LaserPecker

LaserPecker Safety Enclosure

User Manual | Benutzerhandbuch
Manual de Usuario | Manuel d'utilisation

v1.0

LaserPecker

Contents

Safety Information

1 General Safety

- The use of this device, its specific purposes, and the emissions produced by engraved objects should comply with the laws and regulations of the user's location.
- Read and get familiar with all safety precautions and procedures before using the machine. Strictly follow all safety precautions. Ensure that the machine is properly assembled and is working properly.
- DO NOT allow use by minors, by untrained personnel, or by any personnel suffering from any physical or mental limitation that might affect their ability to use the machine safely and properly.
- Ensure that the workspace is clean and flat.
- Keep the area around the machine dry, well ventilated, and enviromentally controlled to 50-95°F (10-35°C) and 10-95% humidity.
- DO NOT leave the machine unattended during operation.

In the event of the following situations, please stop using the machine and cut off the power immediately:

- A burning smell is detected coming from the machine.
- Open flames or sparks are observed being generated from the engraving material.
- Any components of the machine appear to be damaged or malfunctioning.
- Unexpected cessation of machine operation for no clear reason.
- Abnormal sounds, smoke, or unusual lighting are emitted from the machine.

Safety Information

2 Laser Safety

- The LP5 laser engraving machine is initially classified as a Class4 laser device. When properly equipped with the necessary protective and locking devices, and operated strictly according to the operational guidelines, its laser safety level can be classified as Class1, ensuring safer operation.
- The active laser and its reflections can rapidly cause fires, burns, and permanent vision damage. Under normal circumstances, the laser is blocked by the protective cover or safety enclosure during operation. Before using the machine, ensure that the protective cover or safety enclosure is installed properly. If it cannot fully cover the object, you need to wear safety goggles that can shield your eyes from the laser beams.
- Before operating the device, users should fully understand the physical characteristics of laser radiation, its hazard classifications, related health effects, and the necessary safety precautions.
- When operating the device, avoid direct skin contact with the laser to prevent potential burns or other injuries.
- Ensure the protective cover or safety shield is correctly installed and closed. When the protective cover or safety shield is opened, the device should automatically stop laser operations to prevent laser exposure, thereby protecting the operator's safety.
- During operation, the materials being engraved or cut may release toxic and harmful gases or fumes. Depending on the type and composition of the engraving/cutting materials, these emissions can pose health and environmental risks. To ensure safe use, it is recommended to use this machine with an air purifier to effectively absorb and filter any toxic or harmful gases and fumes generated.
- DO NOT use this laser in dewy, dusty, or high-EMI conditions where the active laser might easily be deflected or reflected.
- Only use the machine with stable and compatible power sources. This machine requires a 24V/7.5A power adapter. Failure to use the compatible power adapter can result in machine malfunction.
- Before starting the device for engraving, ensure that all safety precautions are in place. Wear protective goggles to prevent accidental laser injury to the eyes or skin. Remove unrelated items to avoid unnecessary damage from laser exposure. In particular, remove any flammable or explosive materials to prevent the risk of fire.

3 Electrical Safety

When the device cuts or engraves materials, it uses a high-density laser beam to irradiate the material, causing its surface to reach high temperatures with the aim of vaporizing the material without combustion. However, most materials are inherently flammable and may ignite, leading to open flames. Such flames could potentially damage the device (even if it is made of flame-retardant materials) and its surrounding environment. Experience shows that vector cutting with lasers is the most likely to produce open flames.

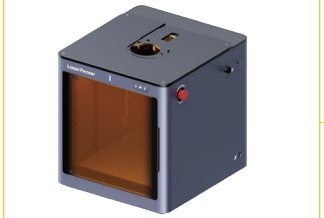
- Ensure the workspace is well-ventilated when operating the device to allow for the timely evacuation of any generated smoke.
- Do not stack materials around the device that could lead to the spread of flames or increase the risk of ignition (especially organic materials like paper).
- Do not operate the device unattended. If the device is improperly set up to run for a prolonged period without supervision, or if a mechanical or electrical malfunction occurs during operation, it could lead to a fire.
- Regularly clean the device. An accumulation of residues and debris from excessive cutting and engraving increases the risk of fire. Ensure that the working area of the device is regularly cleaned and free of any residues and debris.
- Keep the area around the device clean and free of flammable materials, explosives, or volatile solvents such as acetone, alcohol, or gasoline.
- Have a fire extinguisher ready for use and ensure it is regularly maintained and inspected.
- The LaserPecker laser protective cover may easily produce flames when cutting/engraving flammable materials at low speeds with high power. If flames are detected, stop the operation immediately.

