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› [AlgoLaser 10W Laser Engraver Machine – Class 1 Safe for Home DIY | 12000mm/min Speed, 0.05×0.1mm Precision | Beginner-Friendly Metal/Acrylic/Wood Crafts | Ideal for Gift Customization & Small Business](#)

### AlgoLaser DIY KIT-001

# AlgoLaser 10W Laser Engraver Machine User Manual

MODEL: DIY KIT-001

## 1. Introduction

Welcome to the AlgoLaser 10W Laser Engraver Machine user manual. This guide provides essential information for the safe and effective operation, setup, and maintenance of your new laser engraver. Designed for home DIY enthusiasts, small businesses, and professional crafters, this machine offers high precision and speed for a wide range of engraving and cutting tasks.

## 2. Safety Information

Your safety is paramount when operating the AlgoLaser 10W Laser Engraver. Please read and understand all safety precautions before use.

- Always wear the provided safety goggles to protect your eyes from laser exposure.
- The machine is equipped with an emergency stop button for immediate shutdown in case of an unexpected event.
- A key switch is included to prevent unauthorized use, enhancing safety, especially in environments with children.
- Features like over-voltage protection, active light emission detection, beam detection, USB connection protection, voltage detection, and machine tilt detection are integrated for secure operation.
- Ensure adequate ventilation in your workspace to dissipate fumes produced during engraving.
- Never leave the machine unattended during operation.

# Safe and Easy to use

Gyroscope

Flame Detection

Limit Switches

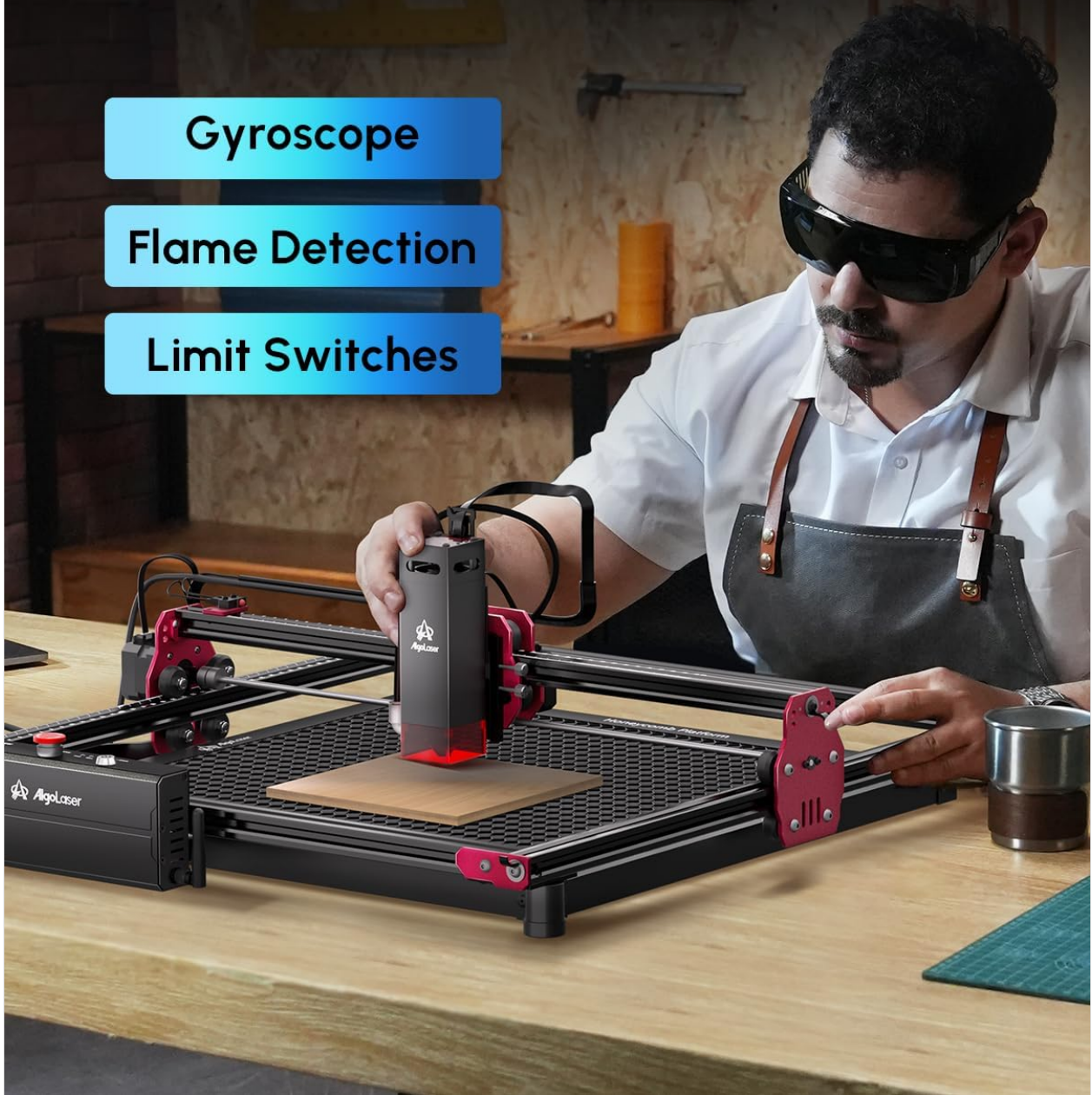


Image: User operating the AlgoLaser 10W Laser Engraver with safety goggles, highlighting its safe and easy-to-use design.

