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> Artilume U1 Laser Engraver & Cutter Machine User Manual

Artilume U1-7000mW

Artilume U1 Laser Engraver & Cutter Machine User Manual

Model: U1-7000mW

1. INTRODUCTION

The Artilume U1 Laser Engraver & Cutter Machine is a versatile tool designed for precision engraving and cutting across a variety of materials. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your U1-7000mW model. Please read this manual thoroughly before operating the device.

The U1-7000mW model features a 7000mW laser output, offering 0.01mm ultra-fine precision and cutting speeds up to 7000mm/min. It is compatible with various software platforms including CutLabX, LightBurn, and LaserGRBL.

2. SAFETY INFORMATION

Operating a laser engraver involves potential hazards. Adhere to all safety guidelines to prevent injury or damage to the device.

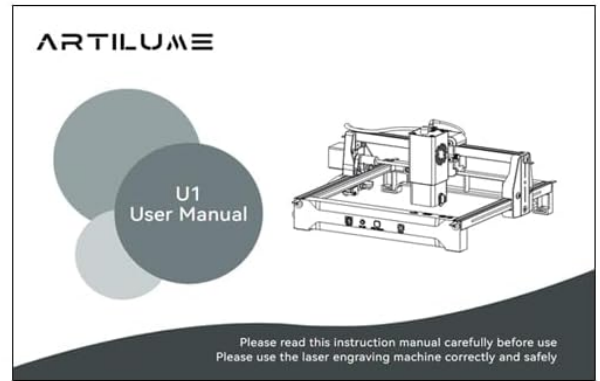
- **Eye Protection:** Always wear the provided professional laser safety goggles when the machine is in operation. Never look directly at the laser beam.
- **Ventilation:** Operate the machine in a well-ventilated area to dissipate fumes and smoke produced during engraving or cutting.
- **Material Safety:** Ensure the material being processed is safe for laser engraving/cutting. Avoid highly reflective, flammable, or toxic materials.
- **Supervision:** Never leave the machine unattended during operation.
- **Emergency Stop:** Familiarize yourself with the safety-stop function and its location for immediate shutdown in case of an emergency.
- **Children and Pets:** Keep children and pets away from the operating area.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:



Artilume U1 Laser Engraver Machine × 1



User Manual × 1



Marker Pen × 1



Cleaning Brush × 1



Black Card
(Square, 80×81.3×0.3mm) × 1



Kraft Paper
(80×80×0.46mm) × 2



Plywood
(100×100×3mm) × 2



Type-B (2.0) USB Cable × 1



4GB TF Card × 1



Laser Safety Goggles
(151×57×55mm) × 1 pair

Image: Contents of the Artilume U1 Laser Engraver package, including the machine, user manual, marker pen, cleaning brush, material samples, USB cable, TF card, and laser safety goggles.

- Artilume U1 Laser Engraver Machine
- User Manual
- Marker Pen
- Cleaning Brush
- Black Card (80x81.3x0.3mm) × 1
- Kraft Paper (80x80x0.46mm) × 2

- Plywood (100x100x3mm) x 2
- Type-B (2.0) USB Cable
- 4GB TF Card
- Laser Safety Goggles (151x57x55mm)

4. SETUP

The Artilume U1 is designed for quick setup, arriving fully assembled and calibrated.

4.1 Unpacking and Placement

1. Carefully remove the machine and all accessories from the packaging.
2. Place the engraver on a stable, level surface in a well-ventilated area. Ensure there is sufficient space around the machine for safe operation and material handling.

4.2 Software Installation and Connection

The Artilume U1 supports multiple software options and connection methods.

