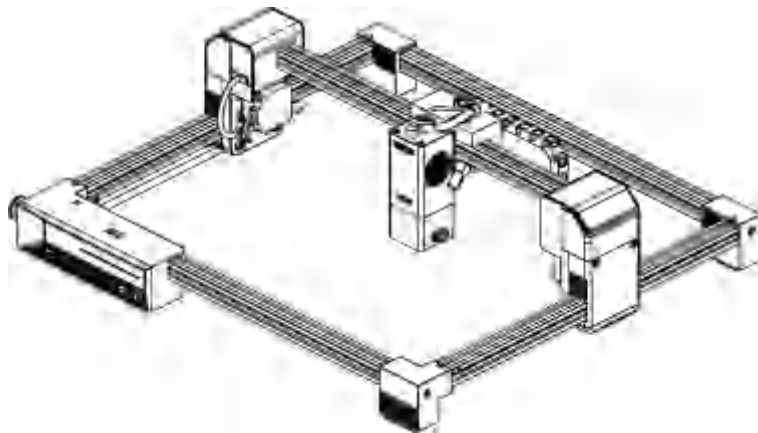


X1 User Manual



Please read this instruction manual carefully before use
Please use the laser engraving machine correctly and safely

Thank you for choosing WAINLUX laser engraving machine

Please read the user manual carefully before use and keep it in a safe place for further reference.
For warranty and any technical support, please contact our service team:

Support@wainlux.com

SAFETY INSTRUCTIONS

Warning

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC Statement

This equipment 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.

NOTE: 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.

FCC Radiation Exposure Statement:

The equipment complies with FCC Radiation exposure limits set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Caution use of controls or adjustment of performance of procedures other than those specified herein may result in hazardous radiation exposure

SAFETY INSTRUCTIONS

Thank you for purchasing the WAINLUX laser engraving machine. In order to better use and maintain this equipment, please read this manual carefully and follow the steps in the manual.

Important Statement!

All losses caused by improper use or failure to follow the steps in the manual shall be borne by the individual. The final right of interpretation of the manual belongs to our company, which also reserves the right to modify all information, data, technical details, etc. in this manual.

Safety Precautions

- ★ Before operating the equipment, users must carefully read the manual and strictly follow the operating procedures.
- ★ Laser processing may be risky, and users should carefully consider whether the object being processed is suitable for laser operation.
- ★ The processing object and emissions should comply with local laws and regulations.
- ★ The laser radiation may cause the following situations:
 - ① Ignition of surrounding flammable materials;
 - ② During laser processing, other radiation and toxic and harmful gases may be generated due to different processing objects;
 - ③ Direct exposure to laser radiation can cause human harm. Firefighting equipment must be equipped in the use site. It is prohibited to stack flammable and explosive items around the workbench and equipment. At the same time, it must be well ventilated.
- ★ The environment where the equipment is located should be dry, free of pollution, vibration, strong electricity, strong magnetism and other interference and influence. The working environment temperature is 5~30°C, and the working environment humidity is 30~65% rh (no condensation)
- ★ Equipment operating voltage: AC100-240V.
- ★ The engraving machine and other related equipment must be safely grounded before they can be turned on and operated.
- ★ When the equipment is turned on, it is necessary to be on duty throughout the process. All power supplies must be cut off before leaving to prevent abnormal conditions. If any abnormal conditions occur, please turn off the power immediately!
- ★ It is strictly forbidden to place any irrelevant total reflection or diffuse reflection objects in the equipment to prevent the laser from reflecting on the human body or flammable items.
- ★ The equipment should be kept away from electrical equipment that is sensitive to electromagnetic interference, which may cause electromagnetic interference to it.
- ★ There is high voltage or other potential dangers inside the laser equipment, and non-professionals are strictly prohibited from disassembling it.

Warning:

When you purchase only the bare device, the device level is: Class IV laser device. Please wear laser protective glasses during use! ! !

When you purchase a device with a cover, the device level is: Class I laser device, which can prevent you from being harmed.

SAFETY INSTRUCTIONS

Notice!



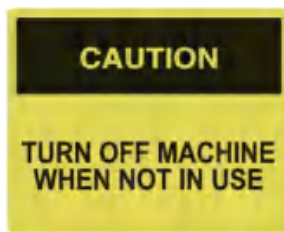
1. After the laser is turned on, it is strictly forbidden to aim at people, animals and flammable objects to avoid skin burns and fire.



2. The brightness of the laser is harmful to the eyes. Please do not look directly at the laser.



3. Keep your hands away from the machine when it is working to avoid injury



4. Turn off the power of the machine when it is not in use to avoid misoperation by a third party

Maintenance and Care

The laser module is a consumable. It is recommended to turn off the machine power for 10 minutes after 4 hours of engraving and 1 hour of cutting.

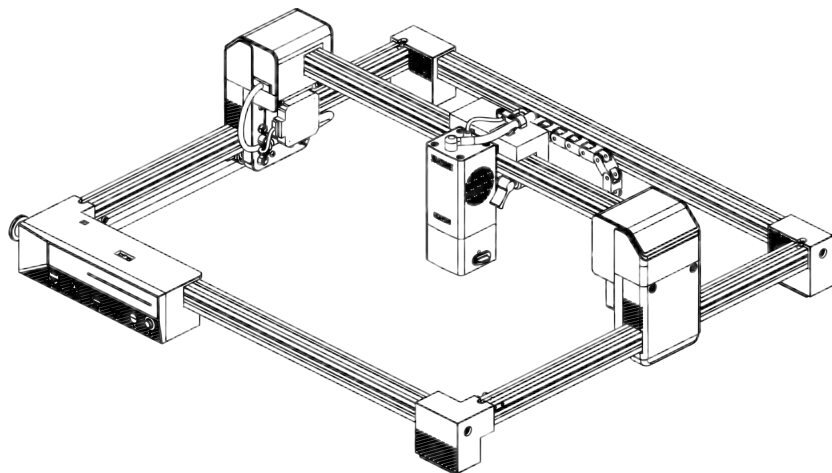


01 Product Parameters	05
02 Products and Accessories	06
03 Product structure and assembly.....	07
04 PC software download and installation	34
05 Mobile software download and installation	38
06 Mobile phone connection	39
07 Computer connection	41
08 FAQ	42
09 Maintenance and care	48

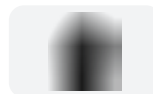
01 PRODUCT PARAMETERS

Product model	X1
Main material	ABS+high strength metal
Laser wavelength	455nm
Engraving speed	7000mm/min
Laser life	> 10000h (27°C ambient temperature)
Focus mode	Knob - type focusing
Engraving area	300×300mm
Engraving accuracy	±0.01mm
Engraving height	< 50mm
Cutting material	5W laser power can cut 3-5mm plywood, 5-7mm pine board 10W laser power can cut 5-7mm plywood, 7-10mm pine board
Total power	<60W
Input voltage	DC24V 2.5A
Engravable materials	Paper, wood, plastic, leather, cloth, cardboard, stone, stainless steel, coated metal, and most other non-transparent materials
Data transmission	USB to serial port wired transmission, WiFi wireless transmission
Cooling method	Air cooling
Supported system	CutLabX software platform (windowsOS, macOS, Android, iOS) GRBL software platform (windowsOS, macOS)
Supported format	CutLabX software platform -> Image formats: JPEG/BMP/JPG/GIF/PLT/PNG/CUTLABX -> Vector formats: DXF/PLT/HPGL GRBL software platform -> NC/BMP/JPG/PNG/DXF and other formats

