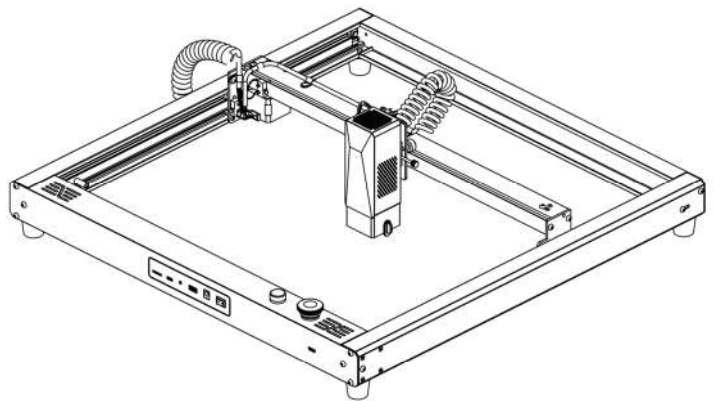


L1 User Manual



L1 Engraving Machine User Manual
Please read this manual carefully before use

Safety Instructions

Thank you for purchasing our company's laser engraving machine, which is a high-tech product integrating light, machine and electricity. In order for you to better use and maintain the equipment, please read the instructions carefully and follow the steps in the instructions.

Hereby Certify!

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

Safety Instruction

Before using the equipment, the user must read this operating manual carefully and strictly abide by the operating procedures. Laser processing may be risky, users should carefully consider whether the processed object is suitable for laser processing. Processing objects and emissions should comply with local laws and regulations.

*This equipment uses four types of lasers (strong laser radiation), which may cause the following conditions:

- ① It will ignite the surrounding combustibles;
- ② In the laser processing process, other radiation and toxic and harmful gases may be generated due to different processing objects;
- ③ The direct exposure of laser radiation can cause human injuries. The place of use must be equipped with fire-fighting equipment. It is forbidden to stack flammable and explosive materials on the workbench and around the equipment. At the same time, it is necessary to maintain good ventilation.

*The environment where the equipment is located should be dry, free of pollution, vibration, strong electricity, strong magnetism, etc. Working environment temperature 5~30°C, working environment humidity 35-65% (non-condensing water)

★The working voltage of the equipment: AC100-240V.

*Only when the engraving machine and other related equipment have a safety grounding wire can it be turned on and operated.

★When the equipment is turned on, it needs to be on duty throughout the whole process. The operator must cut off all power before leaving to prevent abnormal conditions. If any, please cut 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 being reflected on the human body or flammable objects.

Safety Instructions

Pay attention to!



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



2. The brightness of the laser is harmful to the eyes, please try not to look directly at the laser

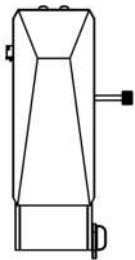


3. Keep your hands away from the machine when the machine is working to avoid injury



4. Turn off the machine switch when the machine is not in use to avoid third-party operations

Machine Care and Maintenance



Laser modules are consumables, so it's recommended as follows:

Power off the machine for 10 minutes after 4 hours of engraving,

Power off the machine for 10 minutes after 1 hour of cutting.

Contents

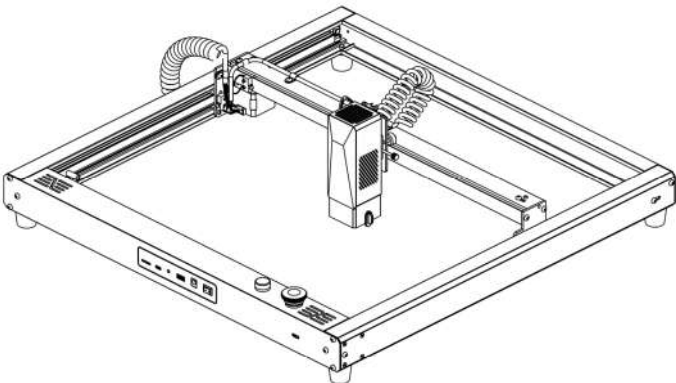


01	Product parameters	01
02	Product and Accessories	02
03	Structure and Assembly	03
04	Laser Module Focus	12
05	Function Display	13
06	Software Download and Installation on PC	14
07	Software Download and Installation on Mobile Phone	23
08	Open-Source Program	29
09	Warranty.....	34
10	FQA	35