Wide Compatibility

Lightburn & LaserGrbl & cutlabx supported

Connection
methods



System



Windows 7+



Mac OS



Linux

Software



LightBurn



CutLabX



CutLabX

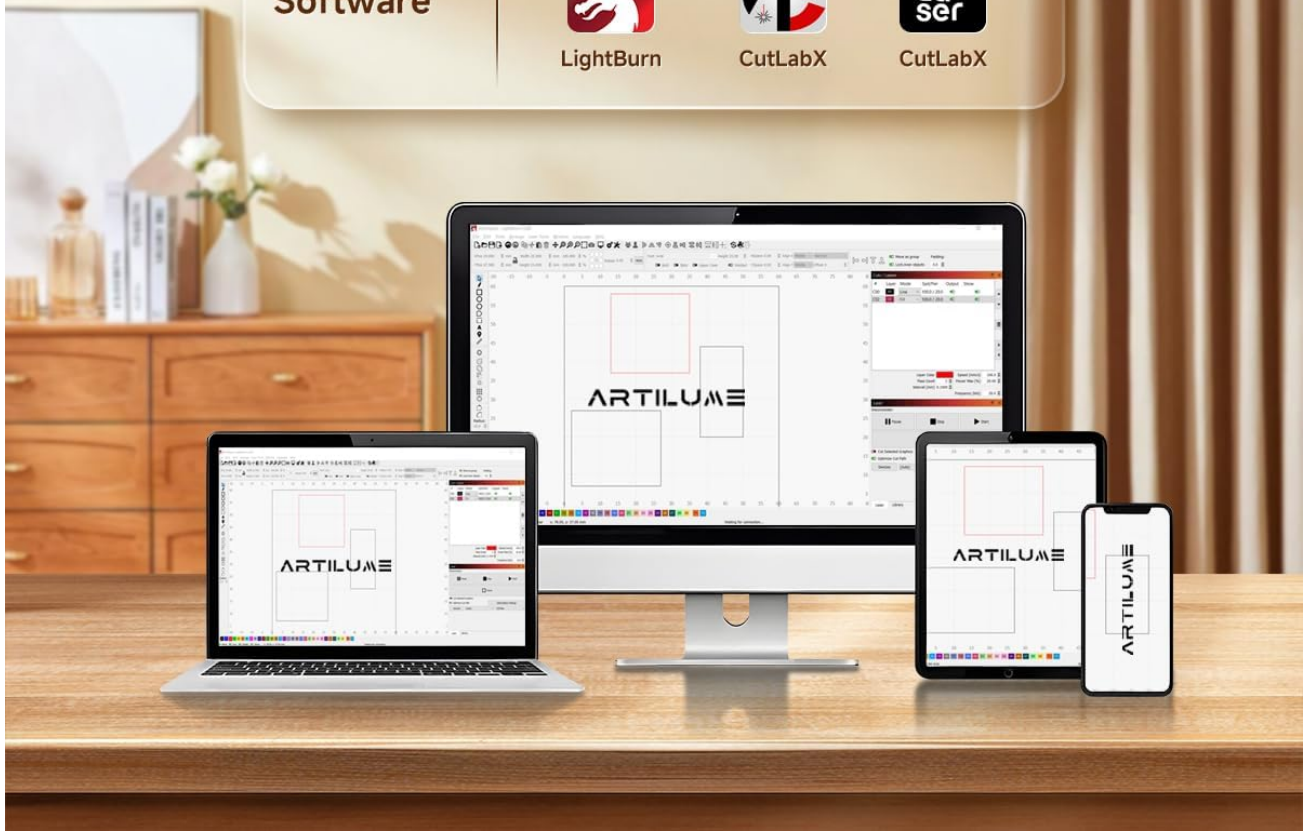


Image: Diagram showing compatibility with Windows 7+, macOS, Linux, and software like LightBurn, LaserGRBL, and CutLabX, along with connection methods including USB, WiFi, and app.

1. **Choose Your Software:** The U1 is compatible with CutLabX (Windows, macOS, Android, iOS), LightBurn, and LaserGRBL. Download and install your preferred software from the official Artilume website or the respective software providers.
2. **Connect the Machine:** Connect the U1 to your computer via the provided USB cable, or establish a wireless connection via Wi-Fi or the dedicated mobile application. Follow the on-screen instructions within your chosen software for initial connection and calibration.
3. **Insert TF Card:** Insert the provided 4GB TF card into the TF card slot on the machine. This card may contain firmware

or sample files.

5. OPERATING INSTRUCTIONS

This section outlines the general steps for operating your Artilume U1 laser engraver.

