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› LONGER Ray5 10W Laser Engraver User Manual

Longer Ray5 10W

LONGER Ray5 10W Laser Engraver User Manual

Model: **Ray5 10W** | Brand: **Longer**

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your LONGER Ray5 10W Laser Engraver. Designed for precision engraving and cutting, this machine offers high performance and versatility for various materials. Please read this manual thoroughly before operating the device to ensure safe and efficient use.

2. SAFETY INFORMATION

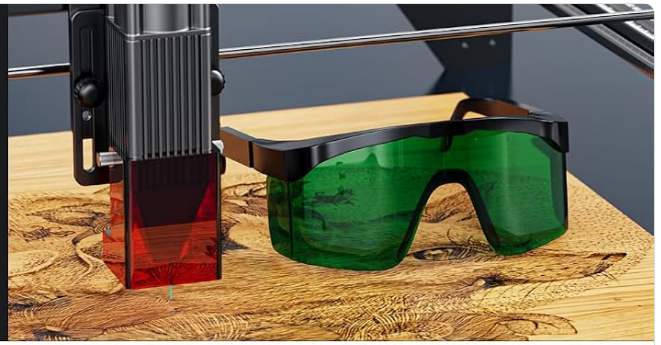
Your safety is paramount. The LONGER Ray5 10W Laser Engraver is equipped with several safety features, but proper adherence to safety guidelines is essential.

- **Eye Protection:** Always wear the provided safety goggles when the laser is in operation. The machine includes a protective cover to minimize laser exposure.
- **Emergency Stop:** An emergency stop function is integrated, allowing immediate shutdown in case of unexpected behavior.
- **Motion Protection:** The device features motion protection, automatically shutting down if abnormal vibrations or movements are detected during operation.
- **Thermal Protection:** An automatic shutdown mechanism is in place if the engraving area overheats or detects a flame.
- **Ventilation:** Ensure adequate ventilation in your workspace to dissipate fumes and particles generated during engraving and cutting.



Eyes Protection

Equipped with a protective cover and glasses, avoid eye irritation.



Thermal Protection

Auto shutdown if it detects a flame of the engraving area overheats.



Movement Protection

If the laser machine move while in use, the move protection will auto shutdown.



Power off/on Button

Longer laser engraver has a power switch button, which is more convenient and safer.

Image: Overview of the safety features including eye protection, thermal protection, movement protection, and the power on/off button.

3. SETUP

The LONGER Ray5 10W Laser Engraver is designed for straightforward assembly. All necessary tools and accessories are included in the package.

1. Unpack all components and verify against the packing list.
2. Follow the step-by-step assembly guide provided in the box. Ensure all connections are secure and stable.
3. Place the assembled machine on a stable, level surface in a well-ventilated area.
4. Connect the power adapter and other necessary cables.



Image: The LONGER Ray5 10W Laser Engraver, showcasing its design and potential applications.

4. OPERATING INSTRUCTIONS

The Ray5 10W offers multiple ways to operate and control your engraving and cutting projects.

