONS

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### 4.1 App Control and Connectivity

The Ortur R1 can be controlled via a dedicated mobile application, offering both online and offline engraving capabilities.

- **Wireless Connectivity:** Connect the device to your smartphone via Wi-Fi for remote control and file transfer.
- **AI Creativity:** The app features AI algorithms to optimize images for engraving.
- **Hand-Drawn Engraving:** Directly sketch on your phone screen and engrave the design.
- **Puzzle Mode:** Customize designs using a modular, Lego-style interface.
- **QR Code Engraving:** Generate and engrave unique QR codes from text, photos, or videos.
- **Custom Text Engraving:** Instant input with over 19 fonts and multi-language support.

# Dual Laser Modes, Versatile Creative Control



Instant input, 19+ fonts, multi-language ready—built for high-turnover engraving.

**19+  
fonts**

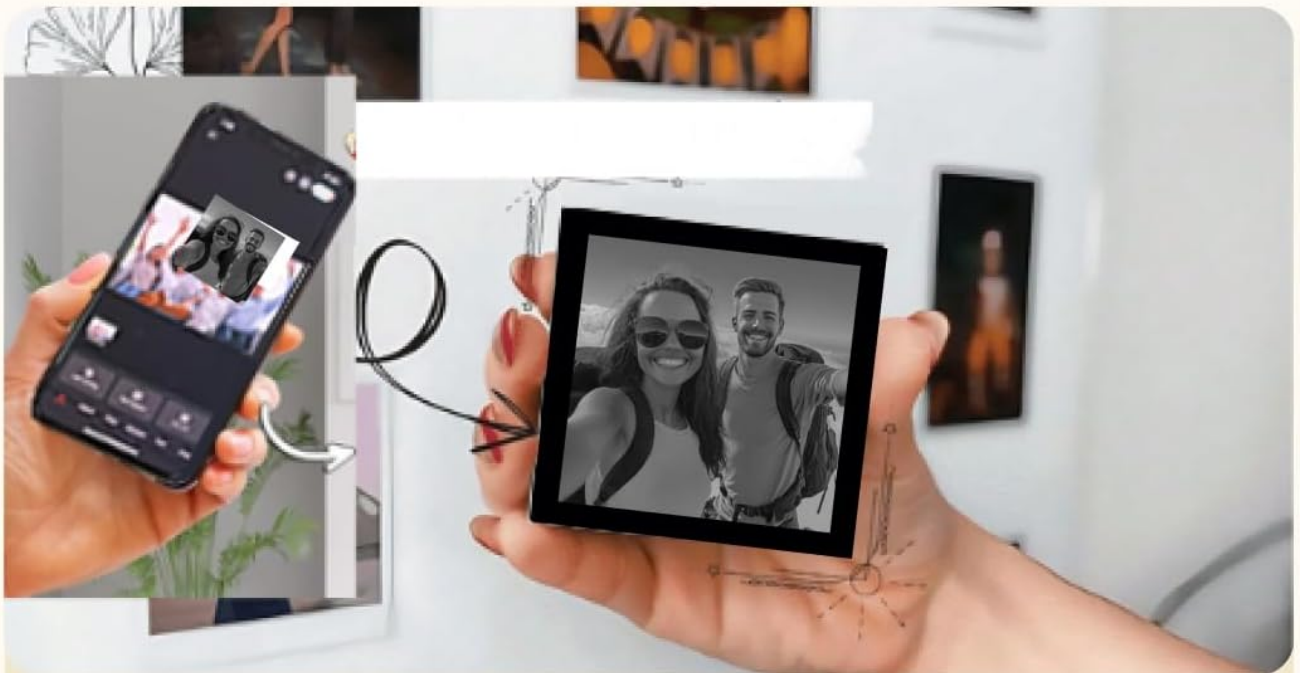


Image: The Ortur R1 features dual laser modes (5W blue light shown) and supports over 19 fonts for versatile creative control.





Support online/offline, control remotely and transfer files with ease.