5.1 Preparing for Engraving/Cutting

1. **Design Preparation:** Create or import your design using compatible software (e.g., LightBurn, LaserGRBL, CutLabX). The software supports JPG, PNG, NC, and DXF formats.
2. **Material Placement:** Place your material securely within the engraving area (200x150mm). Ensure it is flat and properly aligned.
3. **Focus Adjustment:** Follow the software's instructions to adjust the laser focus for optimal results on your chosen material.

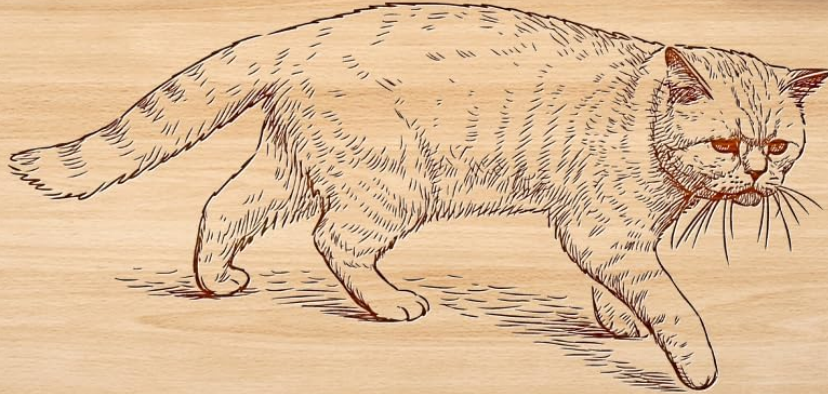
5.2 Engraving and Cutting Process

Finest Laser Spot Size

Maintaining an ultra-fine laser output enables the achievement of exceptionally detailed and lifelike engravings on each piece.



ARTILUME U1 0.01*0.01mm Laser Spot



Others 0.06*0.06mm Laser Spot



Image: Illustrates the fine detail achieved with the Artilume U1's 0.01x0.01mm laser spot compared to a larger 0.06x0.06mm spot from other machines, showing a detailed cat engraving.

Up to 7,000mm/min
work faster, create more

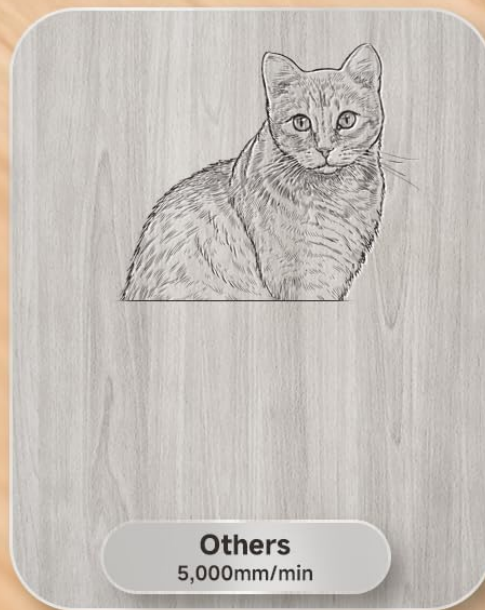
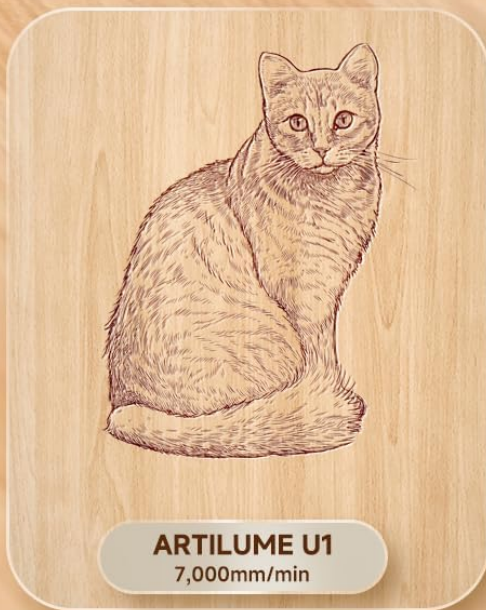


Image: Demonstrates the Aartilume U1's engraving speed of up to 7000mm/min, showing a detailed engraving of a cat on wood, compared to a less detailed engraving from a 5000mm/min machine.

