



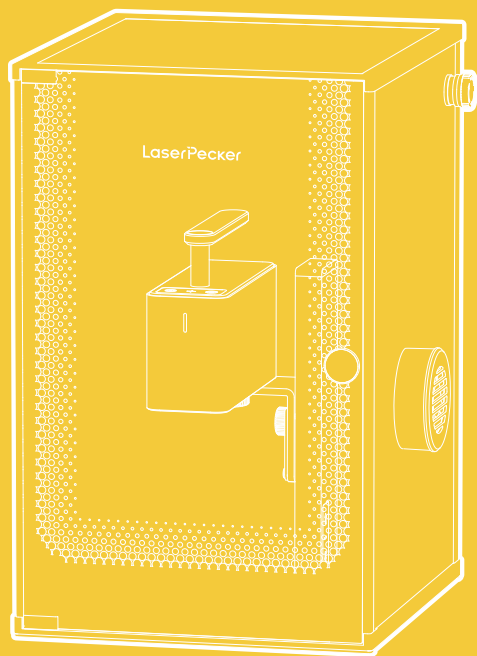
# LP2

## Safeguard

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

v1.0





**EN** ..... 01

**DE** ..... 17

**ES** ..... 33

**FR** ..... 49

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# Safety Information

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- 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 32-149°F (0-65°C) and 5-80% 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

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## 2 Laser Safety

- The LP2 laser engraving machine is initially classified as a Class 4 laser device. When properly equipped with the Standard Enclosure, 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 Standard Enclosure during operation. Before using the machine, ensure that the protective cover or Standard Enclosure is installed properly.
- 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 Standard Enclosure is correctly installed and closed. When the protective cover or Standard Enclosure 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 12V/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 Fire Safety

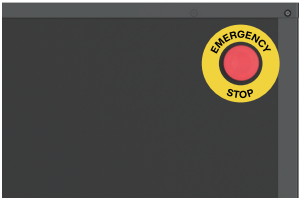
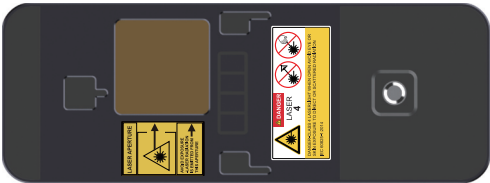
When the device cuts or engraves materials, it uses a high-density laser beam to irradiate the material, causing its surface to reach high temperatures with the aim of vaporizing the material without combustion. However, most materials are inherently flammable and may ignite, leading to open flames. 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.
- When cutting or engraving flammable materials at low speeds with high power in the LaserPecker Standard Enclosure, fire may occur. If you notice any flames, immediately stop the operation.

# 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.



## Software Download

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### Download App

Scan the QR code below to download and install the **LaserPecker Design Space App**.

Please follow the operation guide and read the warnings and precautions in the App carefully.



LaserPecker Design Space

### Download PC Software

Please visit <https://www.laserpecker.net/pages/software> to download the PC software.



## Getting Help

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### Technical Support

If you encounter any issues, please do not hesitate to reach out to our customer support team at [support@laserpecker.com](mailto:support@laserpecker.com)



YouTube: @LaserPecker



Facebook Group: LaserPecker LP2 Official Group

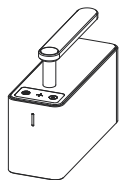
### Video Tutorials

Scan the QR code below to learn how to use the LP2 Laser Unit & Standard Enclosure.