Safety Information

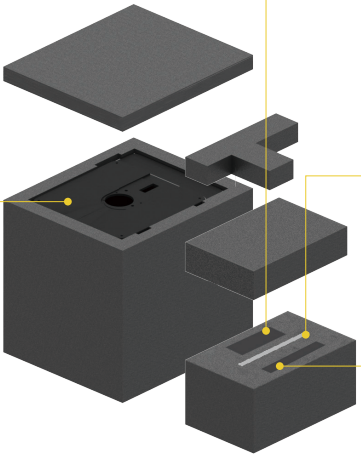
4 Warning Labels

The warning and instruction signs are labeled where physical injuries or damage to the machine may be caused before and/or during operation. If a sign is damaged or lost, replace it immediately. You can use the following template to print the sign you need.

Package List



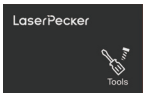
Safety Enclosure x 1



USB-A Adapter Cable x 2

DC Power Adapter Cable x 1

User Manual x 1



Tool Box x 1

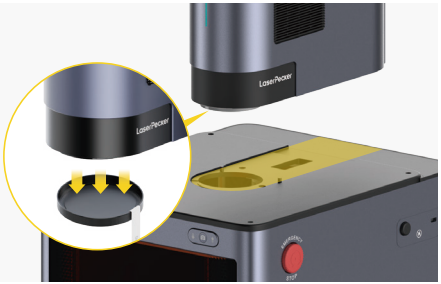
Hex Key H1.5 x 1 H2 x 1 H2.5 x 1

Hand Screw x 2

Screwdriver x 1

Quick Assembly (With LP5 Laser Unit)

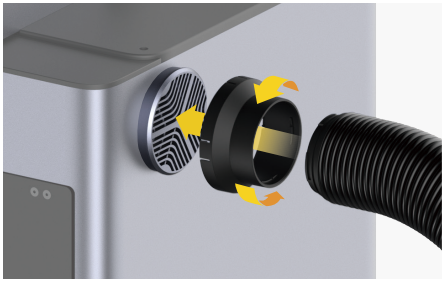
1 Remove the lens cover and place the laser unit into the slot in the correct direction.



2 Take out the two hand screws and tighten them clockwise, as illustrated in the image below.

3 Connect the two USB-A Adapter Cables and the DC power Adapter Cable as shown in the image below. If your machine has a security key, make sure to insert it.

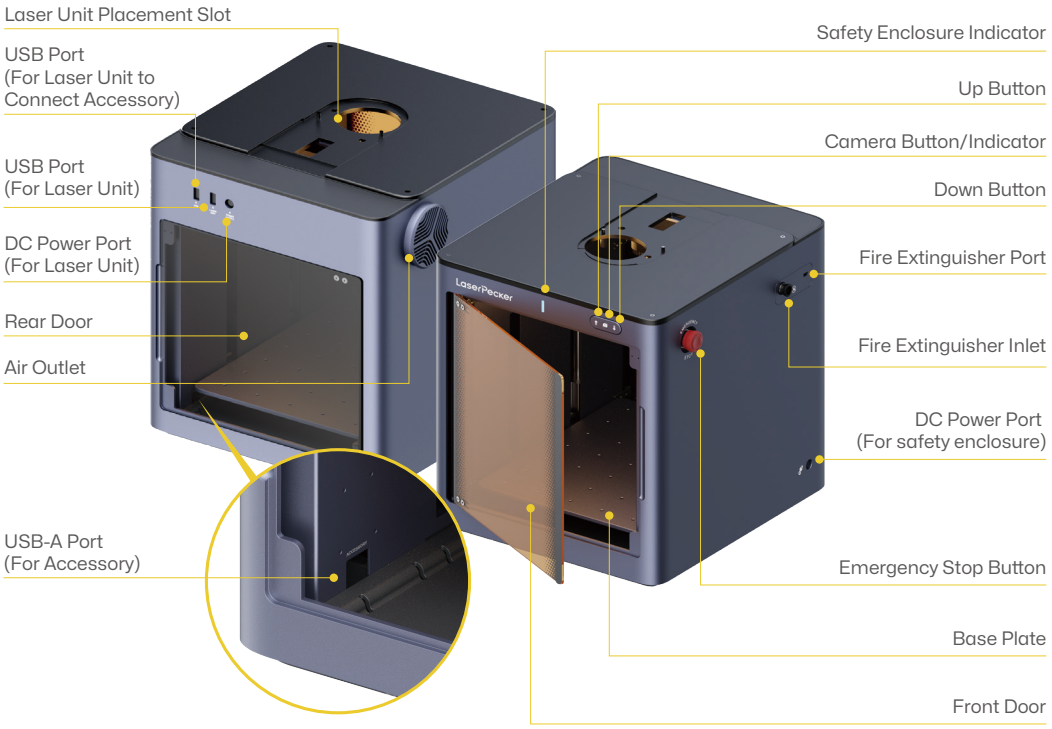
4 The Safety Enclosure has a built-in exhaust fan that can be connected to an external exhaust duct or used with an air purifier.



