



Manuals.plus /

› AlgoLaser /

› AlgoLaser 5W Laser Engraving Machine User Manual

AlgoLaser DIY KIT 5W

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Model: DIY KIT 5W

1. PRODUCT OVERVIEW

The AlgoLaser 5W Laser Engraving Machine is a high-precision tool designed for various engraving and cutting tasks. It is suitable for home use, DIY projects, and small business applications, offering professional-grade results with detailed precision.



Image: The AlgoLaser 5W Laser Engraving Machine, showcasing its compact design and potential applications with various engraved samples.

Key Features:

- **Professional Engraving Performance:** Achieves a maximum engraving speed of 12000mm/min with a precision of 0.04×0.09mm, ensuring sharp details and smooth edges.
- **Versatile Material Compatibility:** Capable of engraving and cutting a wide range of materials including wood, acrylic, leather, metal, stone, glass, and food.
- **Enhanced Safety Features:** Equipped with over-voltage protection, active light emission detection, and includes safety goggles for user protection.
- **Broad Connectivity:** Supports AlgoLaser APP, compatible with mainstream engraving software, and offers USB Type-C and WiFi connections for seamless operation across mobile and desktop devices.
- **Durable Laser Head:** The laser head is designed for longevity, lasting over 10,000 hours.

AlgoLaser DIY KIT Mini

Mini and Mighty



12000mm/min
Engraving speed



Engraving
and Cutting



315*300mm
Working Area



Support
Offline Control



Image: An overview of the AlgoLaser DIY KIT Mini's core features, highlighting its speed, versatility, working area, and offline control capabilities.

2. SAFETY INFORMATION

Operating a laser engraving machine requires adherence to strict safety protocols to prevent injury and damage. This device is a Class 1 laser product, meaning it is safe under normal operating conditions, but precautions are still necessary.

- **Eye Protection:** Always wear the provided safety goggles when the laser is in operation. Never look directly at the laser beam.
- **Ventilation:** Ensure adequate ventilation in your workspace to dissipate fumes and smoke produced during engraving, especially when working with materials like wood, acrylic, or leather.
- **Fire Safety:** Keep a fire extinguisher nearby. Do not leave the machine unattended during operation, as some materials can ignite.
- **Material Compatibility:** Only engrave or cut materials specified as safe for laser processing. Avoid materials that produce toxic fumes or are highly flammable.
- **Children and Pets:** Keep children and pets away from the operating area.

- **Emergency Stop:** Familiarize yourself with the location and function of the emergency stop mechanism.
- **Power Supply:** Use only the power adapter supplied with the machine.

Super Easy for Beginners

Assemble. Connect. Engrave. As Simple As 1-2-3.



Image: Visual representation of the multiple safety features integrated into the AlgoLaser machine, such as protection against USB connection issues, laser beam anomalies, machine displacement, tilting, and voltage fluctuations.

3. PACKAGE CONTENTS

Upon unboxing, please verify that all components are present and undamaged. If any items are missing or damaged, contact customer support immediately.

- Laser Engraving Machine Frame Components
- 5W Laser Module
- Power Adapter and Cable
- USB Type-C Cable
- Safety Goggles
- USB Drive (containing software and digital manual)
- Material Samples for Testing
- Assembly Tools and Fasteners

4. SETUP AND ASSEMBLY

The AlgoLaser 5W Laser Engraving Machine is designed for quick and easy assembly, typically taking 10-15 minutes.

1. **Unpack Components:** Carefully remove all parts from the packaging and lay them out on a clean, flat surface.
2. **Assemble the Frame:** Follow the step-by-step instructions in the included manual or video tutorial to assemble the machine's frame using the provided tools and fasteners. Ensure all connections are secure.
3. **Install Laser Module:** Mount the 5W laser module onto the designated carriage on the gantry. Connect the laser module cable securely.
4. **Connect Power:** Plug the power adapter into the machine and then into a suitable power outlet.
5. **Software Installation:** Insert the provided USB drive into your computer. Install the AlgoLaser software or other compatible engraving software (e.g., LightBurn, LaserGRBL).
6. **Connect to Device:** Connect the engraver to your computer via USB Type-C or establish a WiFi connection using the AlgoLaser APP.