1. **Software Settings:** Within your chosen software, select the appropriate power and speed settings for your material and desired effect. The U1-7000mW can cut 5-8mm plywood and 8-10mm pine wood. It can engrave paper, plastic, leather, fabric, stone, ceramic, and coated metals.
2. **Start Operation:** Initiate the engraving or cutting process from the software. Monitor the machine during operation.
3. **Completion:** Once the process is complete, wait for the laser to stop and any fumes to clear before removing the material.

5.3 Supported Materials



Image: Displays various materials that can be engraved and cut, including wood, acrylic, leather, cork, rock, glass, paper, bamboo, and metal, with examples of finished products.

The Artilume U1 is capable of engraving and cutting a wide range of materials. Always test on a scrap piece first to determine optimal settings.

- **Engraving:** Wood, Acrylic, Leather, Cork, Rock, Glass, Paper, Bamboo, Coated Metals.
- **Cutting (U1-7000mW):** Up to 8mm plywood, up to 10mm pine wood.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Artilume U1.

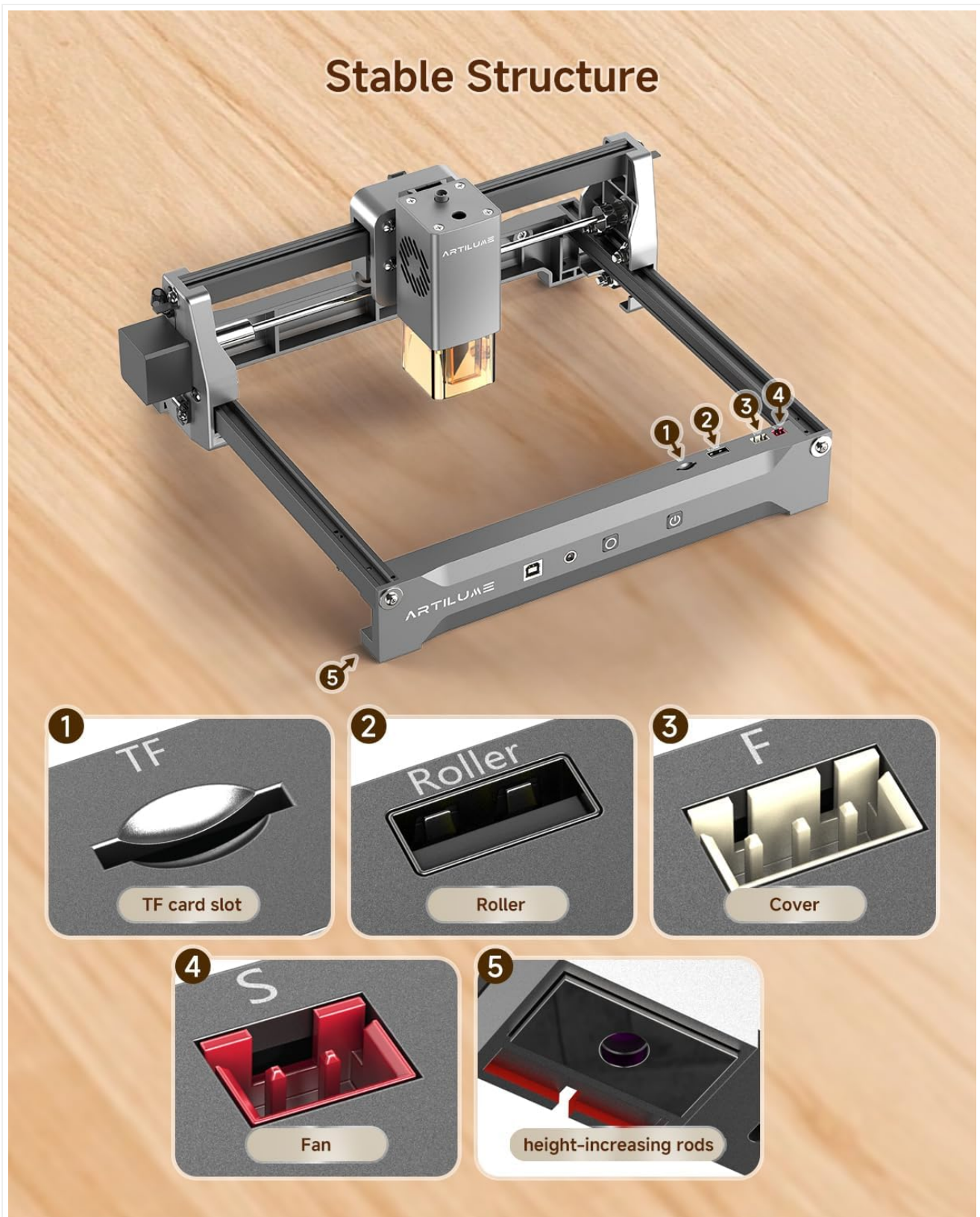


Image: An overhead view of the Artilume U1 machine, highlighting key components such as the TF card slot, roller, cover, fan, and height-increasing rods.

- **Laser Lens Cleaning:** The laser lens features a wind compression dust-proof design, allowing for quick cleaning and replacement. Regularly inspect and clean the lens using a soft, lint-free cloth and appropriate lens cleaning solution to maintain engraving quality.

- **General Cleaning:** Keep the machine free from dust and debris. Use the provided cleaning brush to remove any residue from the engraving area and moving parts.
- **Lubrication:** Periodically check and lubricate the guide rails and moving components as recommended in the full user manual (if applicable) to ensure smooth operation.
- **Firmware Updates:** Check the Artilume website for any available firmware updates to ensure your machine has the latest features and performance enhancements.

7. TROUBLESHOOTING