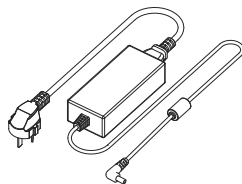


## Package List

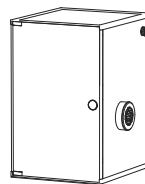
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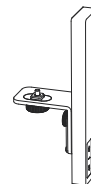
LP2 Laser Unit x 1



AC Power Adapter & Power Cable x 1



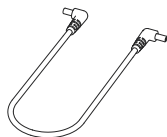
Standard Enclosure x 1



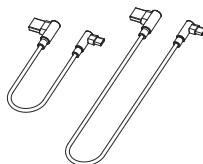
Electric Stand x 1



USB-C to USB-C Cable (0.35 m) x 1



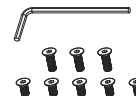
DC Power Cable (0.4 m) x 1



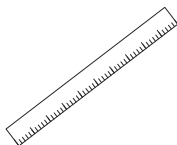
USB-A to USB-C Cable (0.4 m) x 1  
USB-A to USB-C Cable (1.5 m) x 1



Mounting Bracket x 1



Hex Key H2.5 x 1  
M4\*8 Screws x 3  
M4\*5 Screws x 5



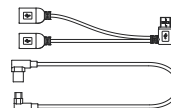
Ruler x 1



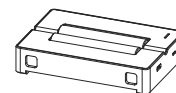
User Manual x 1



Material Pack x 1

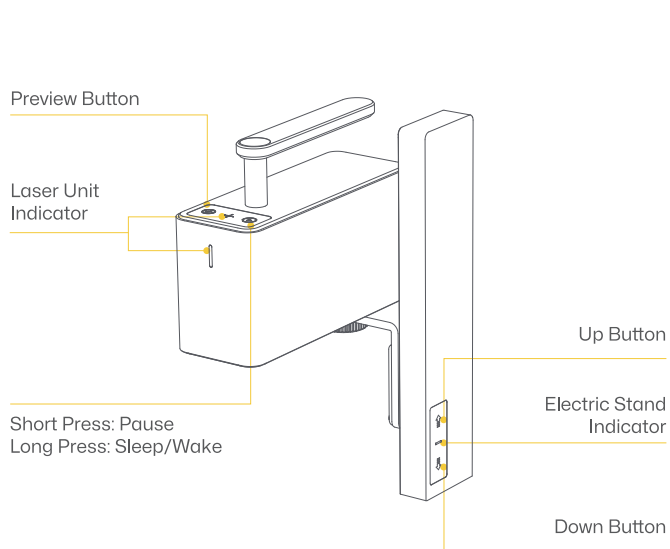


USB Splitter Cable x 1  
USB-A to USB-C Cable (0.4 m) x 1  
(Optional)

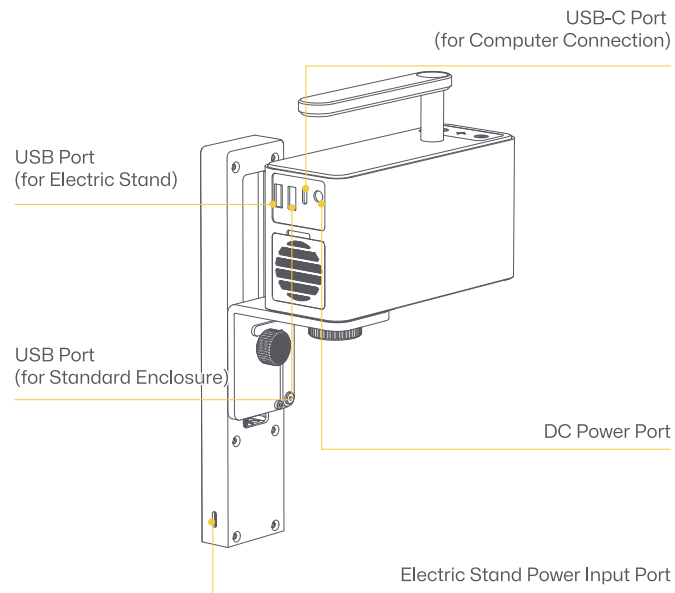


Versatile Electric Roller  
(Optional)