High Accuracy, Abundant Details

The 0.04*0.09mm ultra-fine compressed laser point allows the 5W laser module delivers highly accurate engraving effects with abundant details.



Image: A visual guide illustrating the simple three-step setup process: quick assembly, WiFi connectivity, and direct mobile printing.

5. OPERATING INSTRUCTIONS

This section guides you through the process of using your AlgoLaser 5W Laser Engraving Machine for engraving and cutting.

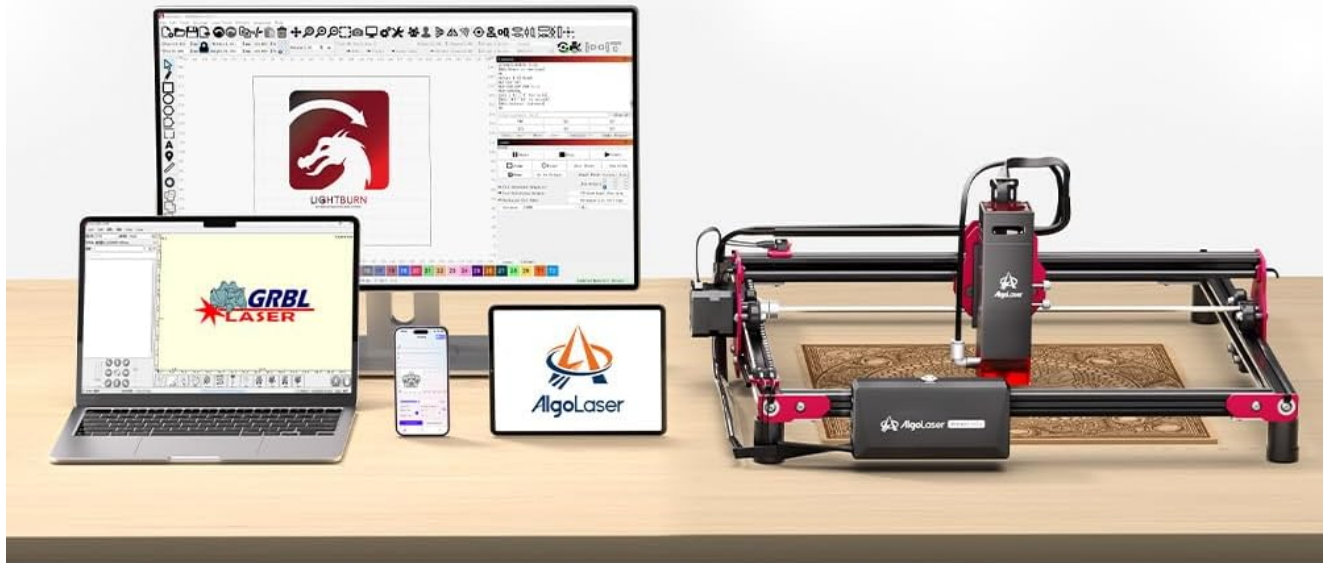
5.1. Software and Connectivity

The AlgoLaser supports various control methods for flexibility:

- **AlgoLaser APP:** Use the dedicated mobile application for smooth operation and customizable settings.
- **Desktop Software:** Compatible with popular engraving software like LightBurn and LaserGRBL on Windows, macOS, and Linux.
- **Connectivity:** Connect via USB Type-C for direct computer control or WiFi for wireless operation.

Real Offline Control

With Wifi connection and AlgoLaser app you can control the machine without cables and wires



Note: For safety, please don't walk away while machine is working.

Image: An illustration demonstrating the machine's real offline control capabilities via WiFi and the AlgoLaser app, compatible with various operating systems and connection types.