02 PRODUCTS AND ACCESSORIES



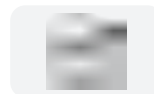
Standard Accessories



TF card



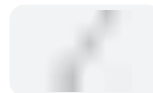
Card reader



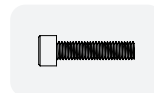
power supply



Type-C cable



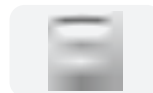
Marker



Screw



Brush



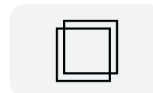
User Manual



Goggles



Wrench

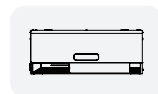


Wooden board

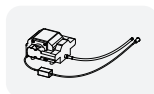


Paper

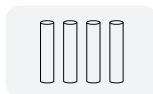
Optional Accessories



Outer cover



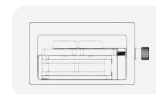
Air pump module



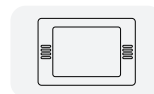
Heightening



Air purifier



Rotation module

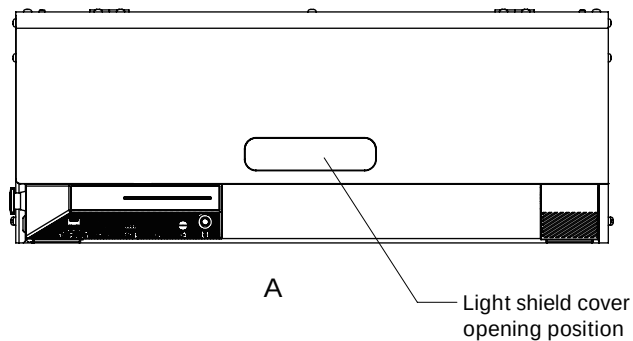


LCD module

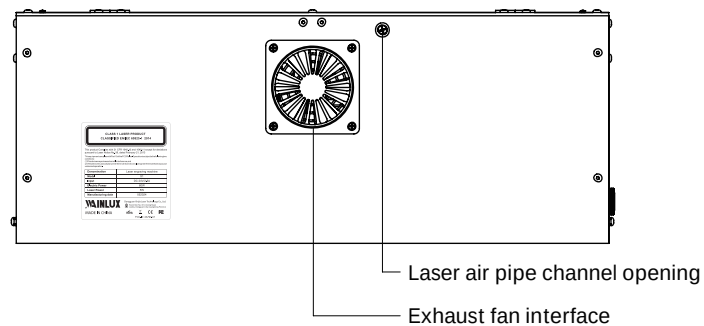
03 PRODUCT STRUCTURE AND ASSEMBLY

English

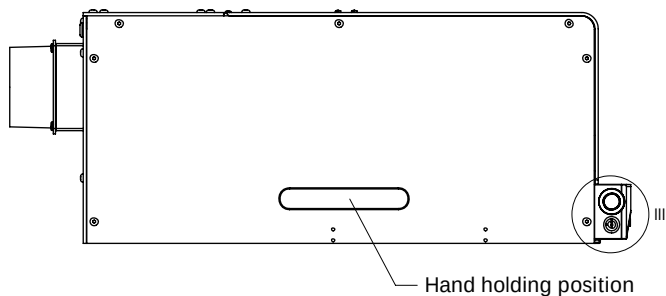
Front View



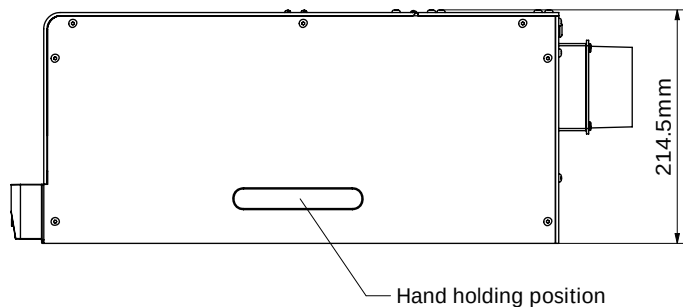
Rear View



Left view

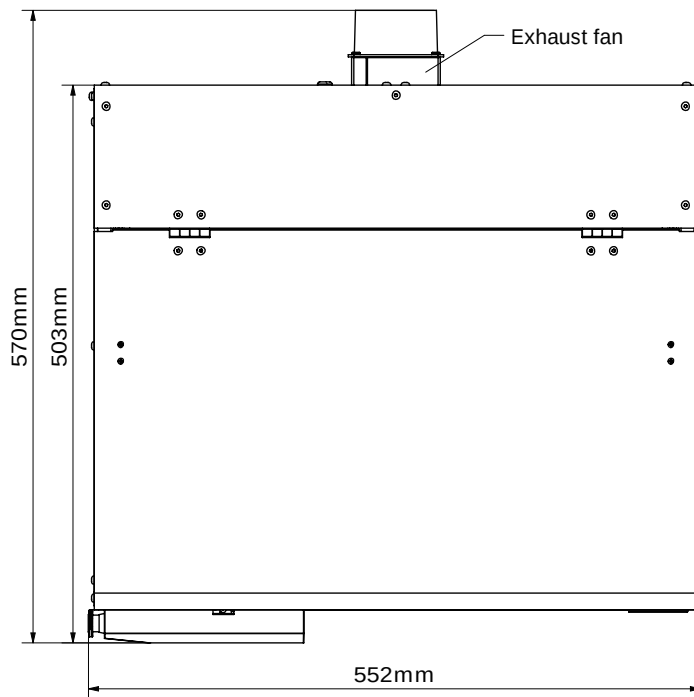


Right view



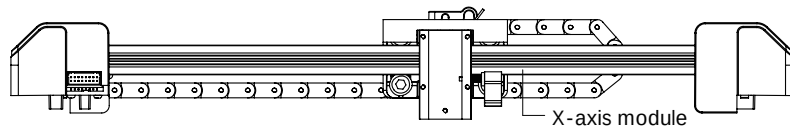
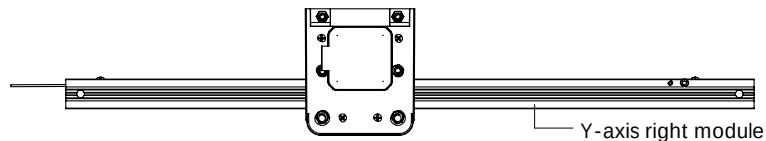
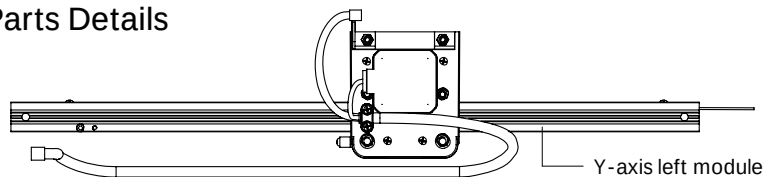
03 PRODUCT STRUCTURE AND ASSEMBLY

Top View

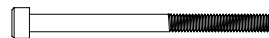


03 PRODUCT STRUCTURE AND ASSEMBLY

Parts Details



M4*55
Hexagon socket head screw



M5*22
Hexagon socket head screw



M3 hexagonal wrench



M4 hexagonal wrench



03 PRODUCT STRUCTURE AND ASSEMBLY

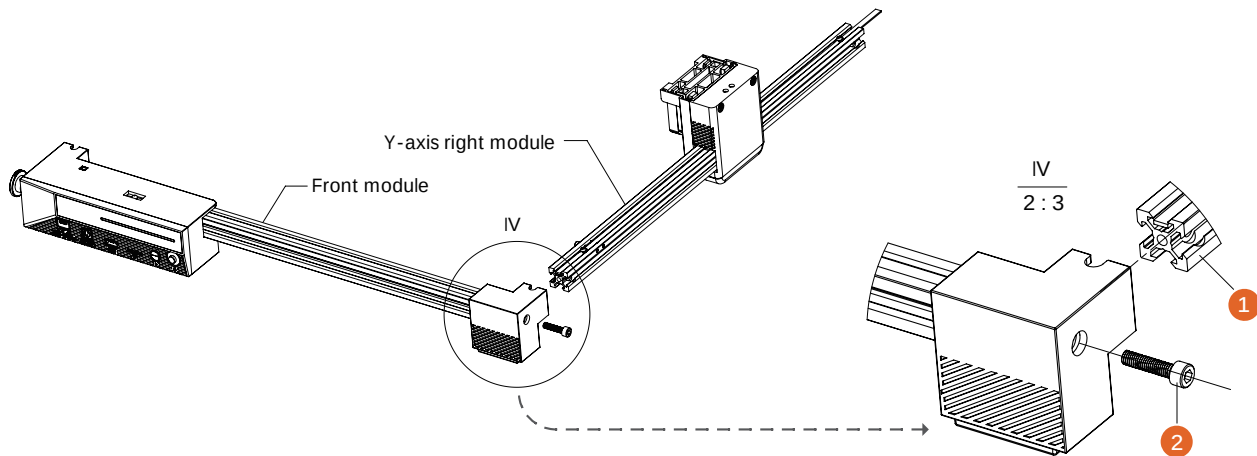
Installation sequence:

1. Install the Y-axis right module ① into the front module.
2. Tighten and fix with M5*22 hexagon socket head screw ②.

M5*22 hexagon socket
head screw



M4 hexagon wrench



03 PRODUCT STRUCTURE AND ASSEMBLY

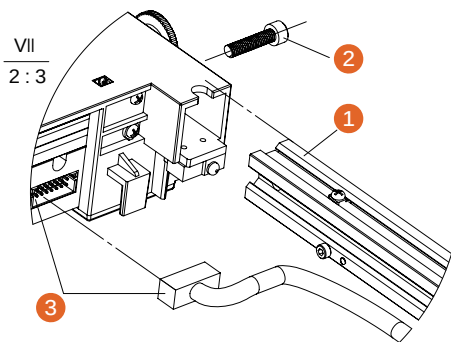
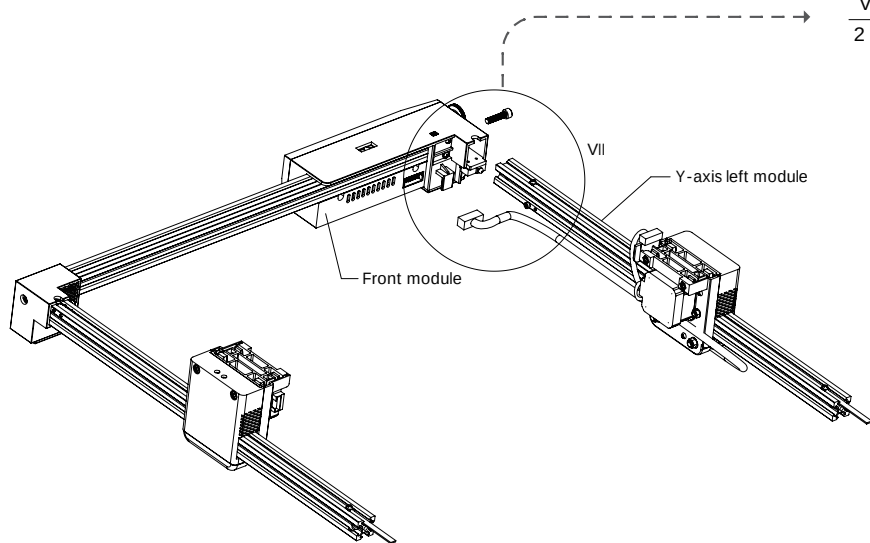
Installation sequence:

1. Install the Y-axis left module ① into the front module.
2. Tighten and fix with M5*22 hexagon socket head screw ②.
3. Plug the motherboard connection plug ③ into the socket accordingly.

M5*22 hexagon socket
head screw



M4 hexagon wrench



03 PRODUCT STRUCTURE AND ASSEMBLY

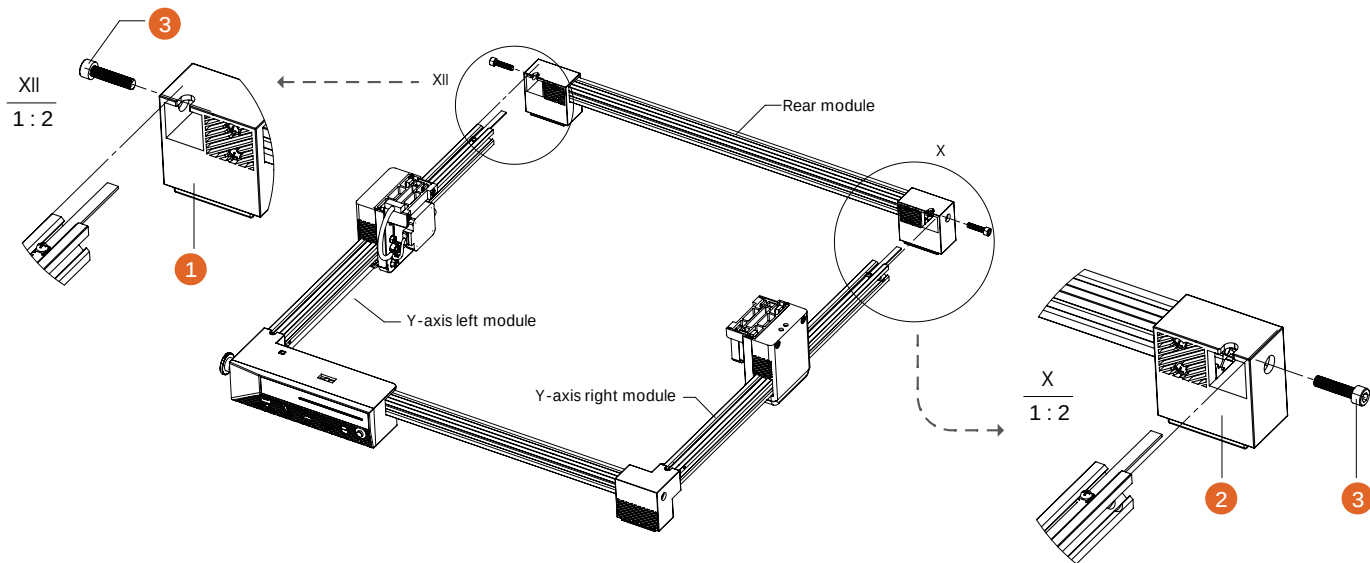
Installation sequence:

1. Install the rear module into the Y-axis left module ① module.
2. Simultaneously install the rear module into the Y-axis right module ② module.
3. Tighten and fix with M5*22 hexagon socket head screw ③.

M5*22 hexagon socket
head screw



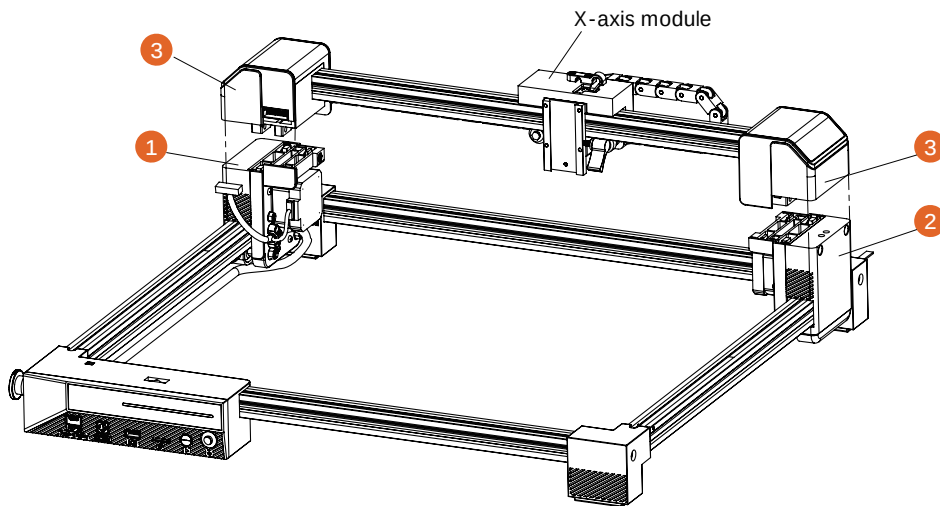
M4 hexagon wrench



03 PRODUCT STRUCTURE AND ASSEMBLY

Installation sequence:

1. Push the Y-axis left sliding group ① backward to the end.
2. Push the Y-axis left sliding group ② backward to the end.
3. Install the X-axis group ③ downward into the sliding group.