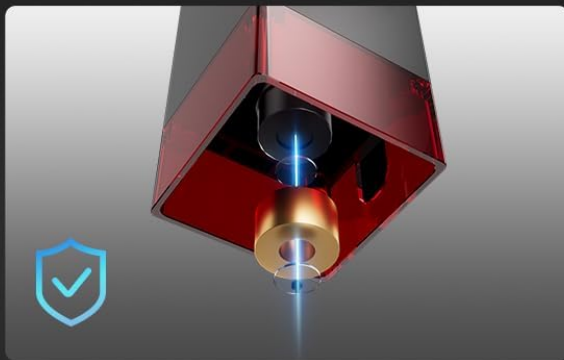
# Details Matter



Emergency Stop Switch



Key Lock



Beam detection and protection



USB Connection  
Detection and Protection



Voltage  
Detection and Protection.



Machine Tilt  
Detection and Protection

Image: Detailed view of the AlgoLaser 10W Laser Engraver's safety mechanisms, including the emergency stop switch, key lock, beam detection, USB connection protection, voltage detection, and machine tilt detection.

## 3. Product Overview

The AlgoLaser 10W Laser Engraver is a robust and precise machine built with durable materials to ensure a long lifespan and consistent performance. It features a 10W laser module capable of fine detail and efficient operation.



Image: The AlgoLaser 10W Laser Engraver Machine, showcasing its design and examples of engraved items such as wood art, cutting boards, and metal tumblers.

### Key Components:

- **Laser Module:** The core engraving component, delivering 10W of power.
- **Frame:** Sturdy metal construction for stability and precision.
- **Control Box:** Houses the electronics and safety features.
- **Work Area:** 400mm × 400mm engraving area.
- **Emergency Stop Button:** For immediate power cut-off.
- **Key Switch:** For security and preventing accidental operation.

## 4. Setup

The AlgoLaser 10W Laser Engraver is designed for straightforward assembly. Follow the included detailed instructions for proper setup.

### Assembly Steps:

1. Unpack all components and verify against the packing list.
2. Assemble the frame according to the visual guide in the separate assembly manual.
3. Mount the laser module and connect all necessary cables.
4. Ensure all connections are secure before powering on the device.
5. Place the machine on a stable, level surface in a well-ventilated area.

## 5. Operating Instructions

The AlgoLaser 10W Laser Engraver offers high performance and versatility for various projects.

### Performance Capabilities:

- **Engraving Speed:** Achieve speeds up to 12000mm/min for efficient project completion.
- **Precision:** Experience fine details with a precision of 0.05×0.1mm.

# 12000mm/min Speed

# 12000



vs



Image: Visual representation of the AlgoLaser's 12000mm/min engraving speed capability.