## Meet the LP2 Laser Unit



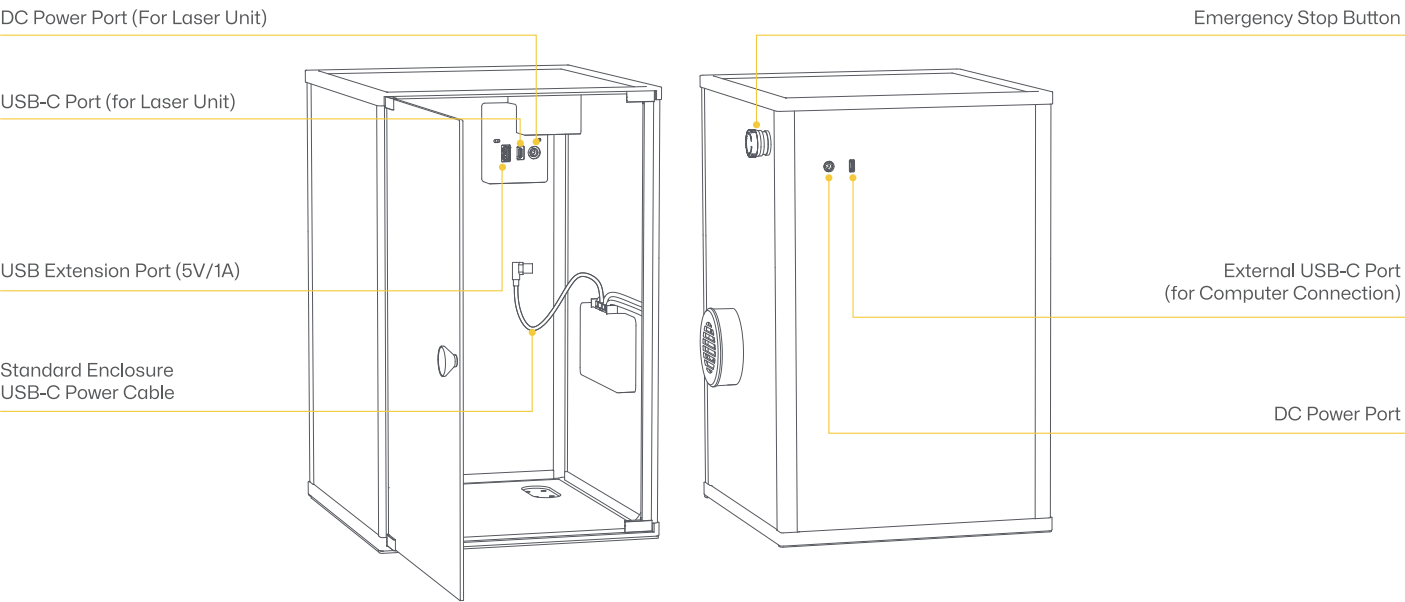
-  Blinking Blue: Awaiting connection
-  Solid Blue: Connected to the App





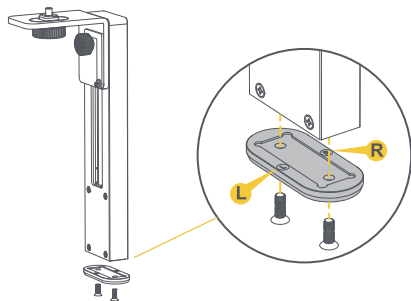
# Meet the Standard Enclosure

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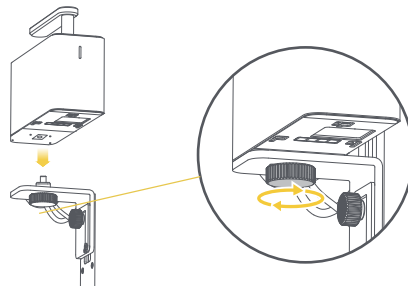


## Quick Assembly

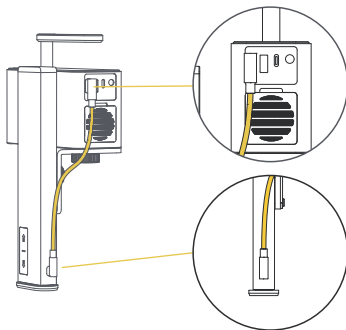
- 1 Place the Mounting Bracket with the grooves face up and align the L (left) and R (right) sides correctly, and secure it to the Electric Stand using an H2.5 hex key and two M4\*8 screws.