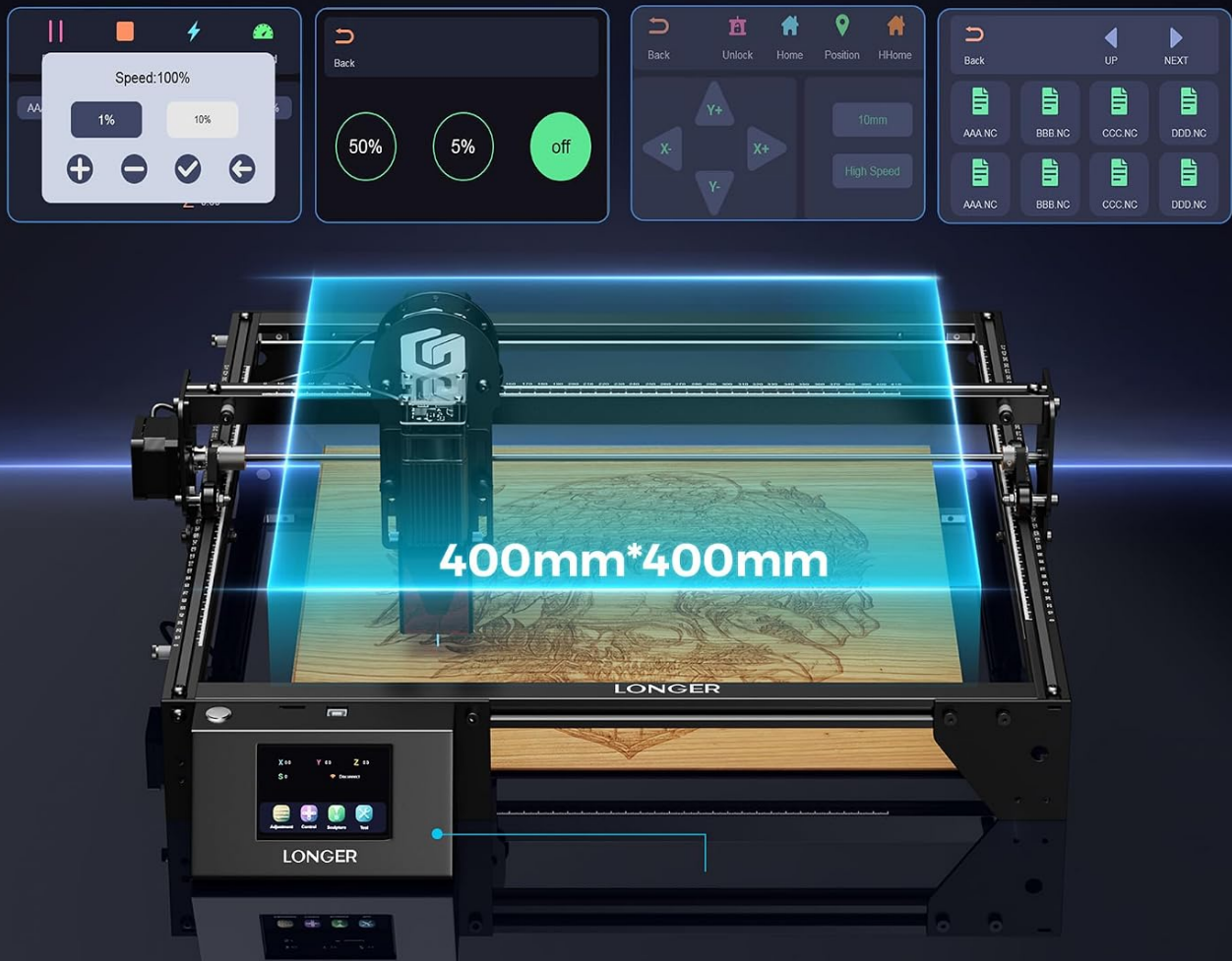
4.1. Key Features

- **High Performance:** Equipped with a 10W output laser module and a 240MHz ESP32 chipset for faster response and enhanced compatibility.
- **Dual-Beam Precision:** Features a 0.06mm x 0.06mm ultra-fine laser point and 0.01mm precision for intricate details.
- **Large Working Area:** A spacious 400mm x 400mm working area accommodates various project sizes.

- **High Processing Speed:** Achieves a maximum engraving speed of 10,000mm/min.

More Highly Efficient Operation

Working area up to **400x400mm**



Additional **3.5"colour** touch screen

Image: The generous 400x400mm working area and the intuitive 3.5-inch color touch screen for efficient operation.

10,000mm/min Processing Speed

Faster Speed, More effective



RAY5 10W
10000mm/min



Others
6000mm/min

Image: Demonstrating the superior processing speed of 10,000mm/min for faster and more effective engraving.

