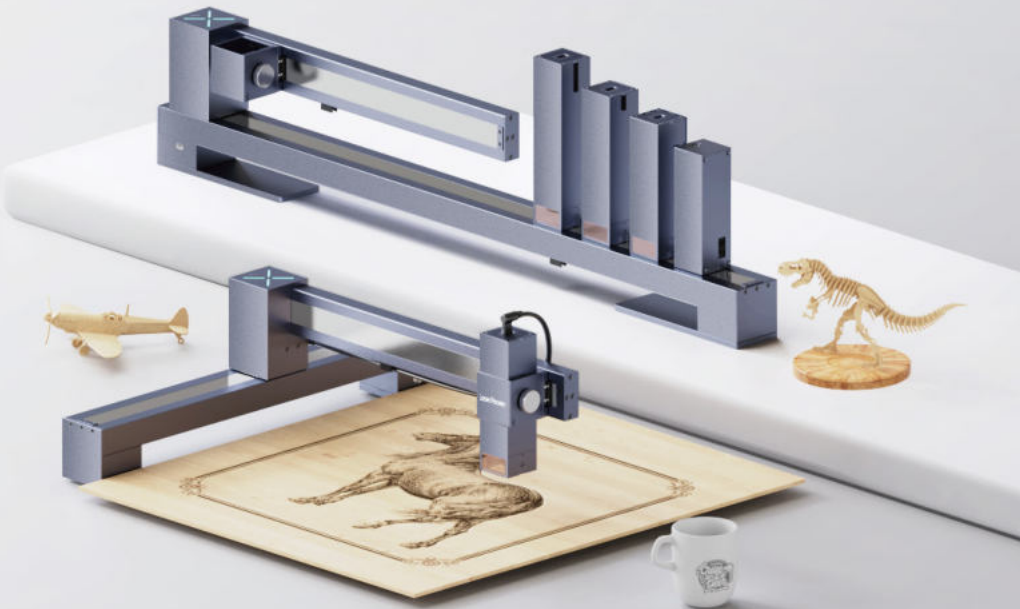


# LX1 Max



## USER MANUAL

Let Creativity Fly

# Let Creativity Fly

LaserPecker values self-expression and spreading love through creativity. We are dedicated to providing you with outstanding portable and versatile laser engravers and cutters to unleash your potential creativity and turn your vision into reality



# Unfold Your Creativity

The LX Series features a powerful laser cutting capability, as well as a generous maximum working area. The unique foldable frame design makes setup work, and storage eXtra fast and easy. With the LaserPecker LX1Max, it's now even easier for you to "Let Creativity FLY!"



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# 1.1 After-Sales Services

Technical support for this product is available globally. Please contact us if you encounter any problems with your LX1 Max and we will get back to you as soon as possible.

- Email: [support@laserpecker.com](mailto:support@laserpecker.com)
- Tel: +86 0755-28913864

# 1.2 APP Software Download

NOTE: After installing the APP, please read all warnings and instructions carefully to ensure safety and the correct operation of the product.

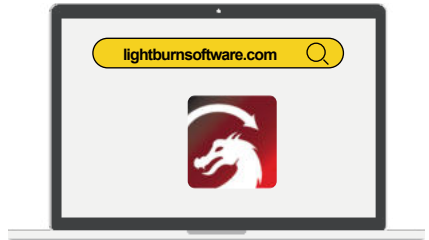


# 1.3 PC Software Download

Download the Windows/Mac software from the Official LaserPecker website.



Download the LightBurn software from the official website: [lightburnsoftware.com](http://lightburnsoftware.com)



## 2.1 Disclaimer

### Dear LaserPecker user:

Thank you for purchasing LaserPecker LX1. This manual relates to your safety, legal responsibilities and rights. Please read carefully and understand the manual before use. Failure to follow the instructions in the manual may result in personal injury, low quality of engraving, or damage to the device and surrounding objects. Please make sure the product operator understands and is familiar with the manual to maximize the value of the product. Using this product shall be deemed to have carefully read the full text of the product manual, and to understand, acknowledge and accept all the terms and conditions of Disclaimer. Personal injury, property or product damage caused by the user's improper operation or failure to operate according to the product instructions shall be borne by the user, and Shenzhen Hingin Technology Co., Ltd. shall not be held responsible.

### When using LaserPecker product, you should:

- Install, carry, store, operate, maintain and dispose of the product according to the manual and the provisions of relevant laws and regulations and safety standards.
- Ensure that the finished work do not breach the intellectual property rights of any third party or violate the provisions of relevant laws and regulations.

**Given the conditions and methods of use of this product are beyond LaserPecker's control, the consequences of any of the following circumstances shall be borne by the user and LaserPecker shall not be held responsible.**

- Personal injury, property or product damage caused by improper operation, failure to follow instruction manual or other uncertainties.
- The work user created by LaserPecker products infringes the intellectual property rights of the third party or violate the relevant laws and regulations.
- Personal injury, property or product damage arise during installation, carry, storage, usage, 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 use with non LaserPecker official materials..