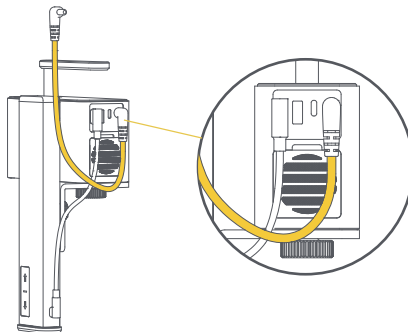
- 2 Place the Laser Unit onto the Electric Stand. Tighten the fixing knob clockwise until it's securely attached.



- 3 Use the 0.4m USB-A to USB-C cable to connect the Laser Unit and the Electric Stand.

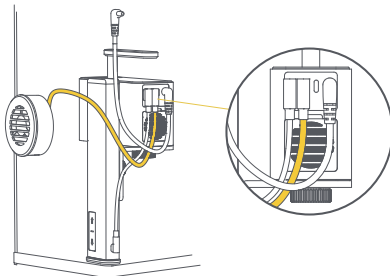


- 4 Plug one end of the 0.4m DC Power Cable into the DC Power Port on the Laser Unit.

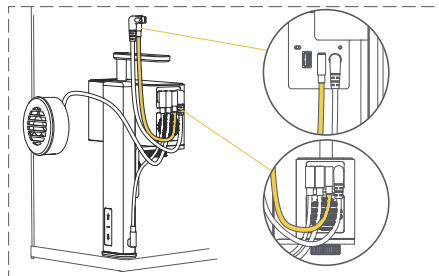


## Quick Assembly

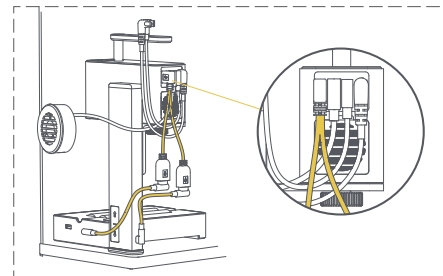
- 5 Connect the Standard Enclosure USB-C Power Cable (located on the inside of the enclosure) to the USB Port on the Laser Unit.



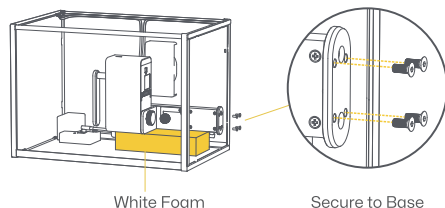
- 6 When using the PC LDS software, use the 0.35m USB-C to USB-C Cable to connect the Laser Unit and the USB-C Port inside the Standard Enclosure.



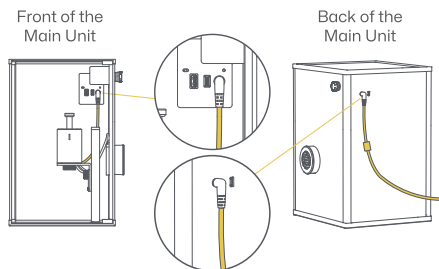
- 7 When using the Versatile Electric Roller, connect both the Electric Stand and the Versatile Electric Roller to the Laser Unit via the USB Splitter Cable.



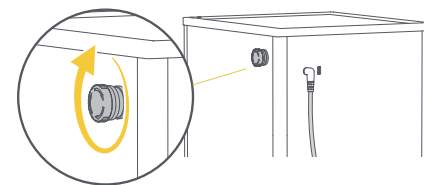
- 8 Rotate the Standard Enclosure 90° backward and lay it flat, then place the white foam padding underneath the Laser Unit for protection. Position the Electric Stand so its grooves line up with the base plate, and secure it with an H2.5 hex key and four M4\*5 screws.