High-Precision Laser Engraving Technology

laser point size of $0.08 \times 0.08 \text{mm}$ an engraving accuracy of 0.01mm

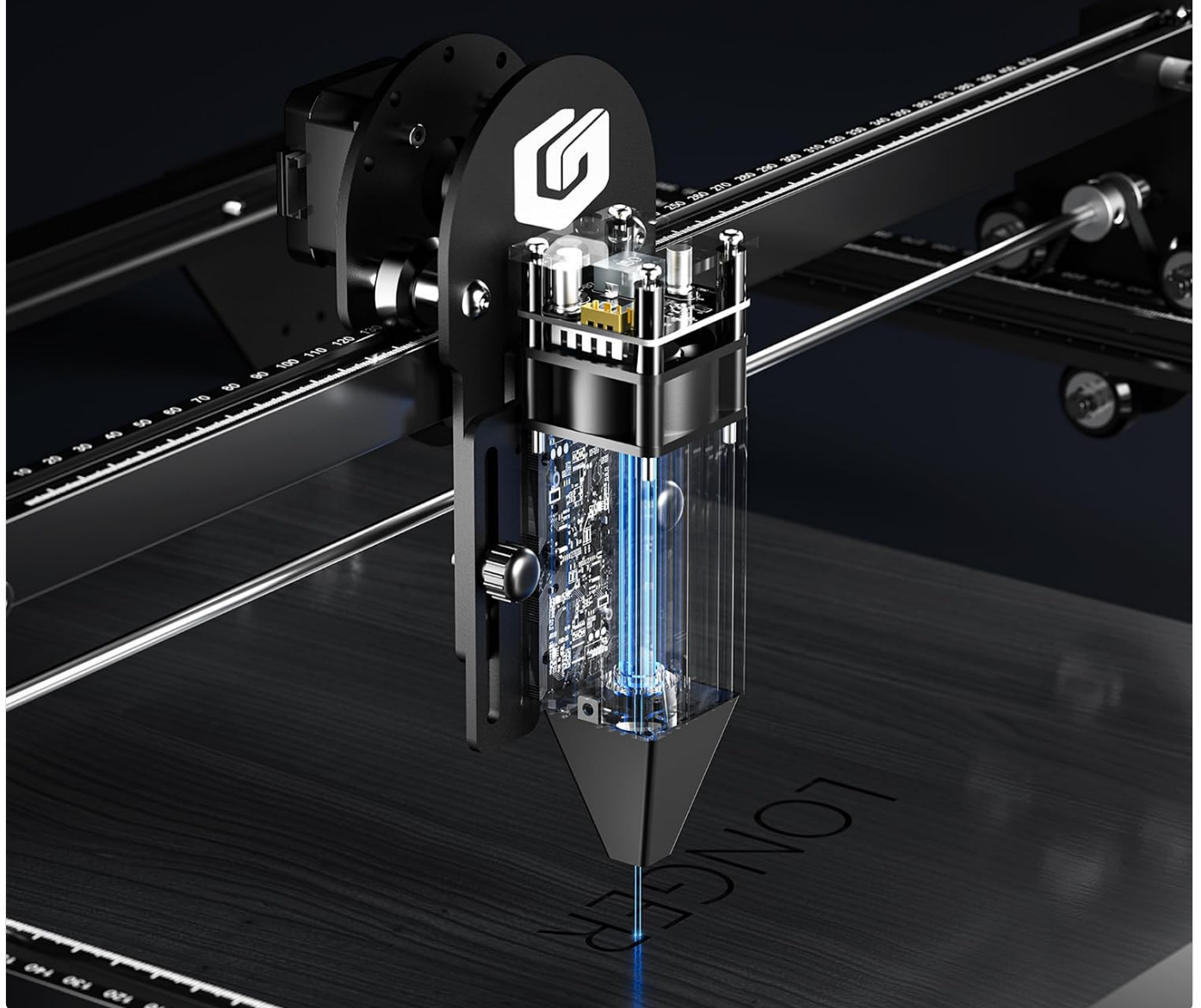


Image: High-precision laser engraving technology, highlighting the 0.06mm laser spot size and 0.01mm engraving accuracy.