01 Product Parameters

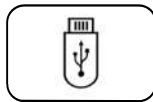
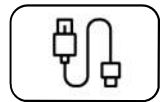
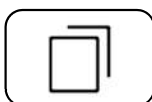
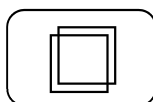
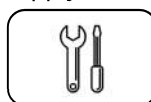
Model	L1
Material	High-strength aluminum, anodized
Laser Module	JG1740B05W Optical Power: 5W; /JG1845B Optical Power:10W
Best Focal Length	5mm
Focus Range	50mm
Power Supply	DC12V/5A
Communication Port	Dual-Mode Bluetooth 5.0 with wireless connection supports IOS and Android APP.
	USB-Type C wired connection supports MAC and Windows APP.
Heat Dissipation	Air Cooling
Laser Service Life	>10000 hours
Engraving Area	400*400mm
Engraving Accuracy	0.05mm
Engraving Speed	150mm/S
Applicable Materials	Paper, Wood, Bamboo, Cloth, Acrylic, Plastic, Leather, Bread, Fruit, Glass, Ceramic, Stainless Steel
Applicable System	Windows/MAC/Android/IOS
Image Format	JPEG/BMP/GIF/PLT/PNG/DXF/JPG, etc
Product Size	604.5*602.5*156mm
Packing Size	645*250*195mm

02 Products and Accessories

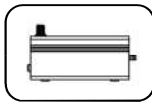
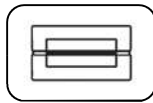
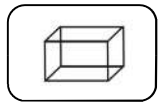