03 PRODUCT STRUCTURE AND ASSEMBLY

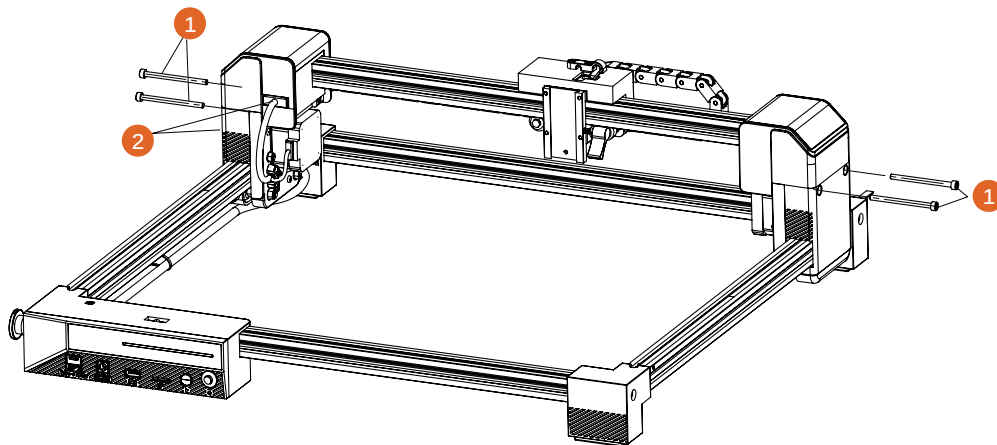
Installation sequence:

1. Use M4*55 hexagon socket head screw ① to tighten the X-axis module.
2. Insert the connection plug ② into the socket.

M4*55 hexagon socket head screw



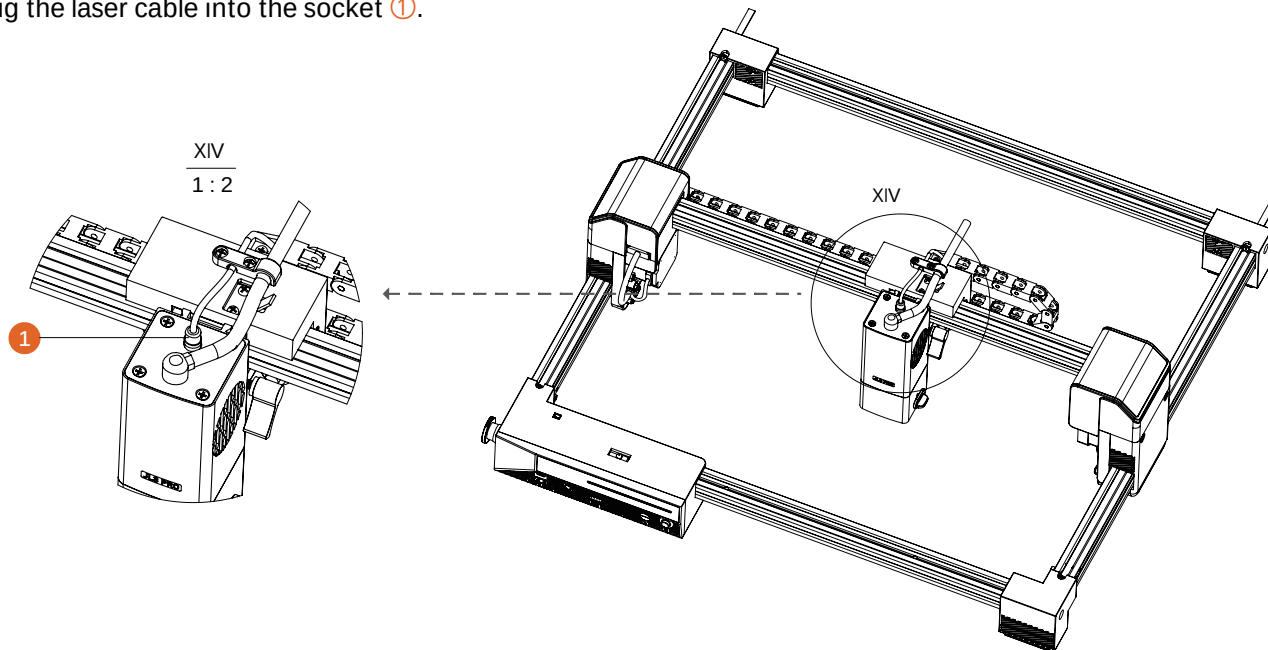
M3 hexagon wrench



03 PRODUCT STRUCTURE AND ASSEMBLY

Installation sequence:

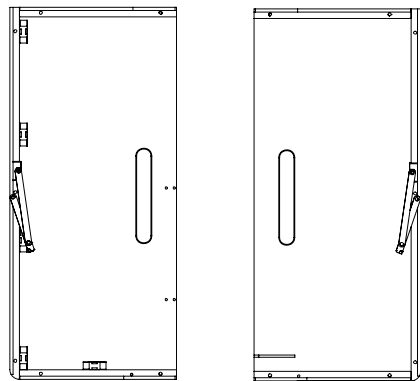
1. Plug the laser cable into the socket ①.



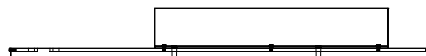
03 PRODUCT STRUCTURE AND ASSEMBLY

LIGHT SHIELD

*This section is the installation steps of the light shield accessory. If you have not purchased this accessory, please skip this section.



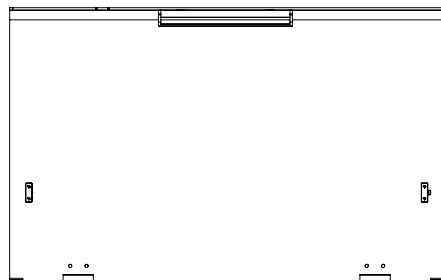
Light shield (left module) Light shield (right module)



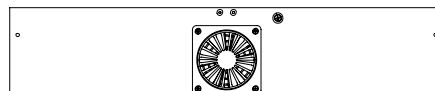
Light shield (front module)



Light shield (top cover and rear plate module)



Light shield (cover plate module)



Light shield (rear module)

M5*22 hexagon
socket head screw



M3*14 hexagon
socket head screw



M4*8 machine
thread round head
hexagon socket screw



M4 non-slip
hexagon nut



M2.5
hexagonal wrench



M3
hexagonal wrench



M4
hexagonal wrench



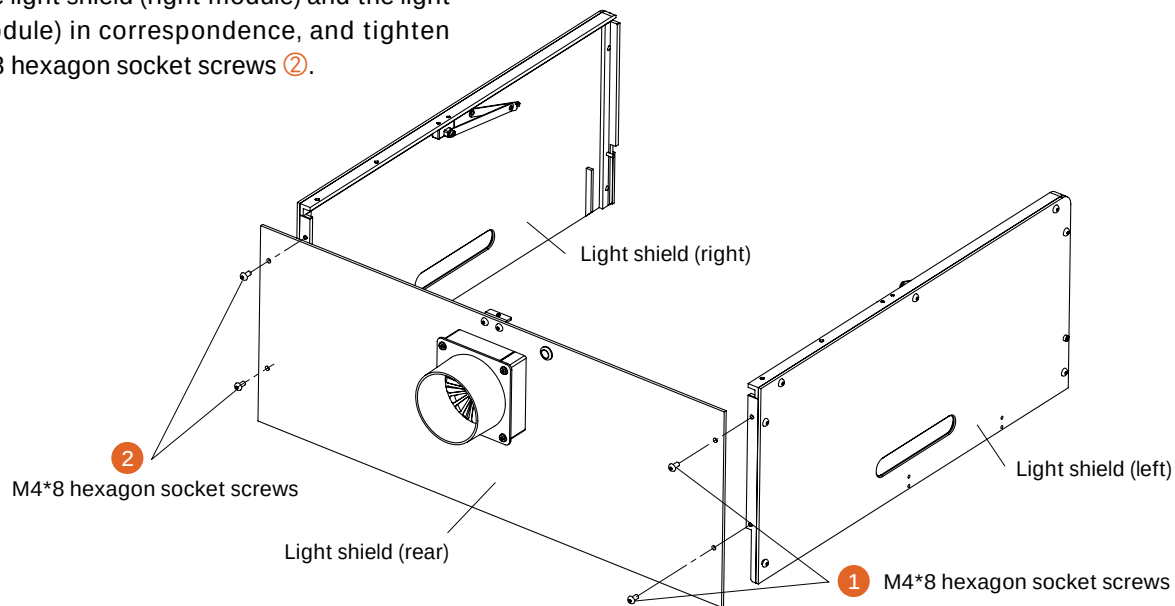
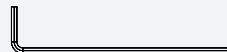
Installation sequence:

1. Assemble the light shield (left module) and the light shield (rear module) in correspondence, and tighten them with M4*8 hexagon socket screws ①.
2. Assemble the light shield (right module) and the light shield (rear module) in correspondence, and tighten them with M4*8 hexagon socket screws ②.

M4*8 hexagon socket screws



M2.5 hexagon wrench



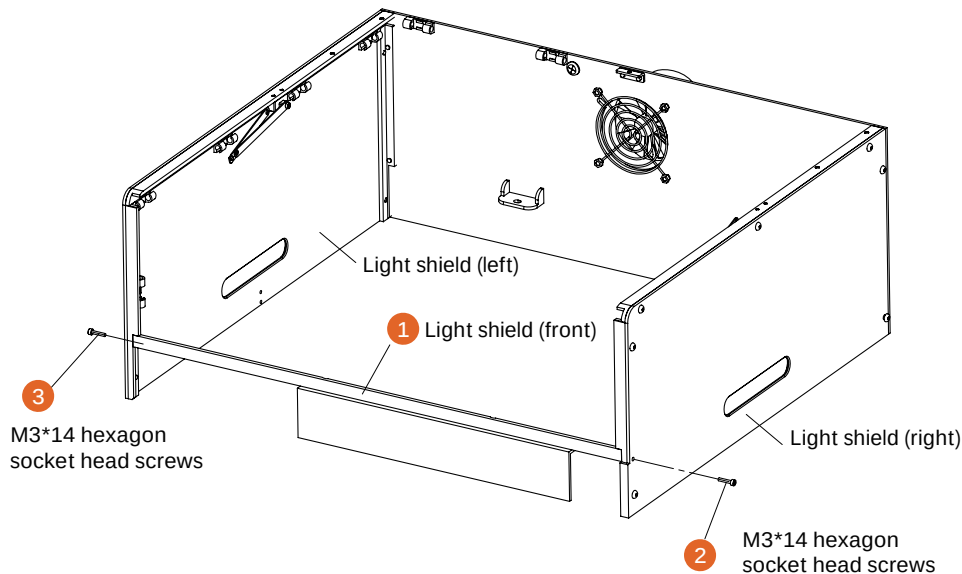
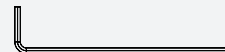
Installation sequence:

1. Assemble the light shield (front module) ① to the light shield (right module) and tighten it with M3*14 hexagon socket head screws ②.
2. Assemble the light shield (front module) to the light shield (left module) and tighten it with M3*14 hexagon socket head screws ③.