## 2.2 Application

LX1 Max laser engraver and cutter offers superior 4-in-1 performance, allowing various creation by laser engraving, cutting and drawing.

## 2.3 Safety

### 2.3.1 General Safety Information

- The usage and specific application of this product, and emissions generated by engraving shall follow the laws and regulations of the user's location.
- Please use and maintain the product in accordance with the manual instructions to ensure safe operation.
- This product is for indoor use only. Do not place in a rainy or damp environment.
- Please prepare a stable and flat table or workbench for this product.
- Minors of any age should not operate the product without adult supervision and assistance.
- Please concentrate and pay close attention to operation process and changes in the surrounding environment during use.
- Do NOT operate the product when fatigued or under the influence of drugs, alcohol, or medication.
- When the product is in operation, please do NOT touch the moving part, otherwise it may spoil your material.

- Do NOT leave the machine unattended during operation.
- Please cut off the power supply before switching to laser module.

## **In case of the following situations, please stop using the product and cut off the power supply immediately.**

- The product has a smell of burning odor.
- Engraved material generates a large amount of fumes or open flames.
- The internal components of the product have been damaged.
- The product stops working accidentally.
- The product generates unprecedented abnormal noise or light.

## **2.32 Laser Engraving Safety**

- Installation specification: Before operating LX1, please secure the main unit based on the user manual. Please place the product on a stable and flat table or workbench. The vibration of the machine will affect the engraving quality.
- Due to the risks of laser, do NOT bring minors or people without self-protection awareness close to the device in operation.
- Before operating the laser module, you should have adequate knowledge of: physical properties of laser radiation, hazardous classification of laser and relevant health implications and safety measures.
- The laser module uses Class 4 lasers. The overall laser becomes Class 1 when paired with a laser protection cover as required and using the laser module correctly.
- When operating the laser module, do NOT look directly at or touch the laser outlet, or expose your body to the laser.
- It is recommended to correctly install and use the official LaserPecker laser protection cover, which can effectively filter the scattered laser light during laser engraving. After the laser protection cover is properly installed and powered on, its opening and closing states are linked to the laser emission, that is, the product will automatically stop laser engraving when the protection cover is opened to prevent laser leakage for your personal safety.
- When the laser module is in operation, the material being engraved or cut may release toxic and harmful gases or smoke. Please make a comprehensive judgment based on the type and composition of the material, and use the product with an air purifier or in a well-ventilated place.
- Reflective materials can cause laser reflection and injury. Please remove all reflective materials from the work area before use and during operation. It is recommended to blacken the area to be engraved of the reflective material by a whiteboard marker beforehand.
- Please power the device with the power and type (adapter with 24V $\overline{\text{---}}$ 5A) as indicated in the user manual. Mismatched power adapter will cause the malfunction.
- Before initiating the laser module, please make sure to take safety protection measures, such as wearing safety goggles to prevent eye or skin injury, removing irrelevant objects to prevent unnecessary damage caused by laser irradiation, and moving away flammable and explosive objects to avoid fire.
- After initiating the laser module, do NOT move the device, otherwise it may cease operation for self-protection, or even affect the final effect of the engraving work due to displacement.

## **2.3.3 Laser Protection Cover Safety**

- Please make sure to disconnect the connection cable of the protection cover and main unit, and separate the device from the outer cover before moving the protection cover or the device.
- Do NOT scratch, bend or break the acrylic plate and profiles, or open the cover reversely, as it will impair its protective performance and cause permanent damage to the cover as well as personal injury.
- The protection cover top is designed as a double-door structure. Please do NOT place heavy objects over 5kg on the top.
- Do not put any objects or body parts near or into the exhaust fan when in operation.
- All wires must be placed away from the exhaust fan blades to avoid damage to the exhaust fan and other parts when in operation.
- LP Air Purifier can be connected to the exhaust fan to purify and filter the air inside the protective cover for your health.

## 2.3.4 Emergency Response







Please take the following measures when there is open fire during engraving (LX1 is capable of detecting high temperature. The machine will cease operation when the temperature reaches 50°C).

1. Cut off the power supply
2. Douse the flames with fire extinguisher

### Inhale smoke and particulate matter

1. Fumes and particulates that can irritate the respiratory system may be generated when engraving or cutting certain materials. It is recommended to use the product with an air purifier or in a well-ventilated place. Please wear a protective mask if necessary.
2. If respiratory irritation or similar symptoms occur, immediately move the patient to a site with fresh air and seek medical help.