Accessories Details

【Standard accessories】

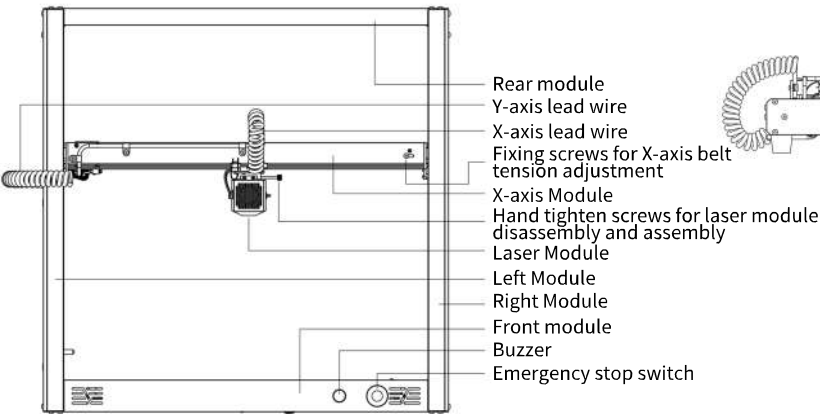
			
TF card	Card reader	Machine Power Supply	Type-C data cable
			
Kraftpaper *2	Board *2	Tool *5	Manual
			
Marker	Brush		

【Optional accessories】

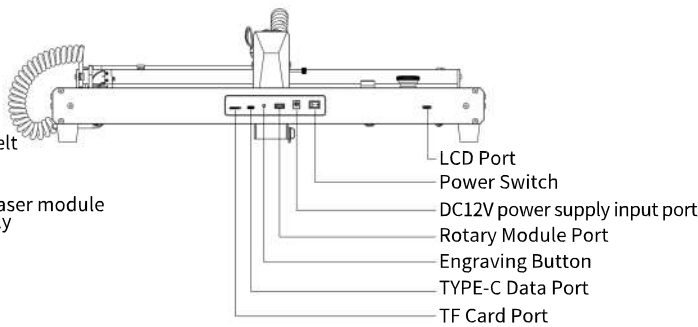
		
Air pump module	Mini roller	Heightening Module

03 Structure and Assembly

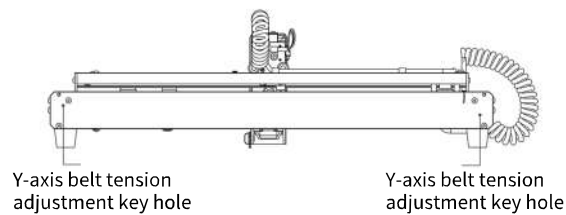
Top View



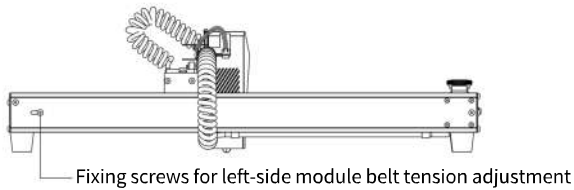
Front View



Back View

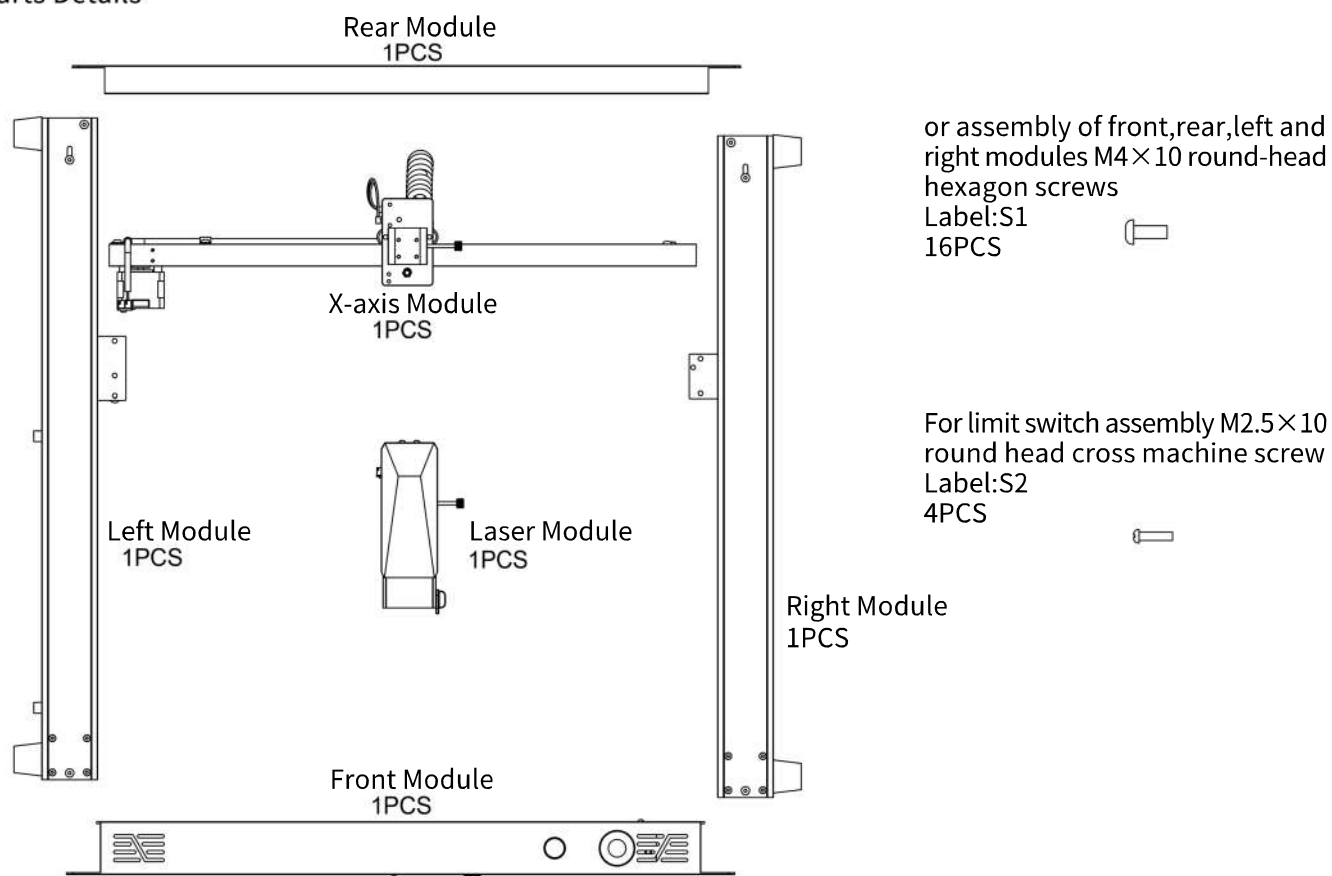