M3*14 hexagon socket
head screws

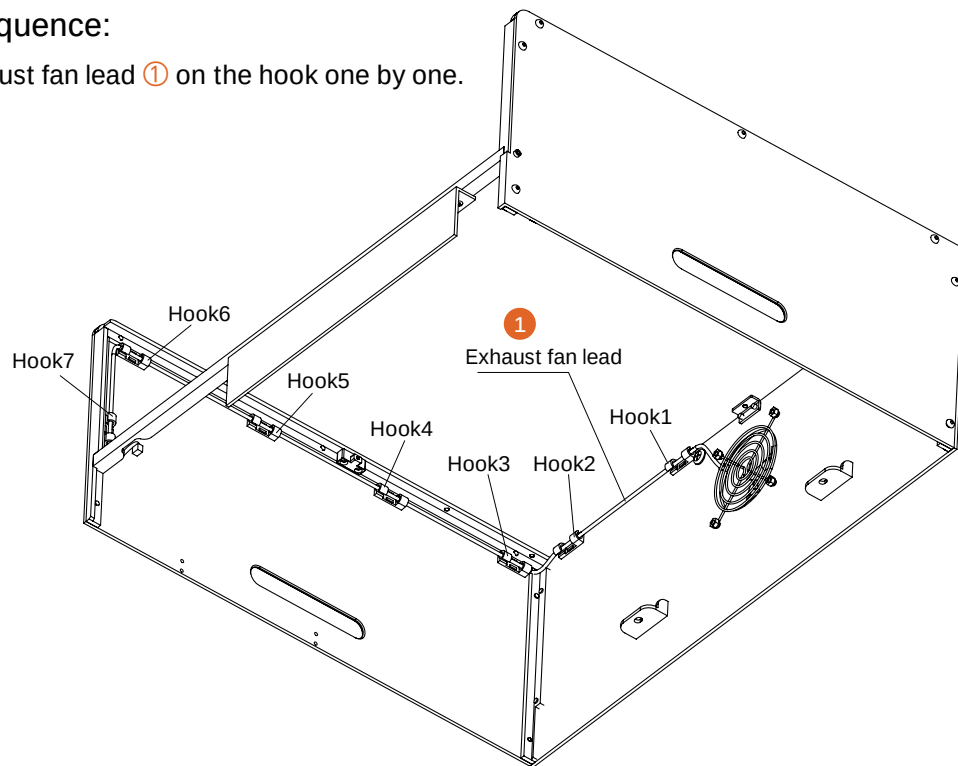


M2.5 hexagon wrench



Installation sequence:

1. Hang the exhaust fan lead ① on the hook one by one.

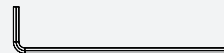


Installation sequence:

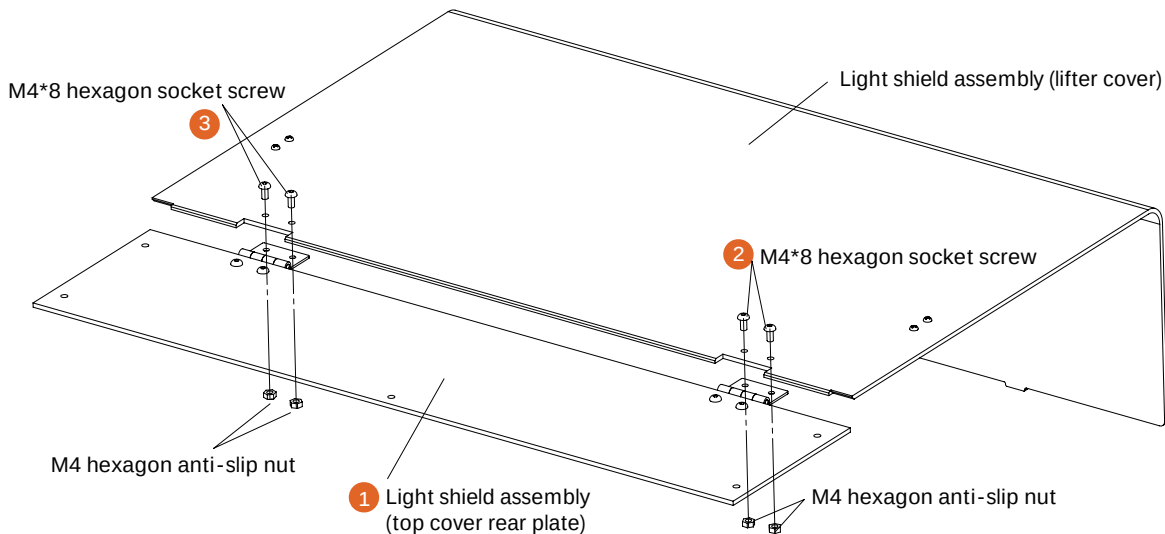
1. Install the light shield assembly (top cover rear plate module) ① to (on the cover lifter module).
2. Fix ② with M4*8 hexagon socket screw + M4 hexagon anti-slip nut, and tighten with a wrench.
3. Fix ③ with M4*8 hexagon socket screw + M4 hexagon anti-slip nut, and tighten with a wrench.

M4 anti-slip hexagon nut

M2.5 hexagon wrench



M4*8 machine thread round head hexagon socket screw



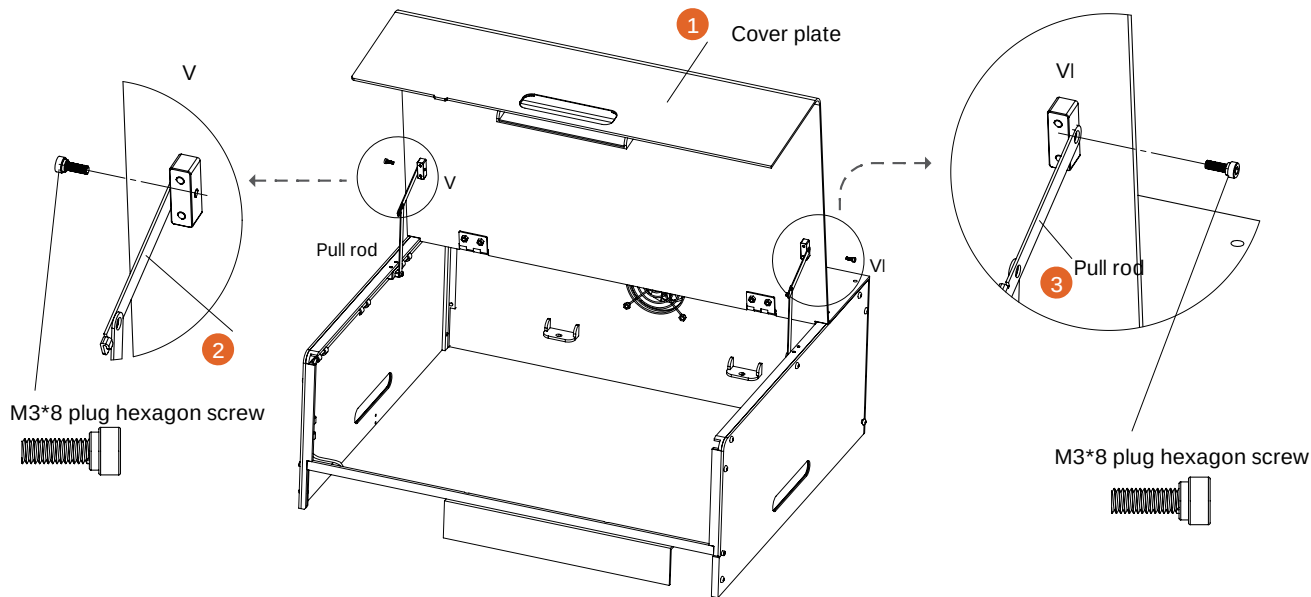
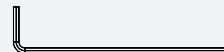
Installation sequence:

1. Open the cover plate ① upwards.
2. Install the pull rod to the position ② as shown in the figure and tighten it with the M3*8 plug hexagon screw.
3. Similarly, install the pull rod to the position ③ as shown in the figure and tighten it with the M3*8 plug hexagon screw.

M3*8 plug hexagon screw



M2.5 hexagon wrench

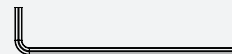


Installation sequence:

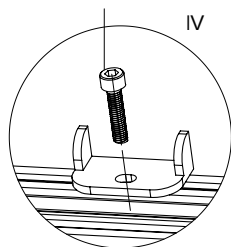
1. Install the assembled light shield and bare device together.
2. Tighten and fix with M5*22 hexagon socket head screws at 4 positions.

M5*22 hexagon socket head screw

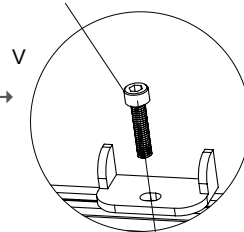
M4 hexagon wrench



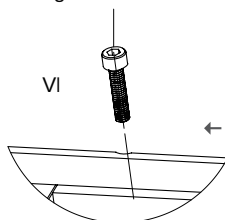
M5*22 hexagon socket head screw



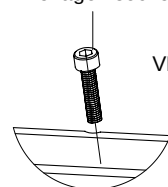
M5*22 hexagon socket head screw



M5*22 hexagon socket head screw

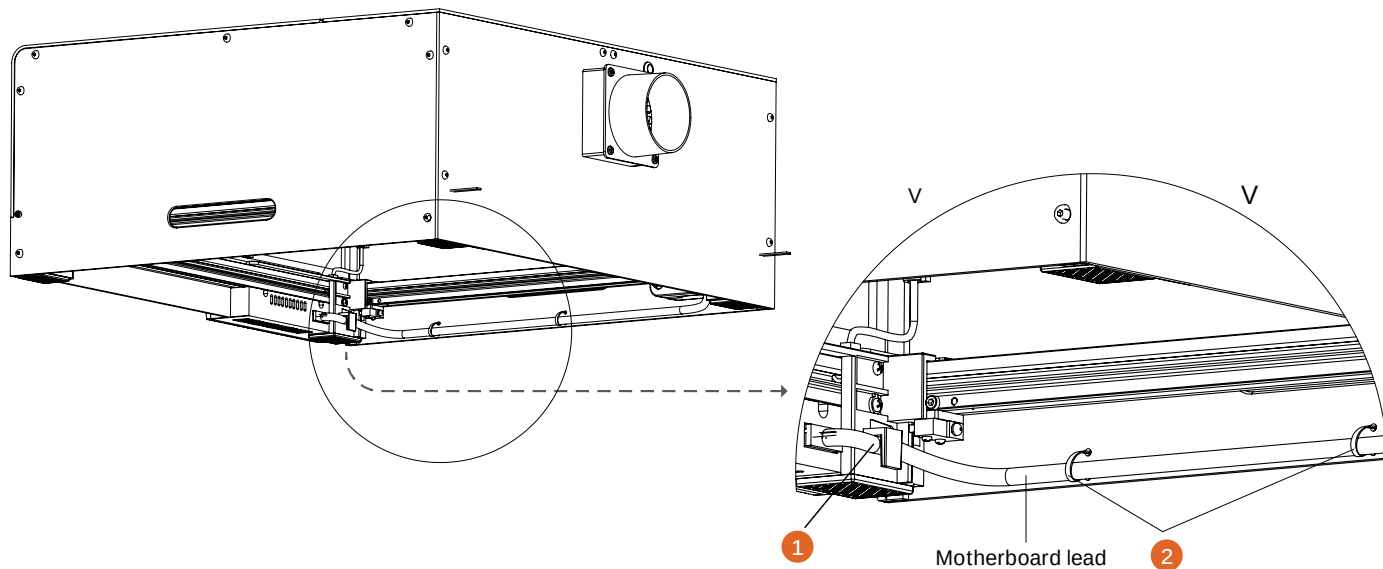


M5*22 hexagon socket head screw



Installation sequence:

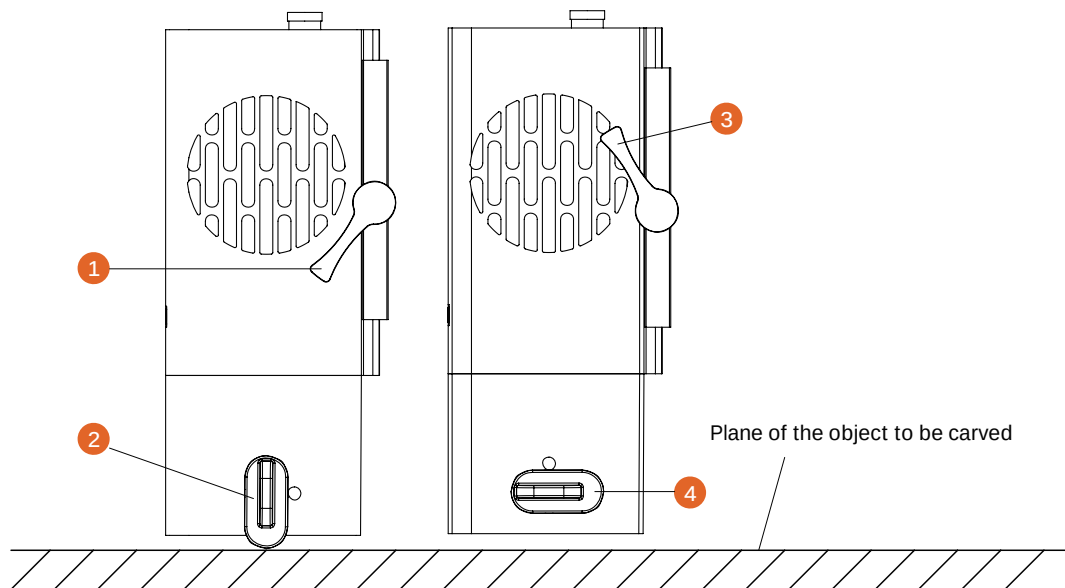
1. Install the motherboard lead ① into the slot.
2. Use a cable tie to secure the lead to the side panel ② of the light shield.