## 2.4 Safety Label

Label	Warning	Position
	Be careful of hot surfaces. Do NOT touch the laser module while its working or when the machine has not yet cooled down after working.	On the back of the laser module
	Be careful of pinch point. Do NOT touch or block the moving parts when in operation.	On the X axis
	Do NOT unplug or plug the connection cable of laser and artist module with power on.	On the X axis
	Do NOT leave the machine unattended during operation. Be careful of fire.	On the laser module
	The laser class of laser product is Class 4. Please avoid eye or skin exposure to direct or scattered laser light.	On the laser module
	The laser class of laser product is Class 1. Please avoid eye or skin exposure to direct or scattered laser light when the opening and closing of the protection cover are not linked to the laser emission.	On the top of the protection cover



## 2.5 Switch Module

To switch the module, remove or add accessories, please turn off the main unit before plugging and unplugging the connection cable of the laser module.

## 2.6 Firmware Upgrade

You can upgrade the firmware online by connecting the LaserPecker APP to your device via Bluetooth. Update prompt for new firmware will show up when connecting the machine. It is recommended to upgrade the firmware to the latest version timely.

### Detailed Steps:

1. Connect the LaserPecker APP to your machine.
2. Red notification dot will show up in the Settings page when a new firmware is available.
3. Enter the interface and click Upgrade.

## 2.7 Warranty Terms

- For customers who purchased from official LaserPecker sales channels, we provide a one-year warranty counting from the day customer receive their products.
- To the extent permitted by law, this warranty is exclusive and supersedes all other express or implied or legal warranty conditions (including in any case for a particular purpose, provided by the statute or any other circumstance), including, but not limited to, any liability derived the commodity suitable for a particular use. In addition, Hingin will not be responsible for any unexpected, special, indirect, or derivative damage (it may originate from use, misuse, nonuse, or product defects).
- When consumers apply for warranty service, they have the obligation to back up all the important data in advance. The data will disappear during the maintenance process, such as the replacement of parts or the updated product software version, and Hingin will not provide data backup or the complete data and set value.
- The product is entitled to free shipping and free maintenance warranty within 7 days of the shipping date. Express fee will be paid after 15 days in the warranty period.
- For any products following the replacement or maintenance, Hingin will give a longer warranty of the remaining warranty period of the original product or the 30-day warranty following the replacement.
- When consumers apply Hingin for warranty services for the products sold in non-Chinese mainland areas, due to the laws and regulations, safety regulations, tariffs, maintenance technology and parts inventory, parts sold in countries and regions cannot be sent back to Hingin for warranty services, for which Hingin can only provide limited warranty services. Therefore, consumers not in mainland China, whether they are within the warranty scope, need to seek warranty services through the path authorized by the original country, and will charge the inspection and labor processing fees. If the country for the recipient levies additional tariff, it will be borne by the consumer itself; Consumers who apply for warranty service directly to Hingin may take the similar measures.

- Distributors may sell Hingin products to consumers in non-Chinese mainland areas. If they provide value-added services different from this warranty, the services are valid only for the area sold by distributors and unrelated to this warranty service.
- Processing quality is highly related to user operation, processing material and processing environment, not within the warranty scope.
- SUGG: Reselling the product without official authorization is strictly prohibited, in which case the official warranty shall not be eligible.

## 2.8 Copyright

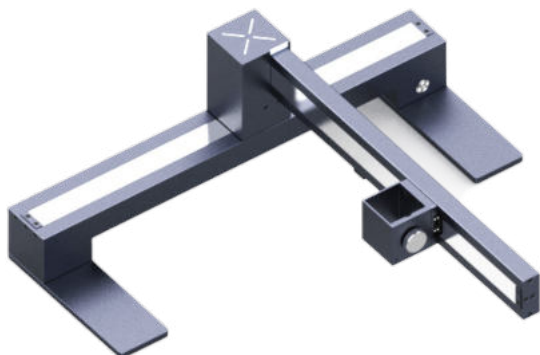
- The copyright of this manual involving the right of software and hardware of the product belongs to Shenzhen Hingin Technology Co., Ltd (hereinafter referred to as “Hingin” ). LaserPecker is the registered trademark of Hingin.
- The information in this manual is subject to change without notice. Please visit our official website <https://www.laserpecker.cn> for latest update.
- 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, except for use by the purchaser of this product.