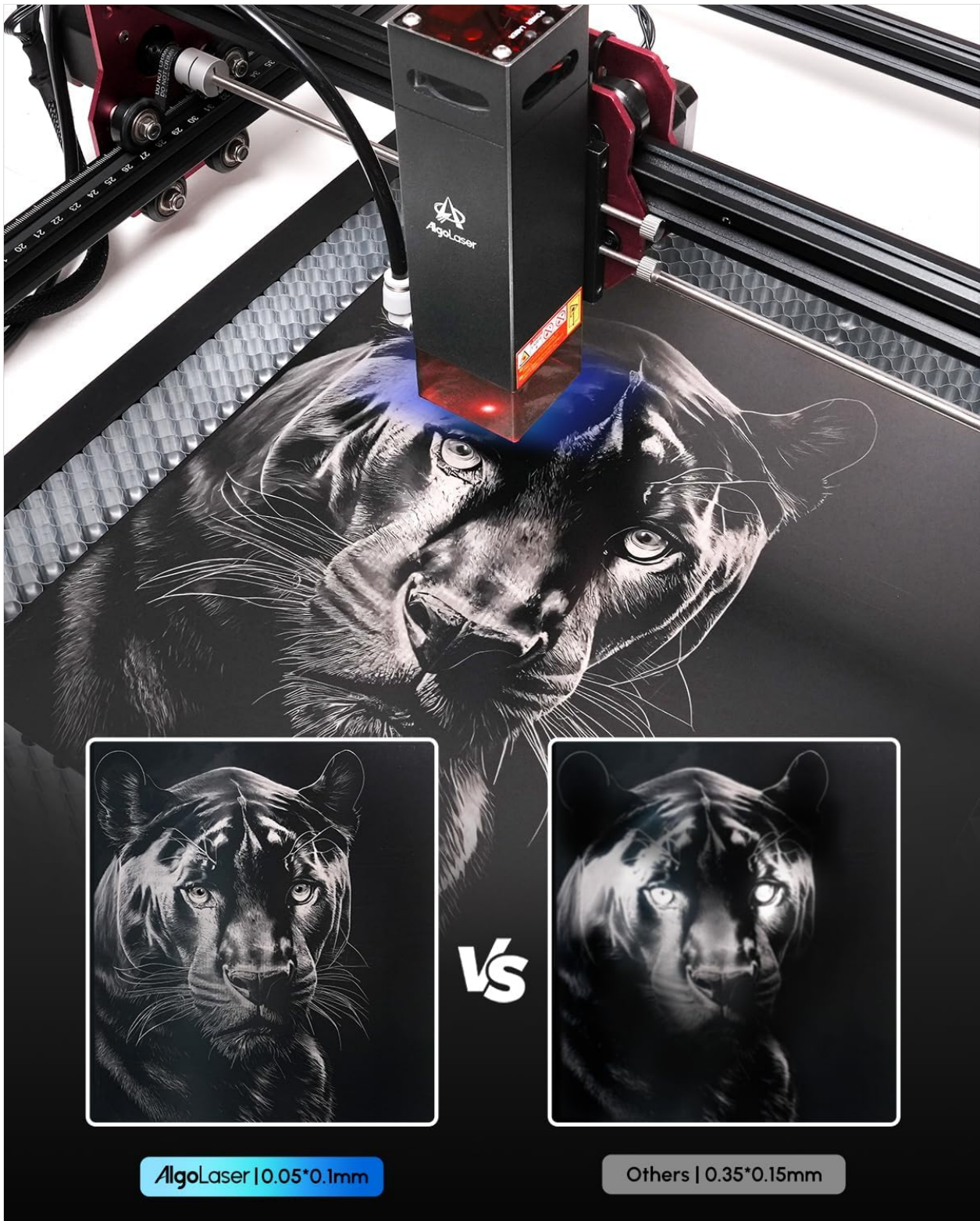


Image: A comparison illustrating the superior 0.05x0.1mm precision of the AlgoLaser engraver for detailed results.

### Material Compatibility:

This laser engraver is capable of working with a wide array of materials, including but not limited to:

- Wood
- Acrylic
- Leather
- Metal (engraving only)
- Stone
- Glass

- Paper
- Rubber
- Ceramic Tile
- Food



Image: A visual guide showcasing the diverse range of materials compatible with the AlgoLaser engraver, such as wood, acrylic, leather, metal, and glass.

### Software and Connectivity:

The AlgoLaser 10W Laser Engraver offers flexible control options:

- **AlgoLaser APP:** Utilize the self-developed mobile application for smooth operation and customizable settings.
- **Third-Party Software:** Compatible with mainstream engraving software such as LightBurn and LaserGRBL.
- **Connectivity:** Supports USB Type-C and WiFi connections for seamless integration and cross-platform operation.
- **Offline Control:** The machine supports offline engraving via the AlgoLaser APP, LightBurn, and LaserGRBL, and includes a 32GB TF card for file storage.



Image: The AlgoLaser engraver demonstrating its real offline control capabilities, including connectivity via the AlgoLaser APP and WiFi.

## 6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your AlgoLaser 10W Laser Engraver.

- Keep the laser lens clean using a soft, lint-free cloth and appropriate cleaning solution.
- Periodically inspect and clean the rails and wheels to ensure smooth movement of the laser head.
- The laser head is designed for durability, with a lifespan exceeding 10,000 hours under normal operating conditions.
- Ensure all electrical connections are secure and free from damage.

**With Top-tier Materials**

You can expect a lifespan of up to

**12000** hours

POM engineering plastic wheels.

Durable Engraving Module

Image: The AlgoLaser 10W Laser Engraver, emphasizing its construction with top-tier materials and a laser module lifespan of over 12,000 hours.

## 7. Troubleshooting

This section addresses common issues you might encounter. For more complex problems, please refer to the support section.

- **No Power:** Ensure the power cable is securely connected to both the machine and a working power outlet. Check the key switch is in the 'on' position and the emergency stop button is disengaged.
- **Laser Not Firing/Weak Output:** Verify the laser module is properly seated and connected. Check software settings for laser power and speed. Ensure the material is within the correct focal distance.
- **Engraving Inaccurate/Skipping:** Inspect the belts for proper tension and ensure the gantry moves freely without obstruction. Clean the rails and wheels.
- **Connectivity Issues:** For WiFi, ensure the machine is within range of your router. For USB, try a different cable or port. Restart both the machine and your controlling device.

## 8. Specifications

Feature	Specification
Product Dimensions	25.2 x 9 x 5.08 inches
Item Model Number	DIY KIT-001
Item Weight	11.58 pounds
Manufacturer	Shenzhen aofeinuo Technology Co., LTD
Date First Available	January 11, 2024
Laser Wavelength	455±5nm
Work Area	400mm x 400mm

## 9. Warranty and Support

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

- **Warranty:** The AlgoLaser 10W Laser Engraver comes with a 1-year warranty from the date of purchase.
- **After-Sales Support:** Professional after-sales service is available with a dedicated engineering team ready to assist 24/7.
- **Contact:** For any questions or concerns, please reach out via Amazon email for prompt resolutions and assistance.