5 Combine the power adapter and power cable, connect them to the Safety Enclosure, and then connect to the power supply.

6 Before use, please release the emergency stop button by turning it clockwise.

Component Introduction



Safety Enclosure Indicator

- Blinking Blue: Successfully Powering on
- Solid Blue: Connected to laser unit
- Blinking red, blue: Firmware updating

Camera Indicator

- Slow blinking white:
  Camera not connected to the network
- Solid White:
  Camera is connected to the network
- Fast blinking white:
  Camera malfunction

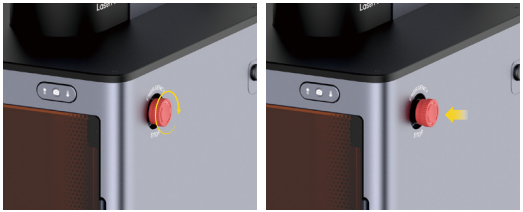
Using The Product

Safety Enclosure Button Functions

Up Button ⇧: Single press raises the base plate by 0.5 mm; long press 2 secs for continuous raising. **Down Button** ⇩: Single press lowers the base plate by 0.5 mm; long press 2 secs for continuous lowering. **Camera Button** 📷: Long press for 3 secs to reconfigure the network; double press to restart the camera.

Emergency Stop

If errors or machine faults occur during material processing, press the emergency stop button to disconnect and stop the processing. Turn the scram button to reset.

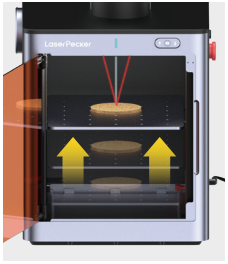


Manual Focusing

Use the up and down buttons to move the base plate vertically. Focus is successful when the red dots coincide.

Automatic Focusing

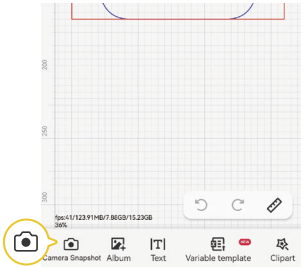
Measure the material thickness and enter it into the software to complete the auto-focus process.



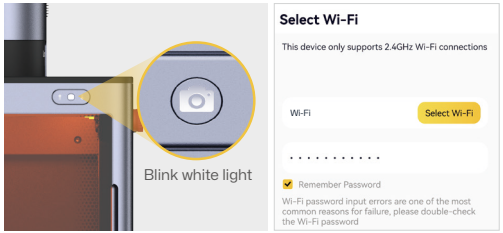
Camera Network Configuration (Using LDS App)

Note: Please ensure your LDS App and LP5 firmware are both updated to the latest version.

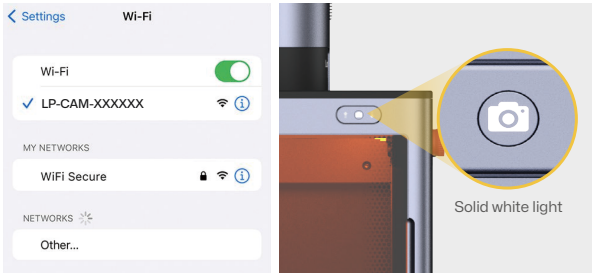
1 Please ensure that the LP5 is connected to the LDS. Click "Create" on the main page, then click "Camera Snapshot" in the selection bar below to add a camera.



2 Press and hold the camera button on the Safety Enclosure for 3 seconds until the indicator light blinks slowly to enter network configuration mode. Click "Next" and connect to the Wi-Fi network used by the LP5.

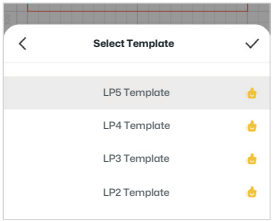


3 Click "Open Wi-Fi Settings" and connect to the LP-CAM-**** hotspot. Wait until the camera indicator light turns solid white to complete the configuration. Then return to the LDS app.



4 Reconnect the laser unit and click "Camera Snapshot" to select the appropriate template. It is recommended to calibrate the camera before first use to ensure accuracy.

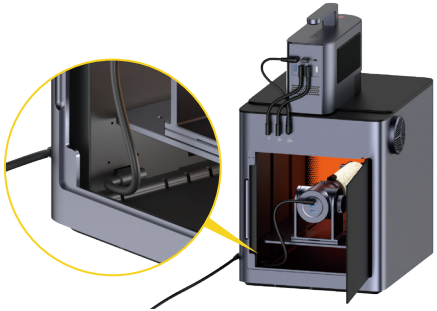
Scan the QR code below to learn how to calibrate and use the camera.