## 2.9 Specifications

Product Name	LaserPecker			
Laser Class under LP Protection Cover	Class 1			
Size	LX1 Max Unfolded: 578mm*558mm*196mm    LX1 Max Frame Folded: 578mm*94.8mm*196mm LX1 Max Frame with Protection Cover: 647mm*632mm*315mm			
	LX1 Unfolded: 578mm*558mm*196mm    LX1 Frame Folded: 578mm*94.8mm*196mm LX1 Frame with Protection Cover: 647mm*632mm*315mm			
Whole Unit Weight	LX1:5kg		LX1 Max:5.76kg	
Working Area	LX1:400*420mm LX1 Artist Module:400*400mm		LX1 MAX:400*800mm LX1 MAX Artist Module:400*780mm	
<b>Four Modules Settings</b>				
Module	10w 450nm Module	20w 450nm Module	2w 1064 nm Module	Artist Module
Laser	450nm(Blue Laser)	450nm(Blue Laser)	1064(Infrared Laser)	\
Laser Output Power	10W	20W	2W	\
Module Weight	548g	618g	702g	436g
Laser Spot (Diameter)	0.08mm	0.08mm	0.03mm	0.3-5mm
Cutting Depth	8mm Plywood 8mm Acrylic	15mm Plywood 10mm Acrylic	\	\
Material	Anodized Aluminum Alloy			
File Format	APP: G-code/JPG/PNG/BMP; Software: SVG/DWG/DXF.....			
Connection Mode	Bluetooth Connection; USB Connectio)			
Operating Systems	Support iOS 9.0 +, Android 6.0 +, MacOS 10+, Windows 10+			
APP & Software	LaserPecker Design Space(PC&APP), LightBurn			
Power Input	DC (24V 5A) AC (100-240V 50-60HZ)			
Working Temperature	Temprature: 0°C~50°C			
Working Humidity	Humidity: 5%~80%			
Certification Project	CE,ROHS,WEEE project, UL project, CA65, PSE, UKCA, GB4943, FCC, IC-ID, NCC, KCC, SRRC, TELEC			