03 PRODUCT STRUCTURE AND ASSEMBLY

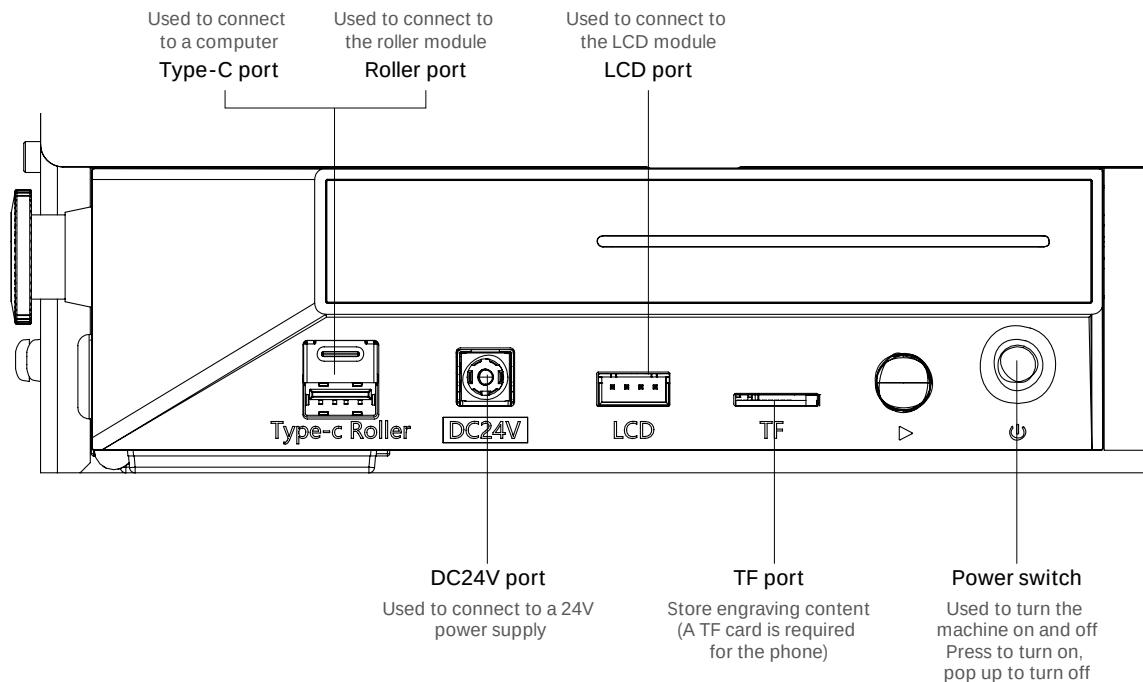
【 Focusing laser focusing method 】

1. Turn the handle screw ① counterclockwise to allow the laser to move up and down.
2. Manually turn the focusing knob ② clockwise 90°, as shown in the figure and match it with the plane of the object to be engraved.
3. Turn the handle screw ③ clockwise to tighten the laser.
4. Manually turn the focusing knob ④ counterclockwise 90°, as shown in the figure.



03 PRODUCT STRUCTURE AND ASSEMBLY

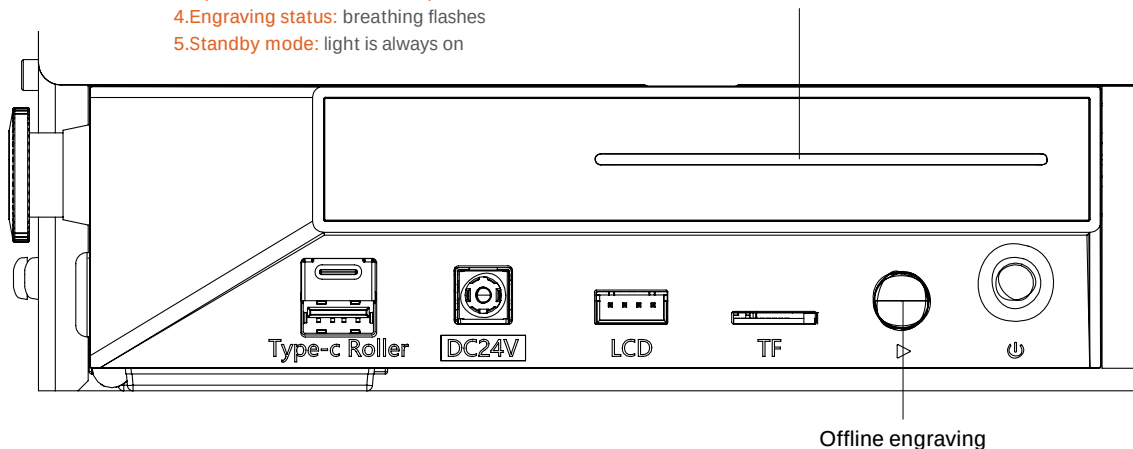
【 Functional Description 】



03 PRODUCT STRUCTURE AND ASSEMBLY

【 Functional Description 】

1. **WiFi connection:** status flashes, on 0.2S, off 0.2S
2. **Warning status:** flashes, on 0.5S, off 0.2S
3. **Open door, flame alarm, tilt protection flashes,** on 0.5S, off 0.5S
4. **Engraving status:** breathing flashes
5. **Standby mode:** light is always on

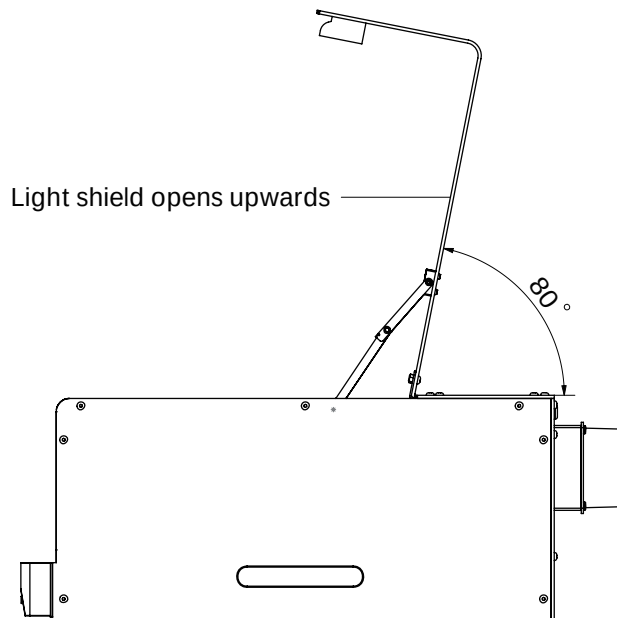


1. Generate engraving or cutting file (gcode) through LightBurn software and save it to the root directory of TF card, save the name as: 001.nc
2. Insert TF card into the machine before powering on, then use the matching power adapter and power cord to connect to the controller panel, and finally turn on the power switch on the stone side of the control panel.
3. Press the "Offline Key Function" button:
 - a. After pressing, the machine will automatically reset and preview
 - b. Press and hold for more than 3S to enter engraving
 - c. Press again to pause
 - d. Press again to continue
 - e. Press again for more than 3S to cancel engraving

03 PRODUCT STRUCTURE AND ASSEMBLY

【 Function Description 】

When the light shield is opened, the laser module will immediately stop laser output.

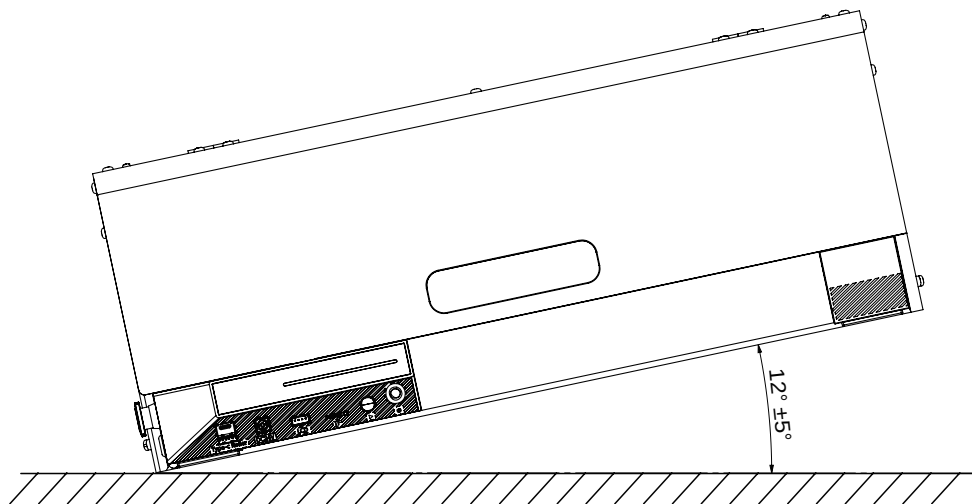


03 PRODUCT STRUCTURE AND ASSEMBLY

【 Function Description 】

If the inclination of the host machine and the horizontal plane is greater than $12^{\circ} \pm 5^{\circ}$ and lasts for more than 1s, the machine will stop running immediately and the laser module will stop laser output.

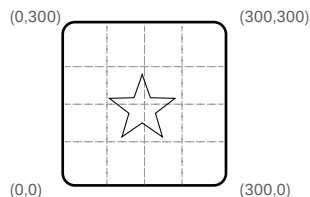
After entering the protection state, the machine must be restarted to restore normal function.



Tilt protection

03 PRODUCT STRUCTURE AND ASSEMBLY

【LightBurn Run】



For example, let's say we want to engrave a star, which is located at the center of the LightBurn workspace as shown on the computer screen, at (150,150).

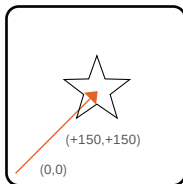
The following figure shows the machine in each of the three startup modes

Problems can occur when manually moving the laser module in the absolute coordinate system or the user origin. This is because the machine does not know that it has been moved.

It cannot know its true position unless the origin position is reestablished or homed.

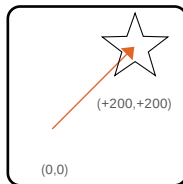
Consider the following sequence of operations when working in absolute coordinates:

1. The machine's origin is (0,0)
2. The user physically drags the laser to a position near (300,300), and the machine still thinks it is at (0,0);
3. The user runs the star program. The machine starts moving up and to the right to reach the "center" and hits the upper right corner.



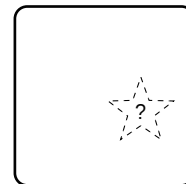
A) Absolute Coordinates:

The machine will move to the center,
The finished star will be at (150,150)



B) User Origin:

Suppose the user origin is set at (20,20),
Then the finished star will be at (220,220)



C) Current Position:

The star will appear wherever the laser module is
located at the moment the program is started.