240MHz ESP32 Chip Processor

With a multi-core architecture, it supports a single device controlling multiple engraving machines simultaneously, allowing for uninterrupted engraving work 24/7.



Image: The powerful 240MHz ESP32 Chip Processor, enabling multi-device control and uninterrupted engraving.

4.2. Connectivity and Software

The Ray5 10W offers flexible connectivity options and broad software compatibility:

- **Connection Modes:** USB, TF card, WiFi, and App.
- **Offline Usage:** The 3.5-inch touch screen allows for offline operation without constant computer connection.
- **Software Compatibility:** Compatible with professional engraving software such as LaserGRBL and LightBurn.

Compatible with Multiple Software and 4 Connection Modes

Connection Supported:



Wi-Fi



USB Cable



APP



TF Card

Operating System Supported:



LaserGRBL



LightBurn



Input Image Format: JPG, PNG, BMP, GIF, SVG, AI, etc.

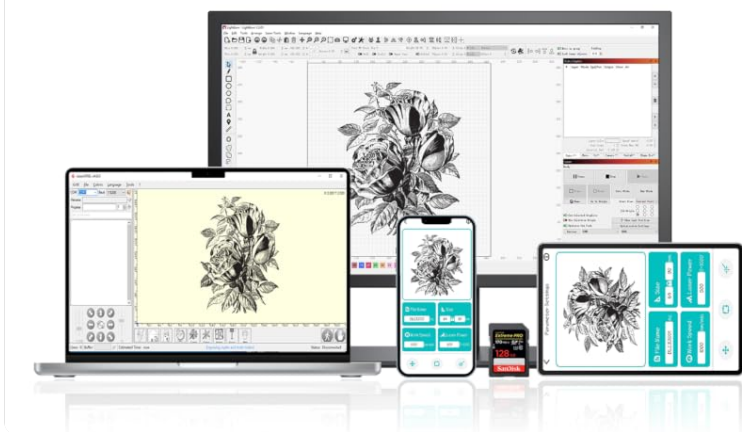
Image: Connectivity options and software compatibility, illustrating how the engraver integrates with various systems.

4.3. Compatible Materials

The LONGER Ray5 10W is versatile and can engrave and cut a wide range of materials. For optimal results, adjust settings based on the material type and desired effect.

- **Engraving:** Stainless steel, cotton cloth, leather, metal, wood, glass, acrylic, plywood, basswood, hardwood, pinewood, Kraft paper, aluminum alloy, ceramics.
- **Cutting:** Wood (up to 0.8 inches/20mm thick), acrylic (up to 1.2 inches/30mm thick), basswood, pinewood, Kraft paper, leather, denim.

Compatible with Multiple Software and 4 Connection Modes



Connection Supported



Wi-Fi



USB Cable



APP



TF Card

Operating System Supported:



Windows



MacOS



Linux

Software Supported:



LaserGRBL (Free)



LightBurn (Paid)



JPG, PNG, BMP, G-code, GIF, SVG, NC, GC,

Image: Examples of diverse materials compatible with the LONGER Ray5 10W laser engraver, including wood, leather, and stainless steel.

Image: Detailed table of recommended settings for different materials, actions (engrave/cut), thickness, power, speed, and cycles.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your laser engraver.

- Keep the working area clean and free of debris.
- Periodically clean the laser lens according to the detailed instructions in the full product manual.
- Ensure the hidden active cooling system is not obstructed to maintain proper laser lifespan.
- Check and tighten any loose screws or connections regularly.