# 3.Product Accessories List

## Standard Suit (Main unit+Single Laser Module)



Main Frame\*1



Laser Module\*1



AC Cord/ Power Adapter\*1



USB to Type-C cable 1.5m\*1/  
Type-C cable \*2



Key H2.0/H2.5/H3.0 \*1

## Optional Add-ons



10W 450nm Module



20W 450nm Module



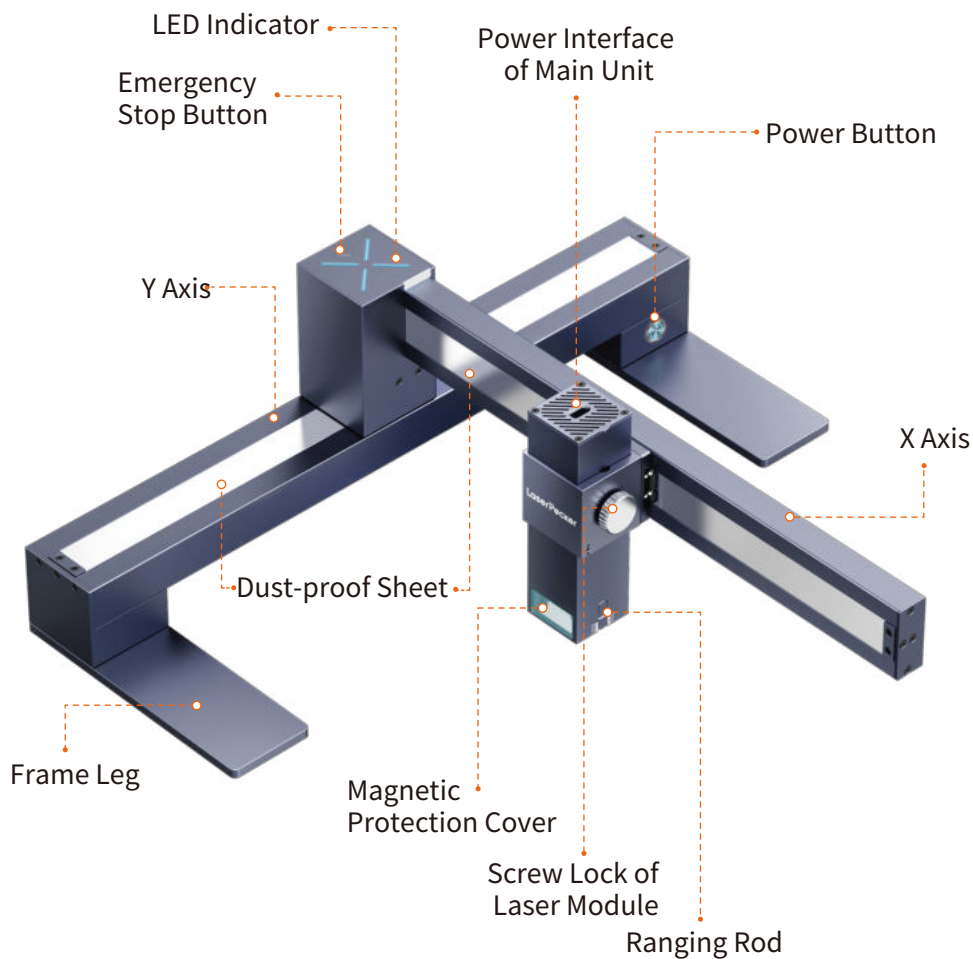
2W 1064nm Module



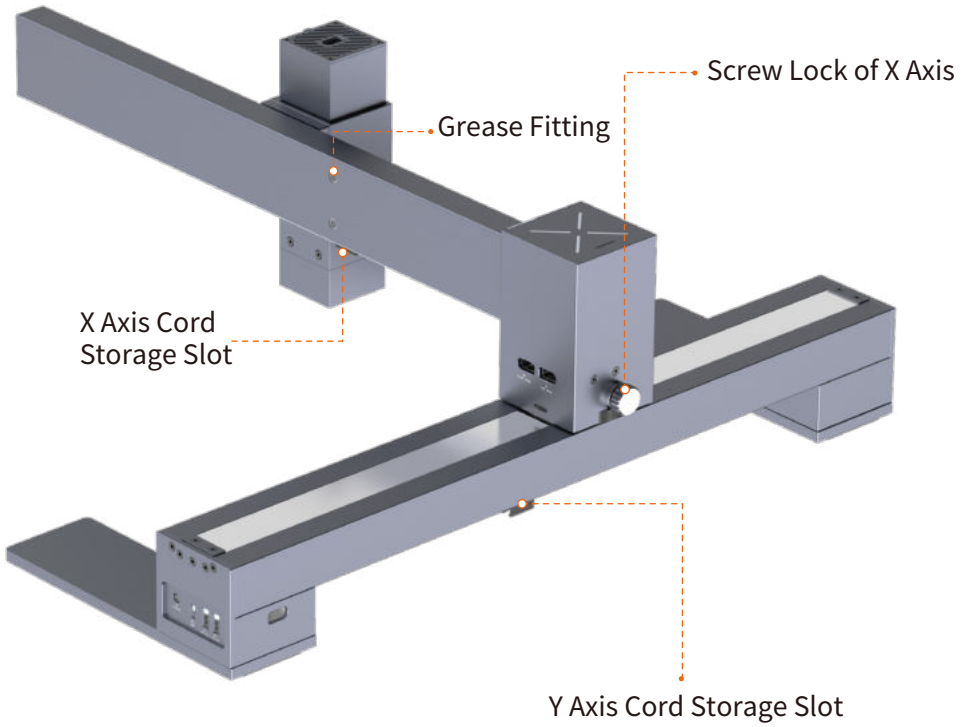
Artist Module

# 4. Get to Know LX1 Max

## 1. Main Frame

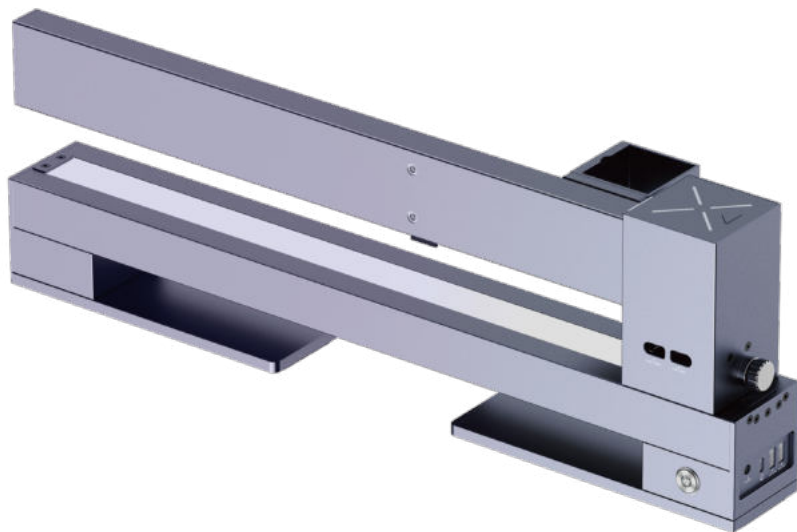