Left View

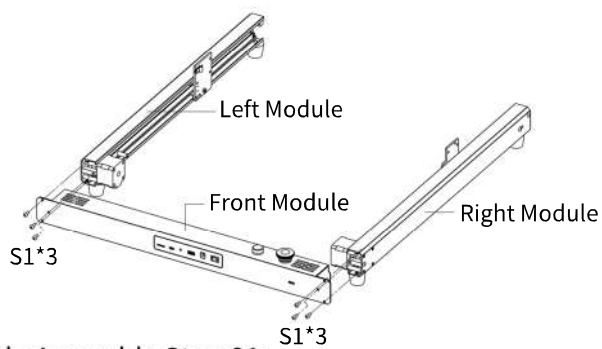


03 Structure and Assembly

Parts Details

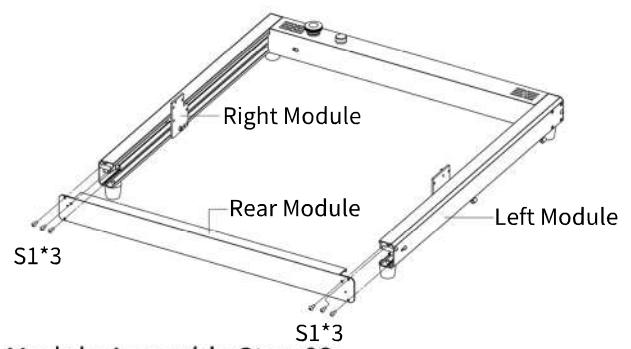
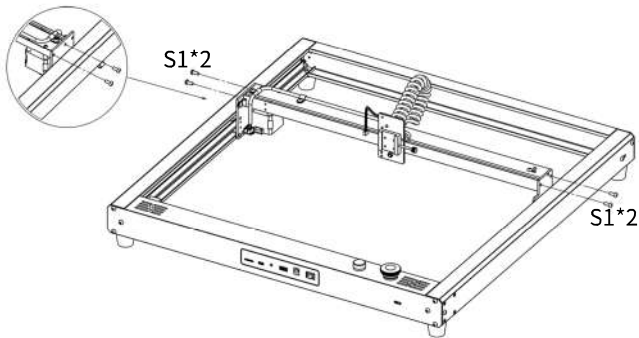


03 Structure and Assembly



Module Assembly Step 01:

1. Install the left module into the front module, Use S1 screw through the front module and tighten the screw with 2.5mm inner hexagon wrench
2. Install the right module into the front module, Use S1 screw through the front module and tighten the screw with 2.5mm inner hexagon wrench