- 9 Connect the other end of the DC Power Cable to the internal DC Power Port on the Standard Enclosure. Next, connect the AC power cable to the AC power adapter then connect to the DC Power Port located on the back of the enclosure.



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

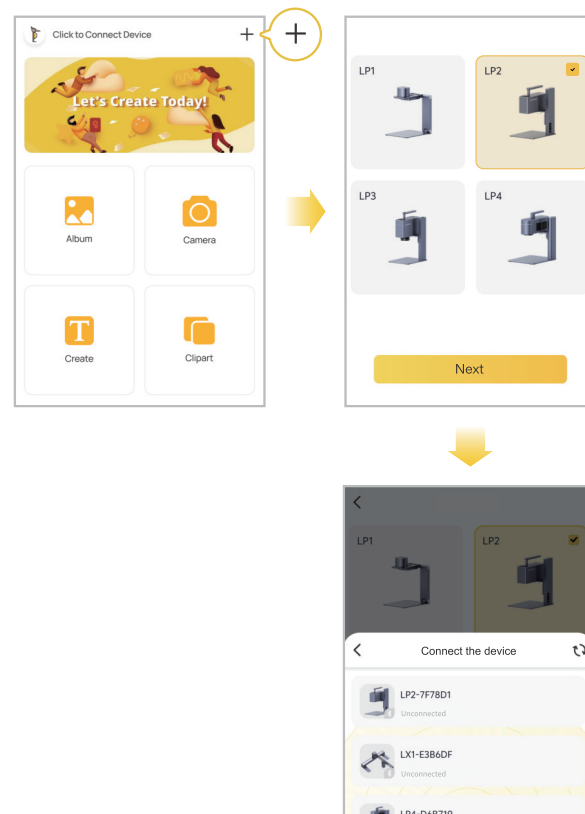
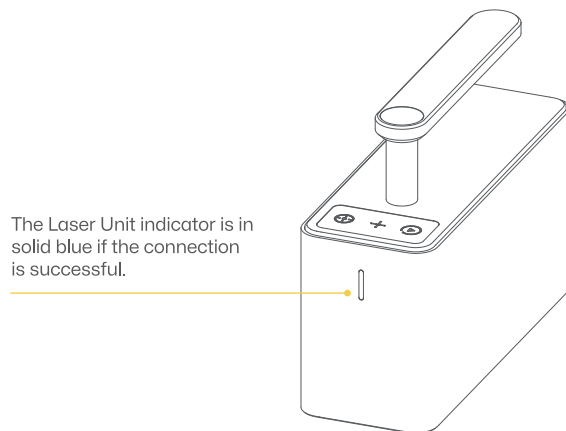


# Connecting Software

## LDS App

Power on the machine. Then open the LaserPecker Design Space (LDS) application. Click the "+" icon in the top-right corner and select "LP2" as your machine model. Search and connect to your LP2 via Bluetooth.

Note: For first-time use, please enable both local network and Bluetooth permissions.



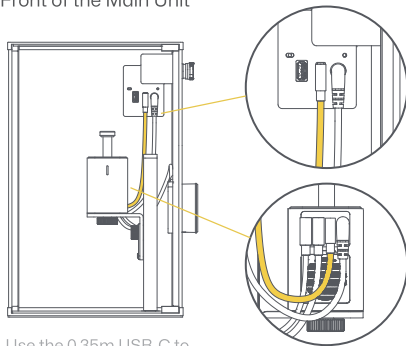
# Connecting Software

## LDS PC Software

Make sure the device is properly installed and powered on. Then open the LaserPecker Design Space application and connect the device to the PC using a USB cable or Bluetooth dongle.