## 2.Main Frame

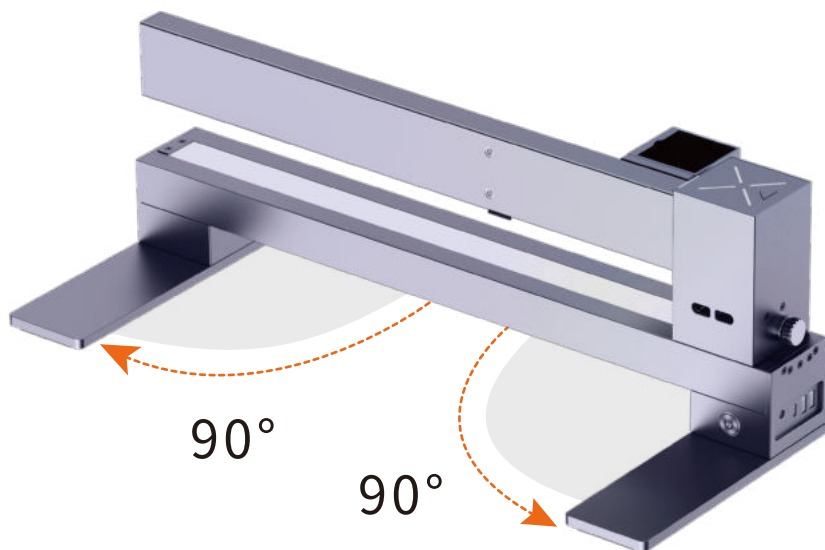


## 5.LX1 Max Fast Assembly

### 1.Unbox the product



### 2.Rotate the two frame legs 90 degrees

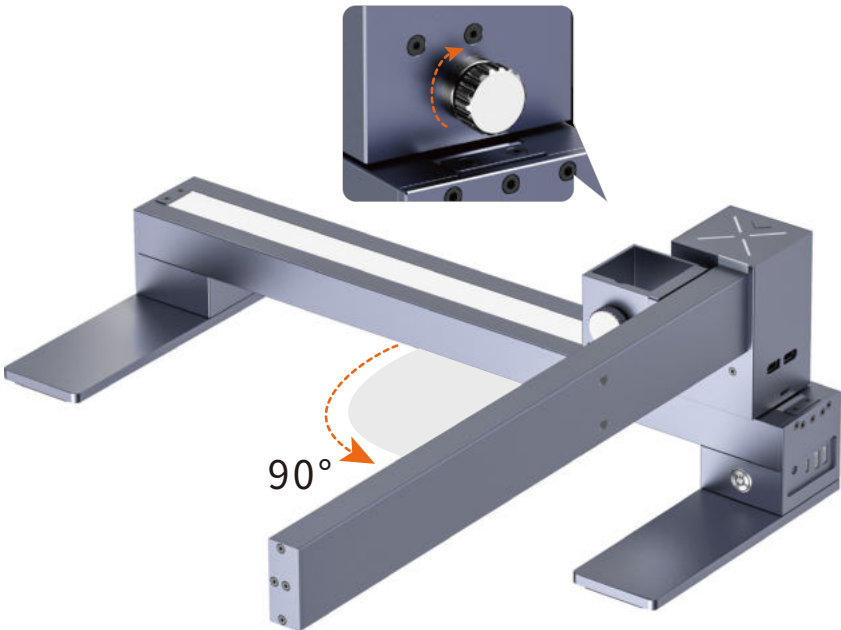




### 3. Unscrew the screw lock of X axis



### 4. Rotate the X axis 90 degrees and screw the lock



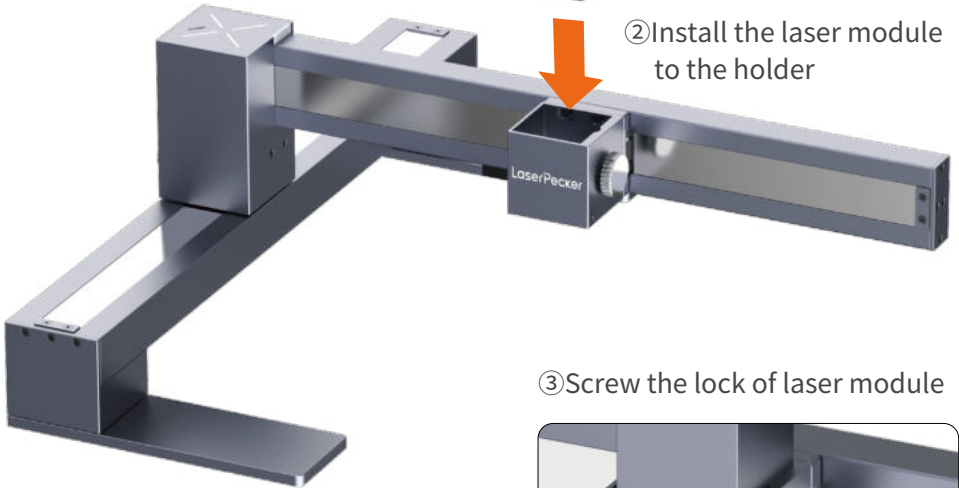
## 5. Unscrew the screw lock of laser module, install the module to the holder