This section addresses common issues you might encounter. For more detailed troubleshooting, refer to the official Artilume support resources.

Problem	Possible Cause	Solution
Machine not powering on	Power cable not connected; Power outlet issue	Ensure power cable is securely connected; Try a different power outlet.
Laser not firing or weak output	Incorrect focus; Dirty laser lens; Incorrect power settings; Laser module issue	Adjust laser focus; Clean the laser lens; Verify power settings in software; Contact support if issue persists.
Engraving/Cutting results are poor or inconsistent	Incorrect speed/power settings; Material not flat; Loose belts/components	Adjust speed and power settings for the material; Ensure material is flat and secure; Check for loose components and tighten if necessary.
Software not connecting to machine	USB cable issue; Driver not installed; Wi-Fi connection problem	Try a different USB port/cable; Install necessary drivers; Verify Wi-Fi connection and network settings.

8. SPECIFICATIONS

Key technical specifications for the Artilume U1-7000mW Laser Engraver & Cutter Machine:

Feature	Detail
Brand	Artilume
Model Number	U1-7000mW
Material	Acrylonitrile Butadiene Styrene (ABS), Aluminum
Color	Gray Blue
Active Surface Area	200x150mm (7.87 x 5.9 inches)
Operation Mode	Automatic
Item Weight	5.57 pounds
Product Dimensions	13.39 x 11.42 x 5.83 inches
Laser Output Power	7000mW

Feature	Detail
Laser Precision	0.01mm
Cutting Speed	Up to 7000mm/min
Laser Wavelength	450nm (Diode Laser)
Software Compatibility	CutLabX (Windows/macOS/Android/iOS), LightBurn, LaserGRBL
File Formats	JPG, PNG, NC, DXF
Connectivity	USB, WiFi, APP

9. WARRANTY & SUPPORT

9.1 Warranty Information

The Artilume U1 Laser Engraver & Cutter Machine comes with a **1 Year Manufacturer Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact Artilume customer support. Refer to the official Artilume website or the contact information provided in your product packaging for the most up-to-date support channels.

Online resources, including FAQs and additional educational materials, are available on the Artilume website to assist you with your projects and machine operation.