Using Accessories

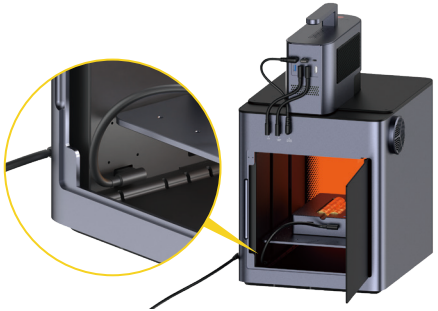
Rotary Extension

Using the LP5 model as an example, please open the rear door to connect and place the rotary extension as shown in the image.



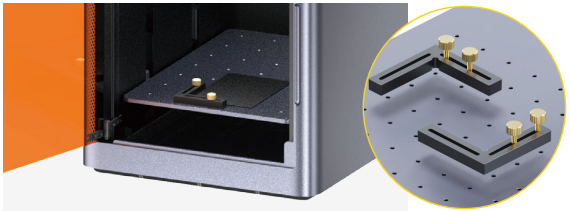
Versatile Electric Roller

Using the LP5 model as an example, please open the rear door to connect and place the versatile electric roller as shown in the image.



L-shaped Positioner

Secure the positioner according to the size of the object for repeated batch engraving.



More Information

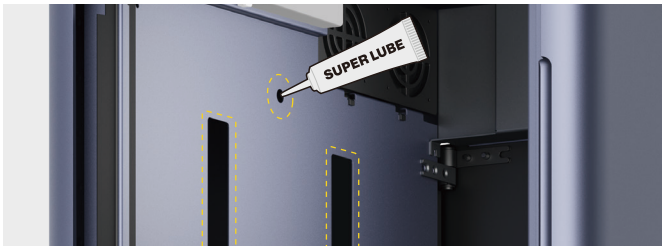
For more information on cable connection between different machine models and the accessory, please visit support.laserpecker.net

Maintenance

Note: Please perform maintenance and care while the device is powered off.

Safety Enclosure Cleaning & Lubrication

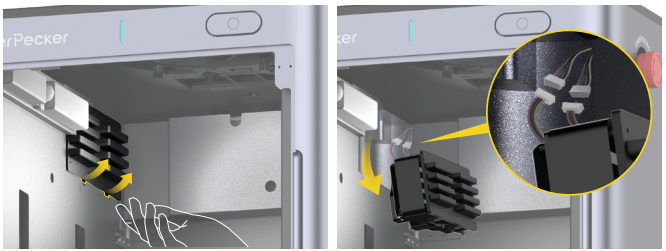
When the movement of the base plate up and down is obstructed or not smooth, apply lube oil to the lead screws and guide rails on both sides of the safety enclosure.



Exhaust Fan Cleaning

When smoke is detected leaking from the safety enclosure. Please remove the fan for cleaning to ensure proper smoke exhaust.

*If necessary, disconnect the wiring and take out the fan for cleaning.



Technical Specifications

Size	310 x 350 x 345 mm	**Harmful light filtration efficiency**	450nm 99.99% 1064nm 99.99%
Net weight	8.9 kg	**Exterior material**	Aluminum alloy, ABS, PC
Load capacity	5 kg	**Maximum engraving diameter for the rotary extension**	118 mm
Compatibility	Compatible with LP5 and LP4 (different top covers are required for compatibility)	**Maximum engraving height for the versatile electric roller**	90 mm

Getting Help

Technical Support

If you encounter any issues, please do not hesitate to reach out to our customer support team at support@laserpecker.com

YouTube: @LaserPecker

Facebook Group: LP5 Official Group

Video Tutorials

Scan the QR code below to learn how to use the machine.

Statements

Disclaimer

Thank you for choosing LaserPecker! This manual relates to your safety, legal responsibilities and rights. Please read and get familiar with all safety precautions and procedures before using the product. If you do not use the product according to the instructions and requirements of the manual, or mis-operate the product due to misunderstanding, etc., LaserPecker (Hingin Technology Co., Ltd.) shall bear no responsibility for any loss resulting therefrom.

Given the conditions and methods of use of this product are beyond the control of LaserPecker, LaserPecker shall not be liable for any of the following consequences, which shall be borne by the user:

- Personal injury, property loss, and product damage caused by improper operation, failure to follow the manual or other uncertainties.
- The work that user created using the LaserPecker product infringes intellectual property rights of the third party or violates relevant laws and regulations.
- Personal injury, property loss, and product damage that may arise during the installation, transportation, storage, use, maintenance, and disposal of this product.
- All official LaserPecker materials have undergone safety testing and are compatible with this product. LaserPecker shall not be liable for material safety or engraving quality if the user uses non-LaserPecker official materials.

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