① Unscrew the screw lock of laser module



② Install the laser module to the holder

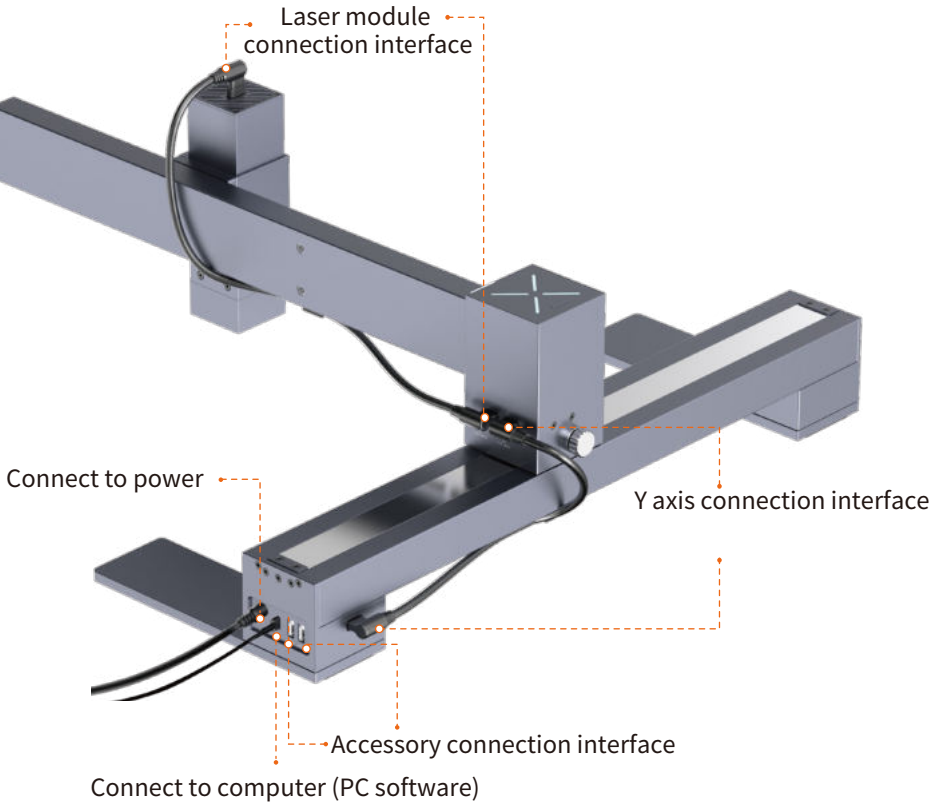


③ Screw the lock of laser module



## 6. Diagram Power Interface Connection

Connect as shown in the picture:



## 7. LED Indicator Description

Solid Blue: Bluetooth is connected

Blinking Blue: Bluetooth is disconnected

Solid Green: In preview

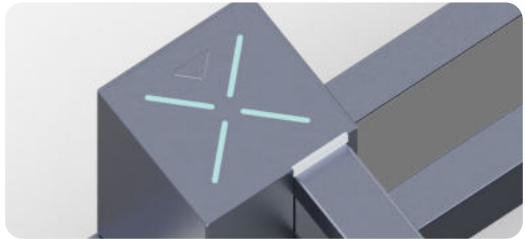
Multi Color: Data is transmitting

Streaming Light: Engraving in progress

Blinking Yellow: Engraving stops

Alternative Flashing of Red and Green: Reset to factory settings

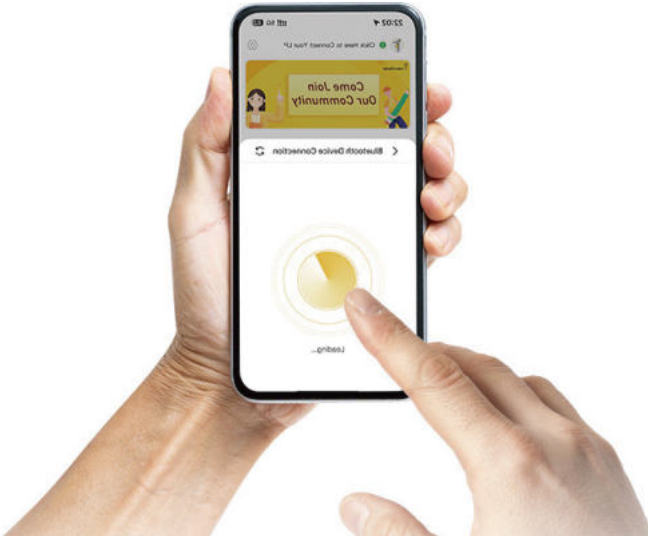
Alternative Flashing of Red and Blue: Firmware is being upgraded



# 6. Software Connection

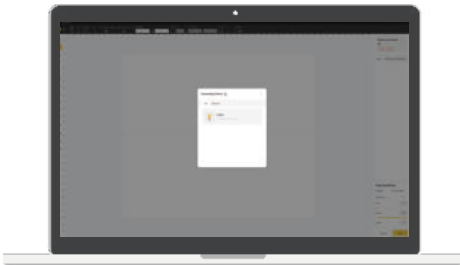
## Mobile APP Connection

After assembling the device and power on, open the official application LaserPecker Design Space(LDS) and connect the device in the APP.