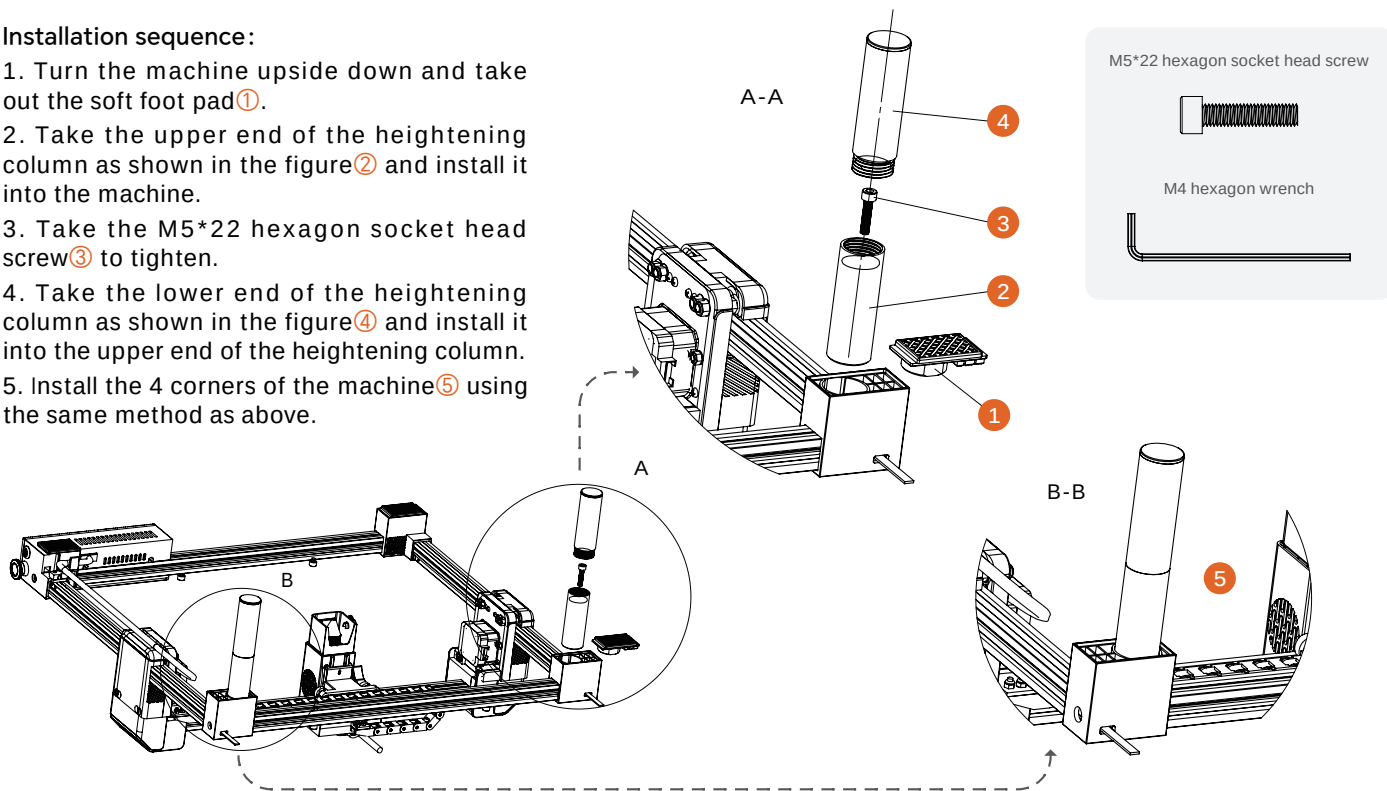
Important

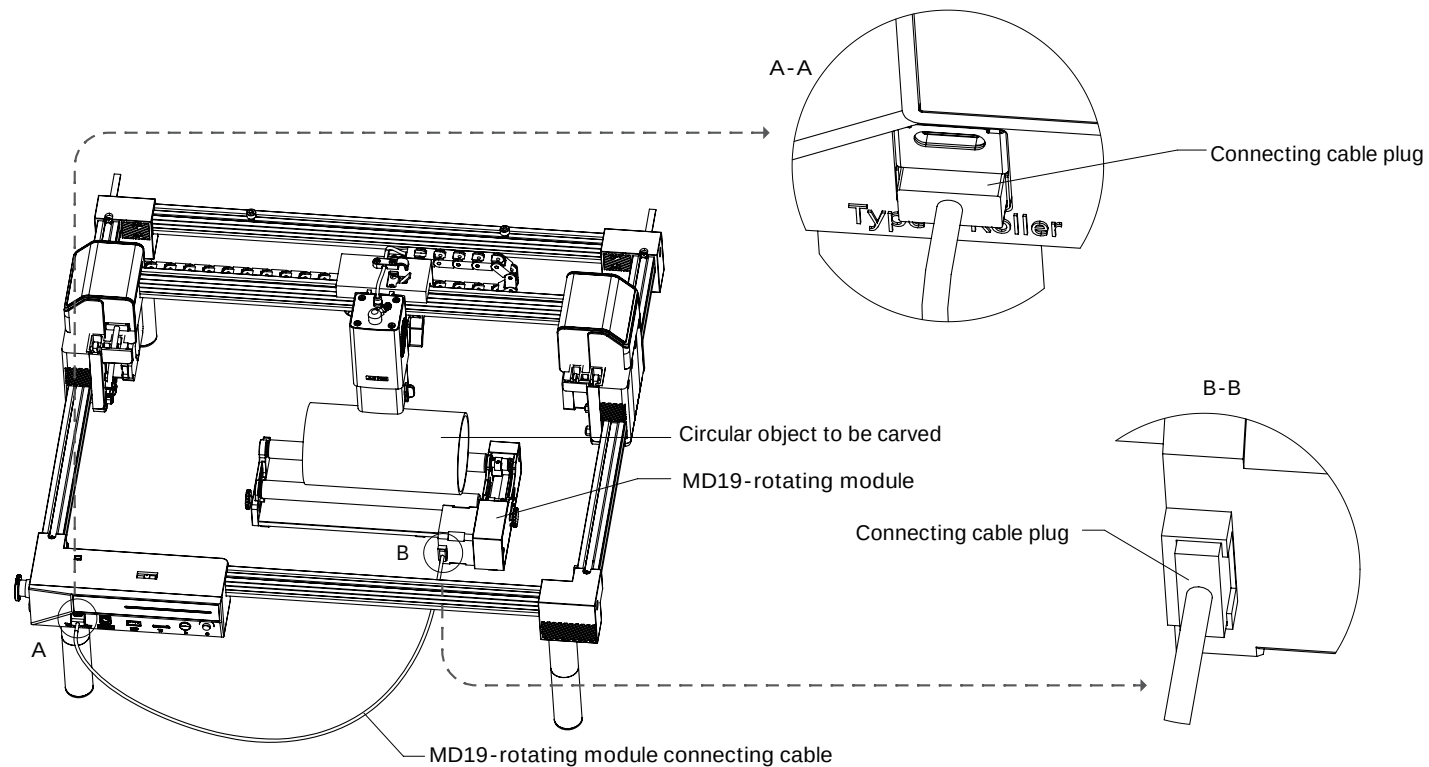
If the machine crashes, be sure to pull the laser back to the center slightly before homing.

There are two limit switches on the machine, one each for X and Y. If the limit switch on one of them is pressed, the machine will not move that axis when homing.

Installation sequence:

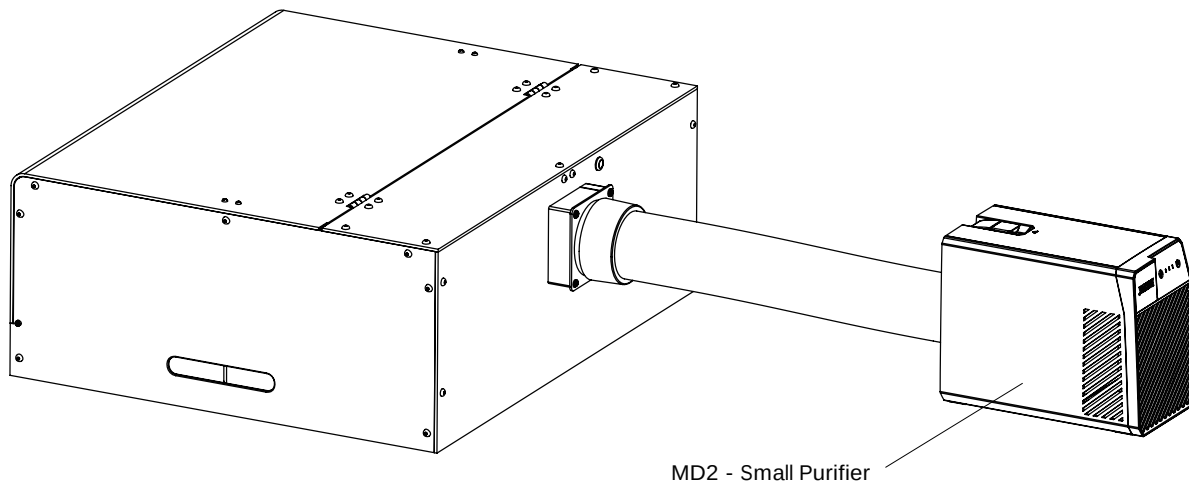
1. Turn the machine upside down and take out the soft foot pad①.
2. Take the upper end of the heightening column as shown in the figure② and install it into the machine.
3. Take the M5*22 hexagon socket head screw③ to tighten.
4. Take the lower end of the heightening column as shown in the figure④ and install it into the upper end of the heightening column.
5. Install the 4 corners of the machine⑤ using the same method as above.





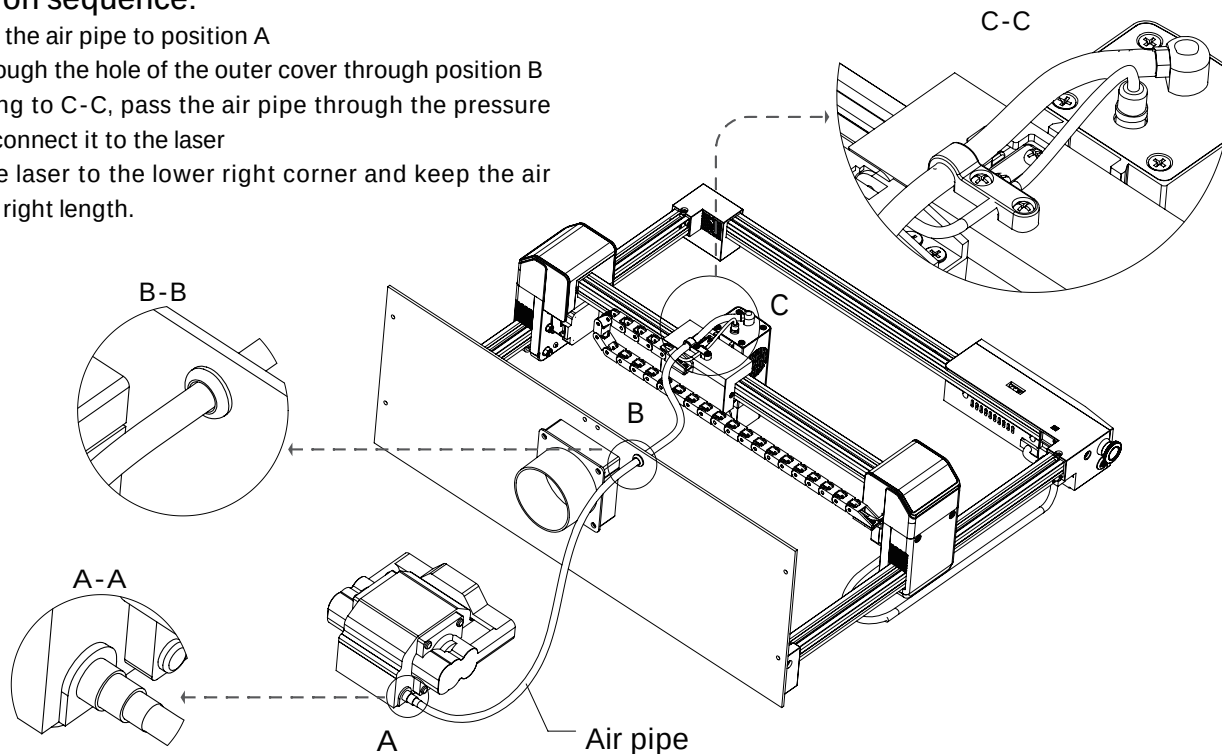
Connect the telescopic exhaust pipe to the air purifier:

- a. Connect the pipe to the air purifier:
- b. Turn on the air purifier and use it.