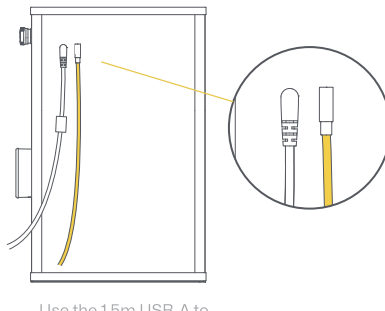
### Option 1 Connect directly via USB cable

Front of the Main Unit

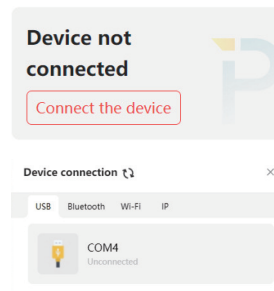


Use the 0.35m USB-C to USB-C Cable to connect the Laser Unit and the USB-C Port inside the Standard Enclosure.

Back of the Main Unit



Use the 1.5m USB-A to USB-C cable to connect the External USB-C Port (located on the back of the Standard Enclosure) to your computer.



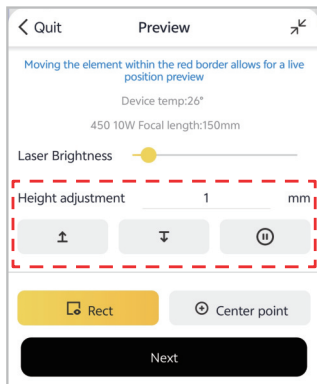
Open LDS PC software and navigate to the canvas. Click "Connect the Device" (top-right corner) and select "USB" as the connection method and proceed.

### Option 2 Connect to PC Software via Bluetooth Dongle (sold separately)

# Focusing Methods

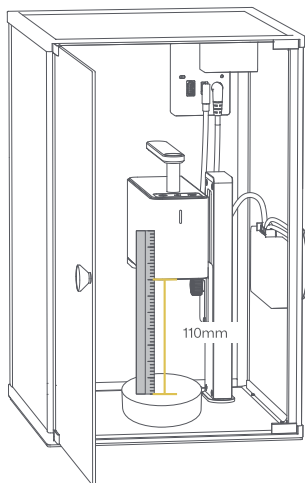
## Focal Adjustment

Use the up and down buttons on the side of the Electric Stand to adjust the height of the Laser Unit.  
(Recommended) Alternatively, you may adjust focal length through the LDS App or PC software during the preview stage.



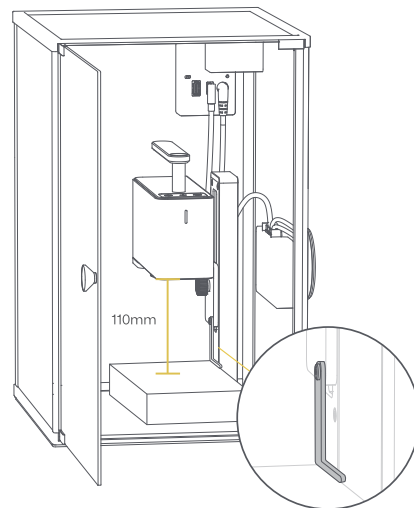
## Ruler Ranging

The LP2 has a fixed focal length of 110mm. After placing your material, adjust the Electric Stand's height and use a ruler to make sure there's exactly 110mm between the Laser Unit's base and your material's surface.



## L-shaped Ranging Rod Ranging

Place your engraving material on the base plate, then lower the L-shaped Ranging Rod. Adjust the Electric Stand's height until the rod's bottom edge lightly touches the material surface, this ensures the correct 110mm focal distance.