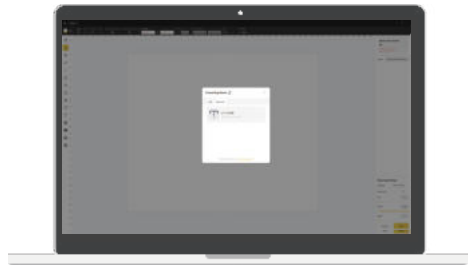


## PC Software Connection

After assembling the device and powering it on, open the official PC Software LaserPecker Design Space(LDS). Connect the device to the PC software via USB cable or official Bluetooth dongle.



USB connection via data cable



Connected via Bluetooth dongle

# 7. Set Focal Length

## Focusing in Engraving Mode

When engraving, put the ranging rod to the lowest position and make sure its button touches the surfaces of the material.



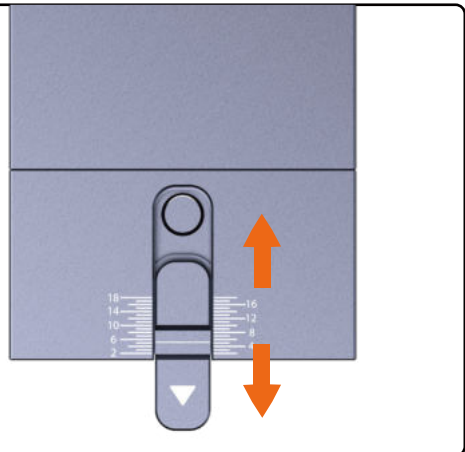
## Focusing in Cutting Mode

Adjust the position according to thickness of material when cutting

Reference for thickness adjustment

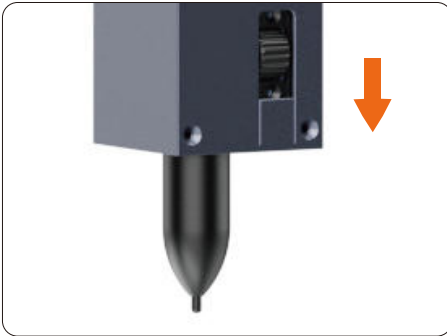
Material thickness	Adjust the corresponding scale
18mm	18
6mm	6

When the material is 6mm thick, adjust the corresponding scale of the white solid line to 6



## 2. Change Pen in Artist Module

\* Please refer to in-APP calibration for more calibration



Slide down the regulator to tighten up the pen



Slide up the regulator to change the pen

## 8. Machine Maintenance

**Fill the back and bottom of the X axis with lubricant when the machine is stuck in operation.**

The grease fitting is behind the X axis and at the bottom of the Y axis. Move the laser head to the grease fitting and align it with two to three drops of lubricant (it is recommended to add lubricating oil once every 3 months).



**FCC Warning Statement:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **FCC Radiation Exposure Statement**

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co - located for operating in conjunction with any other antenna or transmitter.

#### **IC Warning**

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This device complies with Canadian ICES-003 & RSS-247.

Radiation Exposure: This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

IC Radiation Exposure Statement

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located for operating in conjunction with any other antenna or transmitter.

#### **Avertissement IC**

Cet appareil est conforme aux normes RSS sans licence d'Industrie Canada.

L'opération est soumise aux deux conditions suivantes: (1) cet appareil ne doit pas causer d'interférences, et (2) cet appareil doit accepter toute interférence, y compris celle susceptible de provoquer un fonctionnement indésirable de l'appareil dispositif.

Selon la réglementation d'Industrie Canada, cet émetteur radio ne peut fonctionner qu'en utilisant une antenne type et gain maximum (ou inférieur) approuvés pour Industrie Canada par l'émetteur. Réduire brouillage radioélectrique potentiel avec d'autres utilisateurs, le type d'antenne et son gain doivent être choisis que la puissance isotrope rayonnée équivalente (e.i.r.p.) n'est pas supérieure à celle nécessaire pour communication réussie.

Cet appareil est conforme aux normes canadiennes ICES-003 et RSS-247.

Exposition aux radiations: Cet équipement est conforme à la réglementation canadienne sur les radiations. limites d'exposition établies pour un environnement non contrôlé.

Déclaration d'exposition aux radiations IC

Les antennes utilisées pour cet émetteur doivent être installées de manière à assurer une distance de séparation d'au moins 20 cm au moins de toute personne et ne doivent pas être co-localisés pour fonctionner en conjonction avec autre antenne ou émetteur.

# LaserPecker

Shenzhen Hingin Technology Co., Ltd

We provide global online technical support services for this product. If you encounter any problems during your use, please contact us via:

Email: [support@laserpecker.net](mailto:support@laserpecker.net) | Tel: +86 0755-28913864