5.2. Preparing for Engraving/Cutting

1. **Place Material:** Position the material to be engraved or cut flat on the working surface. Ensure it is stable and does not move during operation.
2. **Focus the Laser:** Adjust the laser module's height to achieve optimal focus on the material surface. Refer to the software's focusing guide for precise adjustment.
3. **Import Design:** Open your chosen engraving software. Import or create your design file.
4. **Adjust Settings:** 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 your material.

Cut and Get Your Favorite Artwork Easily

- ▶ Connect to computer, pad, phone to import the cutting files.



Image: A visual guide showing the workflow from connecting the device and importing cutting files to the actual cutting process and the final artwork.

5.3. Starting the Job

1. **Wear Safety Goggles:** Always put on your safety goggles before initiating any laser operation.
2. **Start Engraving:** Click the "Start" or "Run" button in your software. The laser will begin the engraving or cutting process.
3. **Monitor Progress:** Observe the machine during operation. Do not leave it unattended. Be prepared to press the emergency stop button if any issues arise.
4. **Completion:** Once the job is complete, the machine will stop. Wait for any smoke to clear before removing the engraved material.

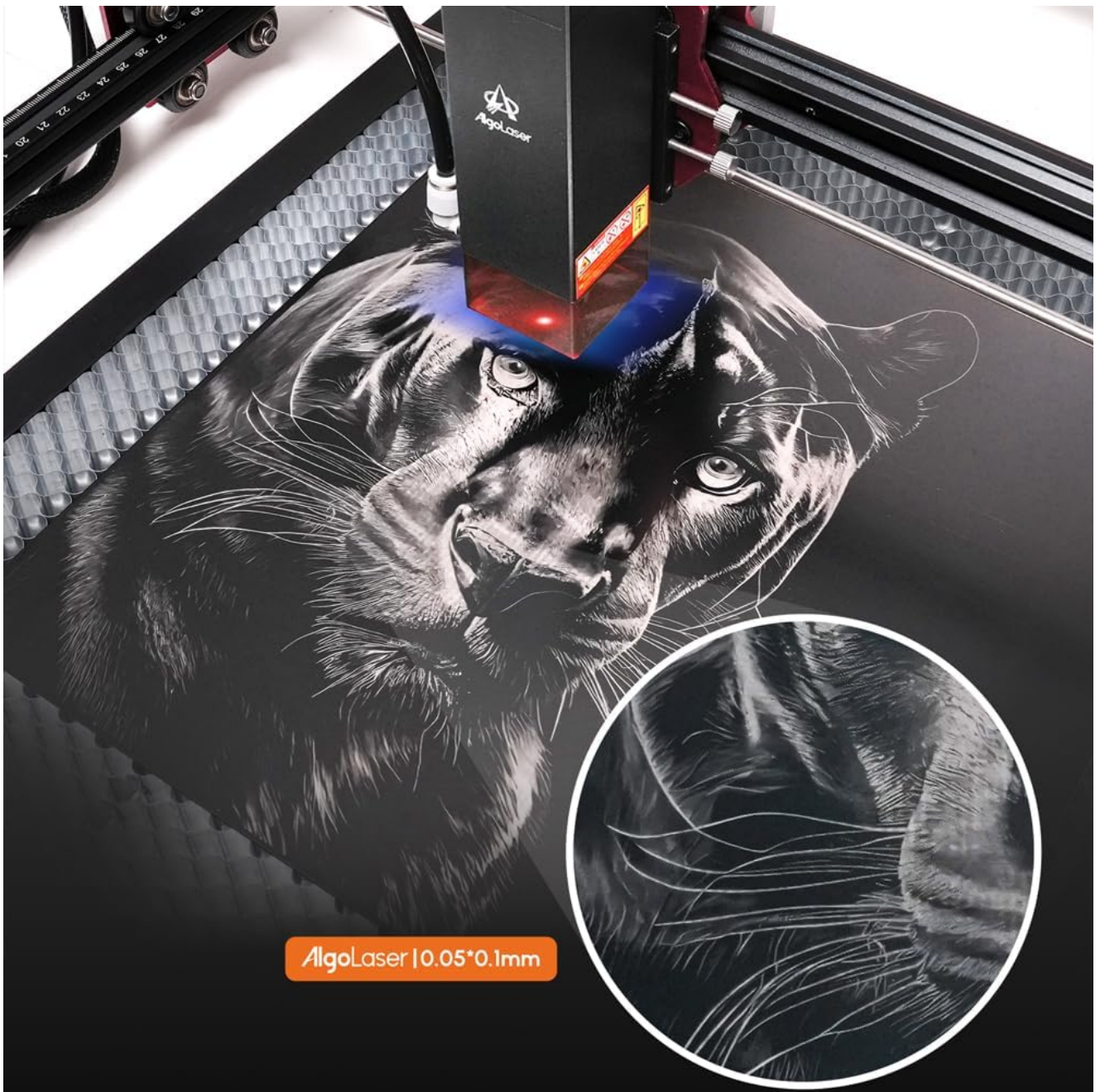


Image: A detailed view of the AlgoLaser machine in action, demonstrating its high precision by engraving a complex panther design.

Various Materials, Amazing Effects



Image: A collage showcasing diverse items engraved and cut by the AlgoLaser, demonstrating its versatility across different materials and applications.

6. MAINTENANCE

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

- **Cleaning the Laser Lens:** Periodically clean the laser lens with a soft, lint-free cloth and lens cleaning solution to maintain engraving quality.
- **Cleaning the Machine:** Wipe down the machine frame and rails to remove dust and debris. Keep the working area clean.
- **Checking Belts and Rails:** Inspect the belts for tension and wear. Ensure the linear rails are clean and move smoothly. Lubricate if necessary according to the detailed manual.