6. TROUBLESHOOTING

If you encounter any issues with your LONGER Ray5 10W Laser Engraver, please refer to the comprehensive troubleshooting guide in the full product manual. Common issues and their solutions are detailed there. If the problem persists, do not attempt to repair the device yourself. Contact customer support for assistance.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	25.39 x 17.12 x 12.79 inches

Item Model Number	10W
Item Weight	9.93 pounds
Manufacturer	Longer
Date First Available	March 28, 2024
Laser Module Model	LC40F50
Laser Technology	Double Diode Laser with FAC
Wavelength	450-460 nm
Max Power Input	12V 3.2A
Optical Power Output	10-11W
Focus Type	Fixed Focus - 50mm Focal length
Dot Size at Optimal Focus	0.06 x 0.06 mm
Laser Class	FDA Class IV, or Class 4 IEC standard

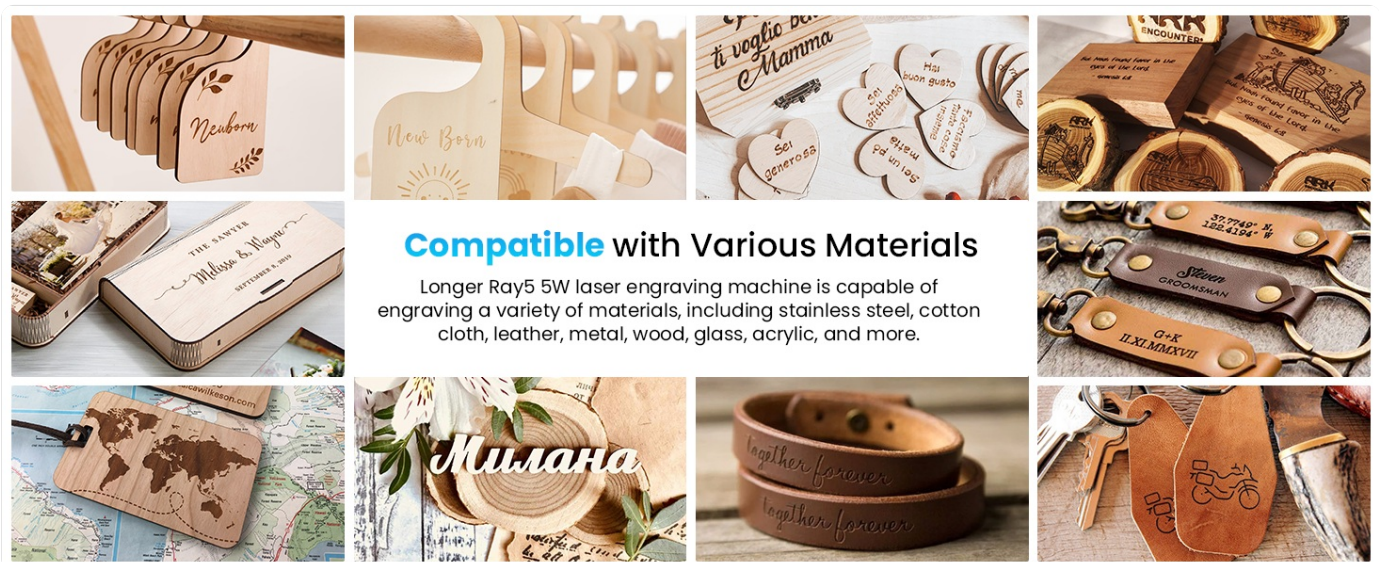


Image: Detailed product specifications for the laser module, including optical power output and laser class.

8. WARRANTY AND SUPPORT

- Longer is committed to providing excellent customer service. Your LONGER Ray5 10W Laser Engraver comes with dedicated support.
- **Customer Support:** Access to 24/7 customer support for any questions or concerns.
 - **Technical Support:** Lifelong technical support is provided to assist you with the operation and maintenance of your device.
 - For detailed warranty information, please refer to the warranty card included with your product or visit the official Longer website.

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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

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