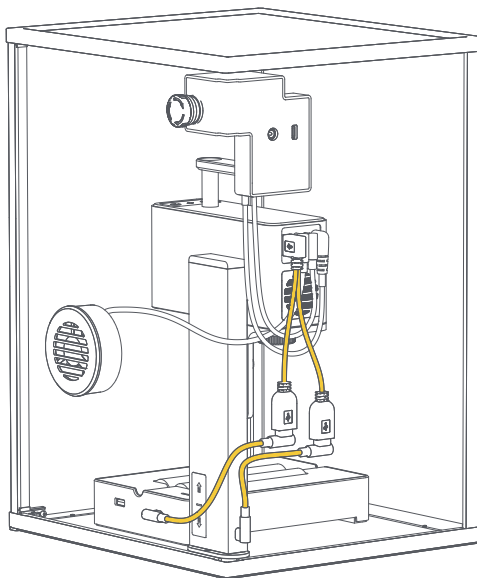


## Using Accessories

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### Versatile Electric Roller

When using the Versatile Electric Roller, connect both the Electric Stand and the Versatile Electric Roller to the Laser Unit via the USB Splitter Cable, as shown below.



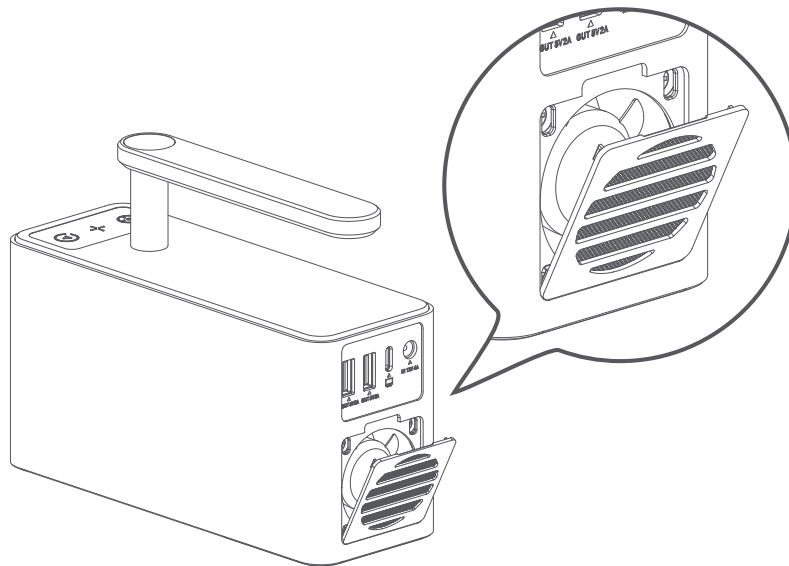
# Maintenance

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

## Dust Filter Cleaning

If you notice dust buildup, remove the cover from the back of the Laser Unit to clean the dust filter.





# Technical Specifications

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|                                                            |                                                                                                 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Size                                                       | 282 x 290 x 407 mm                                                                              |
| Net Weight                                                 | 6.55 kg                                                                                         |
| Laser Source & Power                                       | 5W 450nm Blue Diode Laser                                                                       |
| Working Area                                               | 100 x 100 mm                                                                                    |
| Exterior Material                                          | Aluminum Alloy + Plastic Composite                                                              |
| Preview Mode                                               | Rectangle Preview                                                                               |
| Supported File Formats                                     | PC Software: G-code / JPG / PNG / BMP / SVG / DXF etc.    Mobile App : G-code / JPG / PNG / SVG |
| Connectivity                                               | USB and Bluetooth 5.0                                                                           |
| Supported OS                                               | Support iOS 13.0+, Android 7.0+, macOS 10+, Windows 10+, Compatible with LightBurn              |
| Input Power                                                | DC (12V, 5A)   AC (100-240V, 50-60Hz)                                                           |
| Environmental Temperature                                  | Temperature Range: 0°C - 65°C    Humidity Range: 5% - 80%RH (Non-condensing)                    |
| Safety Certification                                       | CE / ROHS / FCC / FDA / NCC / KC / UKCA / TELEC / SRRC                                          |
| Maximum engraving height for the versatile electric roller | LP2: 80 mm                                                                                      |

# Statements

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## 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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- The information in this manual may be changed without notice; The information in this manual does not constitute a commitment of the Company. Please learn about the latest update from(<https://www.laserpecker.net>). The contents of this manual shall not be rewritten or forwarded in any form or for any purpose without the written permission of the Company.



**LaserPecker**