- **Firmware Updates:** Check for and install any available firmware updates for the machine to ensure compatibility and improved features.

7. TROUBLESHOOTING

This section addresses common issues you might encounter and provides solutions.

Problem	Possible Cause	Solution
Machine not powering on.	Loose power connection, faulty adapter, power switch off.	Check all power connections. Ensure the power switch is in the ON position. Test the power outlet.
Software cannot connect to the machine.	Incorrect USB port, WiFi issue, driver not installed, software settings.	Verify USB cable connection. Ensure WiFi is enabled and connected. Reinstall drivers. Check software communication settings (COM port, baud rate). Restart both machine and computer.
Poor engraving quality (faint, blurry, inconsistent).	Incorrect focus, wrong power/speed settings, dirty lens, material issues.	Re-focus the laser. Adjust power and speed settings for the specific material. Clean the laser lens. Ensure material is flat and suitable.
Machine stops mid-job.	Power interruption, loose cable, software error, overheating.	Check power supply. Secure all cables. Restart software and machine. Allow machine to cool if it feels hot.

8. SPECIFICATIONS

Feature	Detail
Product Dimensions	21.3 x 19.7 x 7 inches
Item Model Number	DIY KIT 5W
ASIN	B0D1G625TL
Item Weight	8.93 pounds
Manufacturer	Shenzhen aofeinuo Technology Co., LTD
Date First Available	April 13, 2024
Laser Power	5W
Engraving Speed	Up to 12000mm/min
Engraving Precision	0.04×0.09mm
Working Area	310mm×300mm
Laser Wavelength	455±5nm

9. WARRANTY AND SUPPORT

AlgoLaser is committed to providing excellent customer service and support for your product.

- **Warranty:** The AlgoLaser 5W Laser Engraving Machine comes with a 1-year warranty from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use.
- **Technical Support:** A dedicated engineering team is available 24/7 to assist with any questions or concerns you may have regarding setup, operation, or troubleshooting.
- **Contact:** For support, please reach out via Amazon email for prompt assistance and resolution.