Take a photo, upload with one tap, and turn it into a custom design.

Image: The Ortur R1 app allows for online/offline control and easy file transfer.

# Creative Playground for Kids

Draw directly in the APP – Kids create freely and unleash their imagination.



Image: The Ortur R1 app provides a creative platform for users to draw and engrave designs directly.

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Video: Shows the Ortur R1 app's capabilities, from design to engraving, in a seamless workflow.

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Video: Illustrates how the Ortur R1 app can be used as a creative tool for children to design and engrave.

## 4.2 Offline Engraving

The Ortur R1 supports offline engraving, allowing you to manage and transfer files even without an internet



connection.

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Video: Demonstrates the offline engraving capabilities of the Ortur R1, showing how designs can be uploaded and engraved without an active internet connection.

### 4.3 Engraving and Cutting Materials

The 5W laser module is capable of engraving and cutting various materials. For optimal results, adjust settings based on the material type and thickness.

- **Engraving Area:** Supports a 100x100mm engraving area with an accuracy of up to 0.05mm.
- **Laser Spot:** Features a 0.025x0.11mm laser spot for fine engraving.
- **Laser Speed:** Achieves speeds of up to 5000mm/min.
- **Cutting Capability:** Can cleanly cut 3mm basswood board in a single pass.
- **Supported Materials:** Wood, leaves, silicone, leather, cloth, paper, and more.

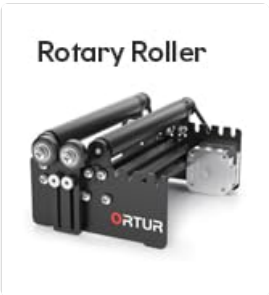


Image: Examples of materials that can be engraved or cut with the Ortur R1 5W laser module.

## 5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your Ortur R1.

- **Cleaning the Lens:** Periodically clean the laser lens with a soft, lint-free cloth and lens cleaning solution to maintain engraving precision.
- **Cleaning the Engraving Area:** Remove debris and dust from the engraving area after each use to prevent buildup.
- **Firmware Updates:** Check for and install any available firmware updates for improved functionality and performance.
- **Storage:** When not in use, fold the device and store it in a dry, dust-free environment.

## 6. TROUBLESHOOTING

If you encounter issues with your Ortur R1, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Device not powering on	Power cable not connected, USB key not inserted, power outlet issue.	Ensure power cable is securely connected. Insert the USB key. Test the power outlet with another device.
Laser not firing or weak engraving	Dirty laser lens, incorrect power settings, material not suitable.	Clean the laser lens. Adjust laser power and speed settings in the app. Verify material compatibility.
App not connecting to device	Wi-Fi issues, device not in pairing mode, app outdated.	Ensure device Wi-Fi is enabled and connected to a 2.4GHz network. Restart the device and app. Check for app updates.
Engraving is inaccurate or distorted	Unstable surface, incorrect focus, material movement.	Place the device on a firm, level surface. Ensure the material is securely positioned. Check laser focus.

For further assistance, please contact Ortur customer support.

## 7. SPECIFICATIONS

Feature	Detail
Product Dimensions	12.4 x 11.38 x 7.28 inches
Item Model Number	R1
Item Weight	7.94 pounds
Manufacturer	Ortur
Laser Power	5000mW (5W)
Engraving Area	100 x 100 mm
Engraving Accuracy	Up to 0.05mm
Laser Spot Size	0.025 x 0.11 mm
Laser Speed	Up to 5000mm/min
Connectivity	Wi-Fi (2.4GHz), Offline Mode
Safety Classification	Class 1 Laser Product

## 8. WARRANTY AND SUPPORT

Ortur provides comprehensive customer support for the R1 laser engraver.

- **Warranty:** 365-day warranty from the date of product receipt.
- **Technical Support:** 24/7 service and lifetime technical support are available.
- **Contact:** For any issues or inquiries, please contact Ortur directly through the Amazon platform or their official support channels.