Installation sequence:

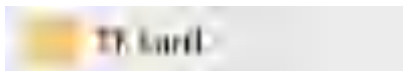
1. Connect the air pipe to position A
2. Pass through the hole of the outer cover through position B
3. According to C-C, pass the air pipe through the pressure block and connect it to the laser
4. Push the laser to the lower right corner and keep the air pipe at the right length.



1. Driver installation path:

Double-click the U disk folder/windows/driver/driver.exe/Click to install/Driver installation is successful

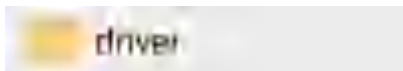
①



②



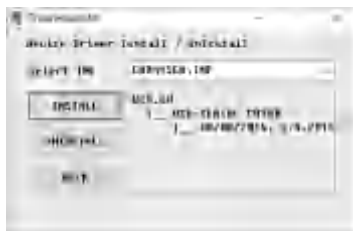
③



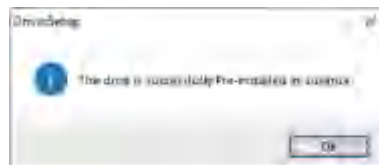
④



⑤ Click to install



⑥ Confirm to complete the installation



*Driver software acquisition method: Download from the designated website www.dkjxz.com

2. Software installation path:

Double-click U disk data file/windows/software/ Cut-LabX/Wait for the progress bar to complete the installation

- ①  TF card
- ②  01_Windows
- ③  software
- ④  CutLabX



⑤ Double-click CutLabX installation



⑥ Select the installation location and click "OK"



⑦ Wait for the progress bar to complete



⑧ Installation completed

3. Online operation:

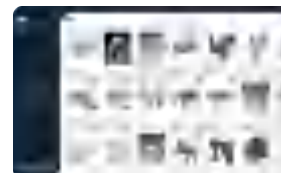
Use a data cable to connect the machine to the computer

Double-click the software icon-enter the creation interface-select the appropriate port

Click "Connect" when it becomes "Connected" to indicate a successful connection.



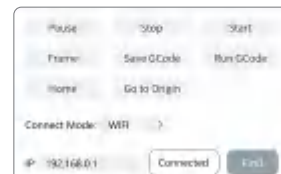
① Double-click the software icon



② Enter the homepage and click Start Creating



③ Select the appropriate port to connect



④ Connect successfully

Tip: If the antivirus software or computer manager pops up a risk prompt after clicking Laser_2.0.4(211018), the Laser_2.0.4(211018) file is a Win system installation package. If it is mistakenly identified as a suspicious file, please select Allow all operations of the program to successfully complete the software installation.

1. Driver installation path:

Driver installation path: Double-click U disk/02_MAC/driver/CH34x_Install_V1.4.pkg/Installation introduction/Installation type/Installation/Installation completed



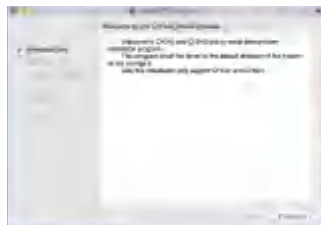
①



②



③



④ Click Continue



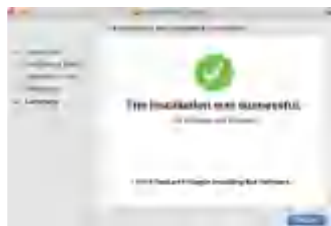
⑤ Enter the computer password



⑥ Click Continue installation



⑦ Continue installation



⑧ Complete installation

2. Software installation path:

Double-click the USB disk/02_MAC/software/Cut-LabX/software icon right/Complete the installation



①



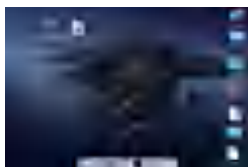
②



③



④



⑤ Double-click the software icon



⑥ Drag the icon to the right of the Applications folder



⑦ Complete the installation

3. Online operation:

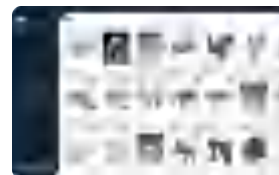
Use a data cable to connect the machine to the computer

Double-click the software icon-click the connection device icon-select the appropriate port

Click "Connect" when it becomes "Connected" to indicate a successful connection.



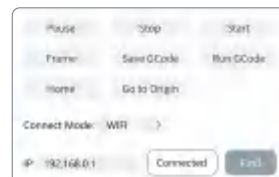
① Double-click the software icon



② Enter the homepage and click Start Creating



③ Select the appropriate port to connect



④ Connect successfully

Tip: When the machine is connected to MAC, you must select a name that begins with: W.ch.....

05 MOBILE SOFTWARE DOWNLOAD AND INSTALLATION

English

01

Method 1:

App download web: <https://www.cutlabx.com>

02

Method 2:

Scan the QR code to download



Web Download

Note:

1. For Android system, open the browser and scan the QR code to download.
2. After successful installation, the corresponding permissions must be granted.

06 MOBILE PHONE CONNECTION

1. Steps to connect the mobile phone to the machine: Default WiFi

*Note: After the mobile phone is successfully connected to the machine, the mobile phone will have no network.

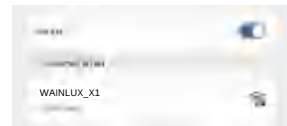
01

Turn on the machine and turn it on



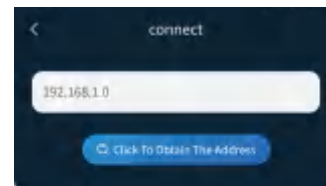
02

Turn on the mobile phone's WLAN and find the WIFI signal
The name is WAINLUX_X1, and the password is 12345678



03

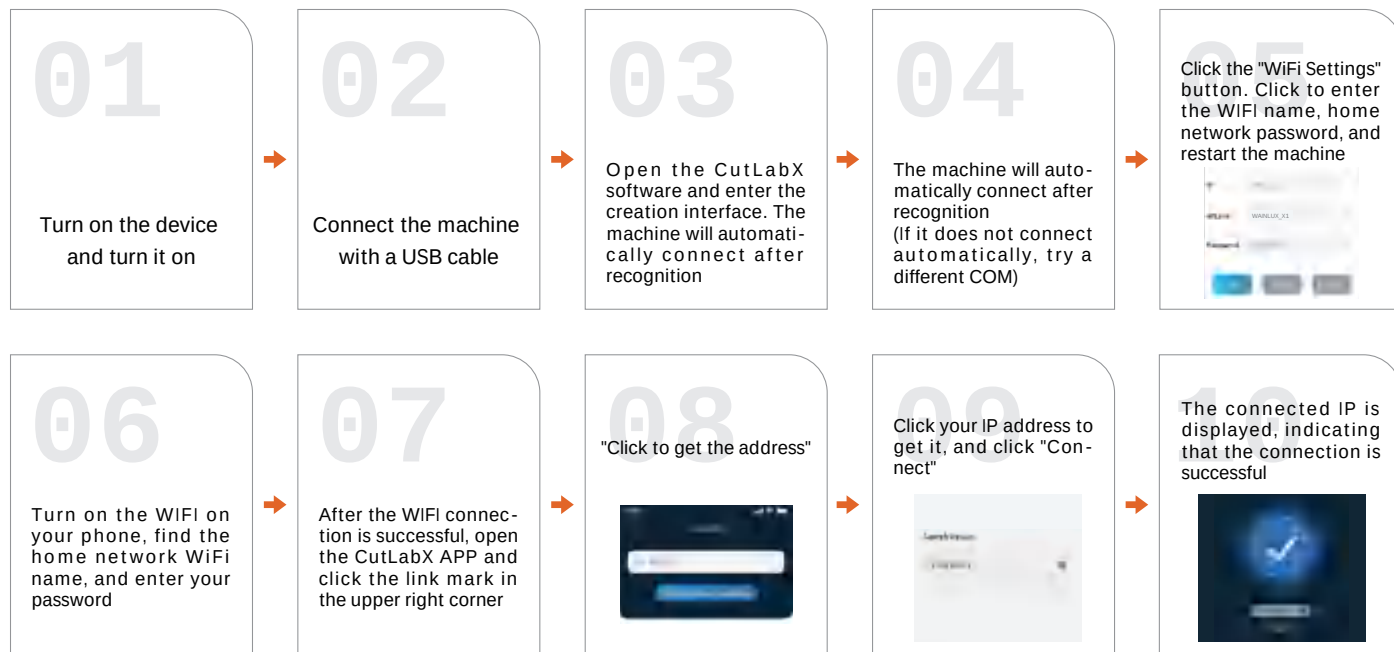
After the WIFI connection is successful, open the CutLabX APP,
Click the link mark in the upper right corner,
Enter 192.168.0.1 as the IP address,
and click "Connect" to complete the connection.



(Tip: When using WiFi mode, the machine and the mobile phone must be in the same WiFi network)

06 MOBILE PHONE CONNECTION

2. Steps to connect the phone to the machine: Home network



(Tip: To use the WiFi mode, the machine and the phone must be in the same WiFi network)

07 COMPUTER CONNECTION

3. Steps to connect the computer to the machine via USB

*Note: Install the driver according to your computer system (see driver installation instructions).

01

Turn on the machine and turn it on



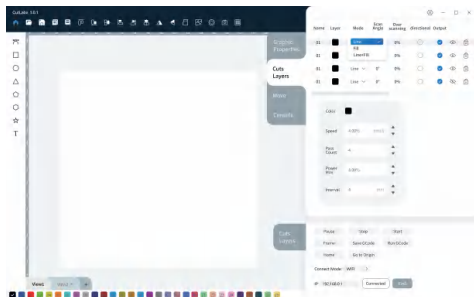
02

Connect the WAINLUX_X1 machine with a USB cable



03

Open CutLabX software and enter the creation page



04

Automatically identify the machine and connect
(If it does not connect automatically, you may need to try another COM)



(Tip: When the machine is connected to a MAC, you must select the name that begins with: W.ch.....)

FAQ-Machine-related issues

Questions	Solutions
What type of laser source does the machine use?	It is a semiconductor laser
What happens if the machine loses power during operation?	When the power is cut off during an engraving task, the laser head will remain in place. When the power is turned on again, the machine will initialize and will not continue the original task.
Why can't the pattern be engraved at all (or the engraving is very shallow)?	The imported picture should be clear and the color should not be too light; before engraving, please make sure the focus is correct and the power, speed and time settings are appropriate.
What if the pattern is not engraved completely (or the depth is inconsistent)?	Please make sure that the engraving object is flat, the machine is level, and it has been adjusted normally according to the operating instructions.

FAQ - Machine related issues

Questions	Solutions
How to focus the WAINLUX X1 laser engraving machine?	Place the material on the stage, lower the left knob to focus, and lock it after focusing. For example, engrave and cut a 2mm thick basswood board.
Will the working platform be damaged during laser engraving?	During the engraving or cutting process, the laser may penetrate the object and leave marks on the work surface. Be sure to place an object that the laser cannot penetrate under the engraving object, such as: stainless steel plate, aluminum alloy plate, etc.
Why can't I start engraving when pressing the button on the host during offline engraving?	Make sure there is an engraving file in the root directory of the TF card and the TF card is inserted. Note: - The machine reads the engraving file with the latest modification date in the root directory of the TF card by default. It is recommended to delete other irrelevant files in the root directory. - This file can be generated by LaserGRBL, LightBurn, and CutLabX software, and the compatible format is NC. If GC is generated by default, please manually modify the file suffix to NC.
Why does the machine not respond after turning on?	- Check whether the power plug on the machine end is fully plugged in. - Check the electrical status of the power socket. - Check whether the power switch and light shield on the machine are closed.

FAQ-Machine related issues

Questions	Solutions
Why can't the machine connect to the computer after it is turned on?	a. Reinstall the driver, the driver shows that it has been installed, indicating that the driver is normal. When the driver display is pre-installed, you need to check whether it is the original wiring or not connected to the machine. Please use another port on the computer. b. Is the port selection correct? Some computers will have 2 ports when connected. Please ignore com1 and select another com port. (The port number of the MAC must start with Wchusbserial to work properly) c. Close other software that occupies the com port. When using Lasergrbl to connect, it cannot connect when you open CutLabX. You need to close Lasergrbl to use it normally. *Note: In Lightburn, the machine can store multiple machine information, please select the appropriate configuration information according to the model.
Why can't the mobile phone be used after the machine is turned on?	a. Please use the mobile phone according to the manual. b. If the connection is abnormal due to incompatibility of the newly released mobile phone or system upgrade, please provide a screenshot of the mobile phone configuration and contact our customer service to get technical support as soon as possible.

FAQ-Engraving/Cutting Related Questions

Questions	Solutions
What non-transparent materials can the WAINLUX X1 laser engraver engrave or cut?	Engraving: cardboard, wood, bamboo, rubber, leather, cloth, acrylic, plastic, etc.; Cutting: cardboard, wood, bamboo, cloth, leather, cloth, acrylic (transparent acrylic cannot be cut), plastic, etc.
Can it be engraved on curved materials?	Yes, but the curvature of the material and the area of the engraved image should not be too large, otherwise there will be slight deformation.
Can it be engraved on reflective/transparent materials such as ceramics/glass?	Yes, but before engraving, anti-reflective materials (such as laser colored paper, black marker) need to be applied to the surface of the material to ensure the engraving effect and prevent reflected light from damaging the laser module.
Why do materials of the same material but different colors have very different processing effects using the same G-code file?	Materials of different colors have different optical properties and absorb and reflect laser energy differently. When engraving materials of the same material but different colors, it is recommended to set different powers and speeds in the software.

FAQ-Engraving/Cutting Related Questions

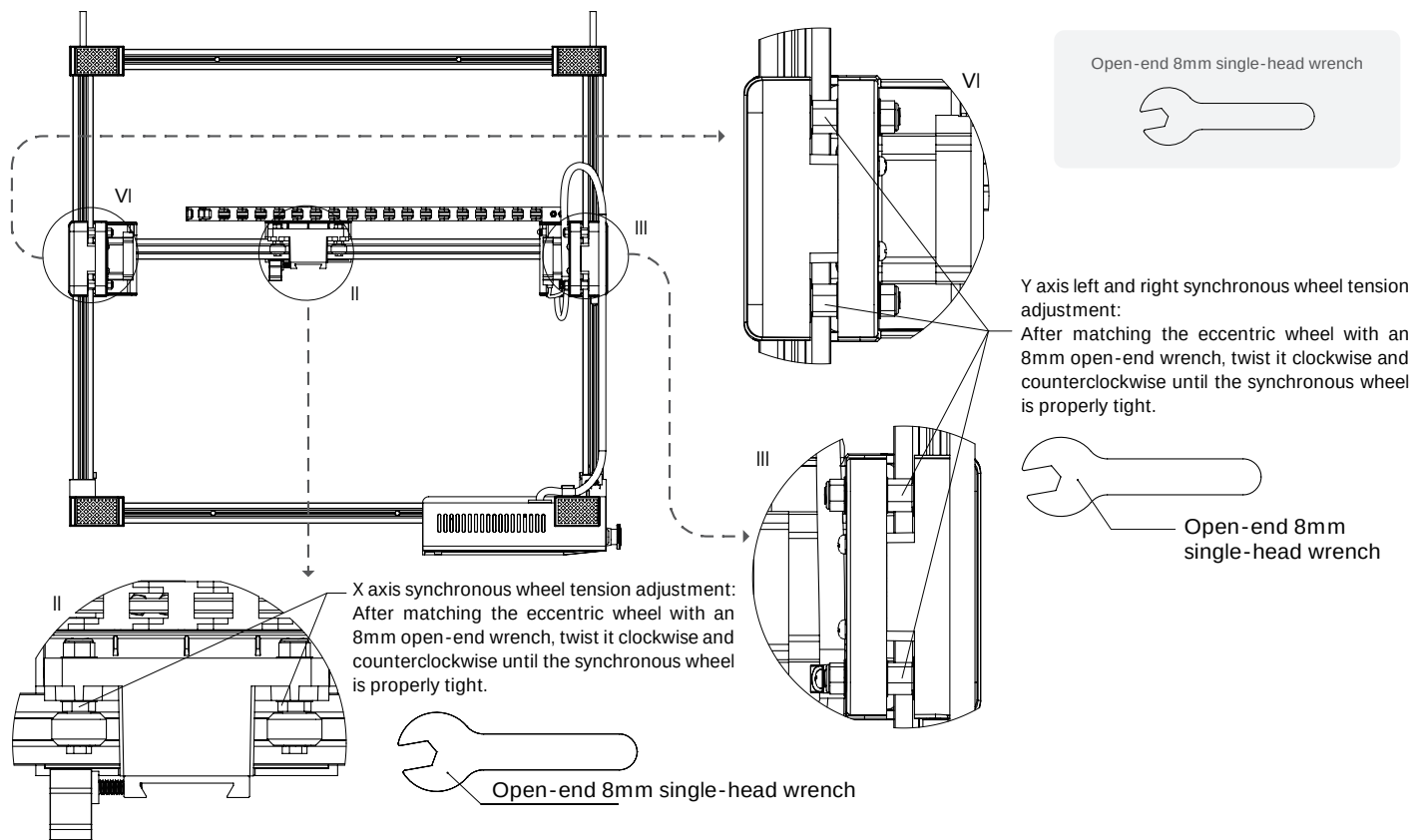
Questions	Solutions
There is a lot of smoke on the cut material, how to deal with it?	Please reduce the laser power and increase the speed appropriately.
Why can't the material be cut?	1. Make sure the machine and the engraving material are parallel to the work surface; 2. Make sure the laser module protective lens is clean; 3. Make sure the focus mode is correct; 4. Confirm the material thickness again and set it according to the recommended parameters in the random data; 5. Gradually increase the number of cuts, or appropriately reduce the cutting speed.

FAQ-Software related questions

Questions	Solutions
What software does the WAINLUX X1 laser engraver support?	LaserGRBL (free) - Real-time LightBurn (paid) - Real-time/offline 30-day trial CutLabX (free) - Real-time/offline/mobile During real-time engraving, be careful not to let the computer freeze or enter standby mode (do not lock the screen) to avoid affecting the engraving.
Where can I download these software?	LaserGRBL (https://lasergrbl.com/download/) LightBurn (https://lightburnsoftware.com/pages/trial-version-try-before-you-buy) CutLabX (www.cutlabx.com)
What image formats does the software support?	LaserGRBL (bmp/png/jpg/gif/svg) LightBurn (bmp/png/jpg/jpeg/gif/tif/tiff/tga/ai/pdf/sc/dxf/hpgl/plt/rd/svg) CutLabX (AI, PDF, SVG, DXF, PLT, PNG, JPG, GIF, BMP)
Where can I get tutorials for the software?	LaserGRBL (https://lasergrbl.com/usage/) LightBurn (https://lightburnsoftware.github.io/NewDocs/) CutLabX (www.cutlabx.com)

09 MAINTENANCE AND CARE

X/Y AXIS ECCENTRIC NUT ADJUSTMENT

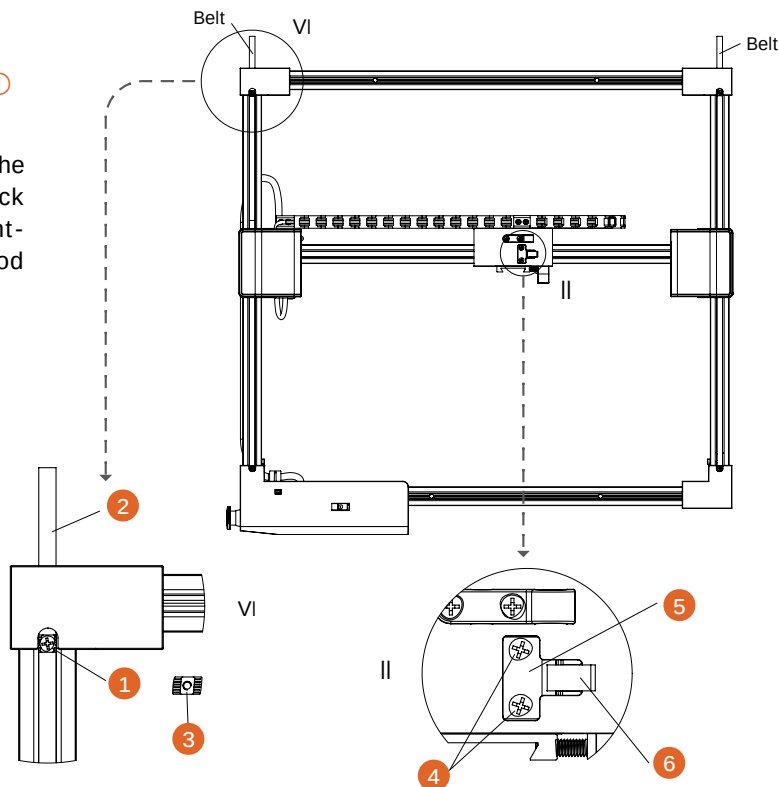


Y axis belt adjustment sequence:

1. Use a cross screwdriver to completely loosen screw ①
2. Then turn nut ② counterclockwise about 80 degrees
3. Use pliers to tighten the belt and pull it outward to the appropriate tightness, then turn the nut clockwise back to its original position, and finally install screw ③ to tighten the left and right Y axis belts. The adjustment method is the same

X axis belt adjustment sequence::

4. Use a cross screwdriver to loosen screw ④
5. Loosen the belt pressure piece ⑤ upwards
6. Use pliers to tighten the belt and pull it outward to the appropriate tightness, then tighten the screw ⑥ on the belt pressure piece



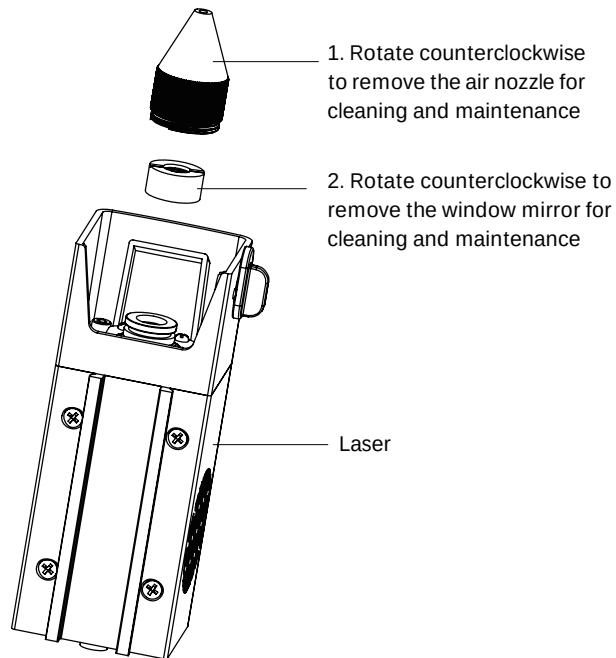
* You can do some of the following regularly to keep your WAIN-LUX X1 in good working condition and reduce wear and tear on your engraving machine.

* Clean the laser module lens Over time, particles can deposit on the outer lens of the laser module. This can reduce the power output of the module and heat the lens.

* If you find that your laser is having trouble cutting materials that you previously had no problems with, it may be time to clean the lens.

* Remove the laser from the machine, turn the knob to the right, and gently clean the lens with a cotton swab or alcohol wipe dipped in alcohol.

* When in use, connect the air pump module and select the appropriate air volume level based on what you need.





WAINLUX

LASER ENGRAVING MACHINE



Support@wainlux.com
Service@wainlux.com