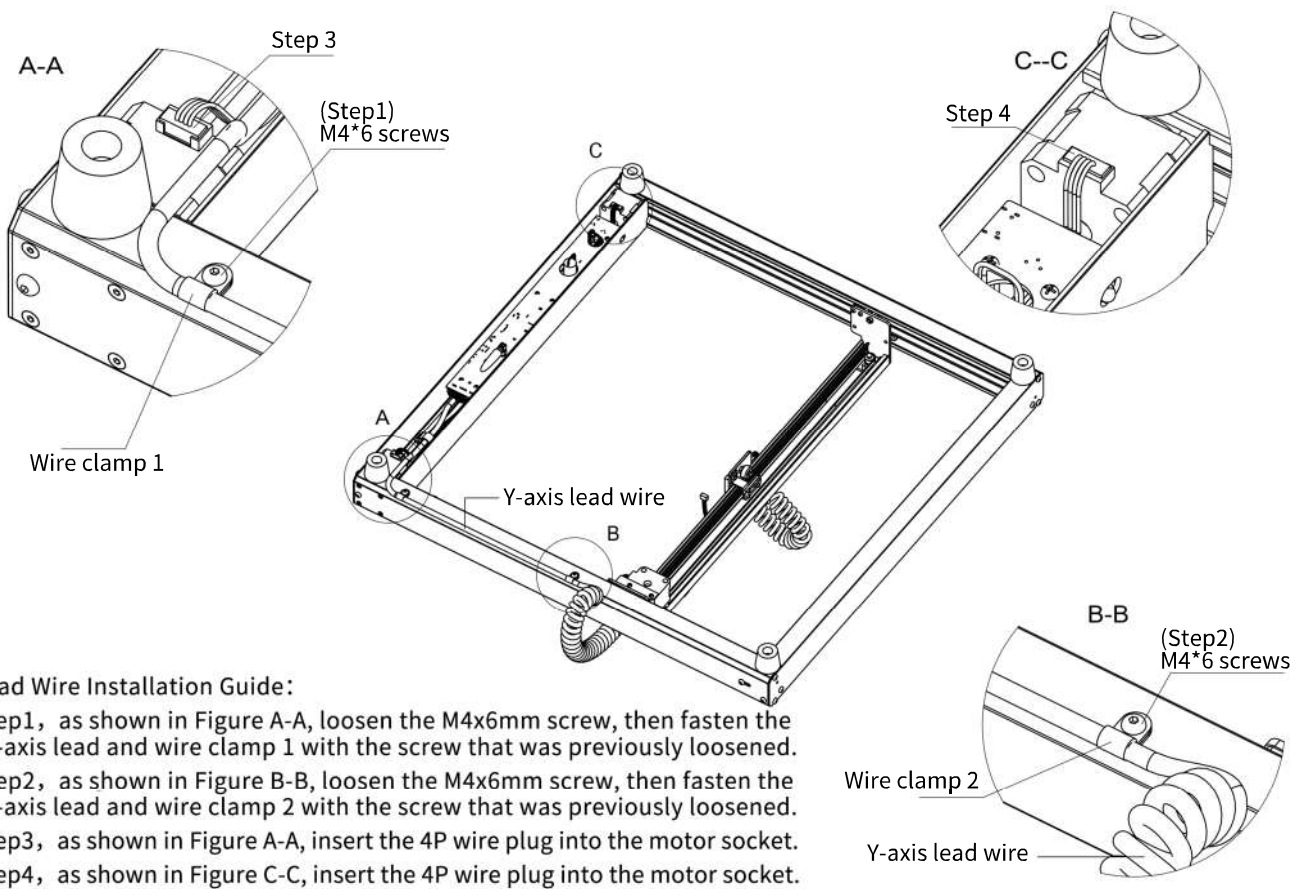
Module Assembly Step 02:

1. Insert the rear module into the left module and the right module, use S1 screw through the rear module, and tighten the screw with 2.5mm inner hexagon wrench

Module Assembly Step 03:

1. Insert the X-axis module into the left module and the right module, use S1 screw through the left module and the right module, and tighten the screw with 2.5mm inner hexagon wrench

03 Structure and Assembly



Lead Wire Installation Guide:

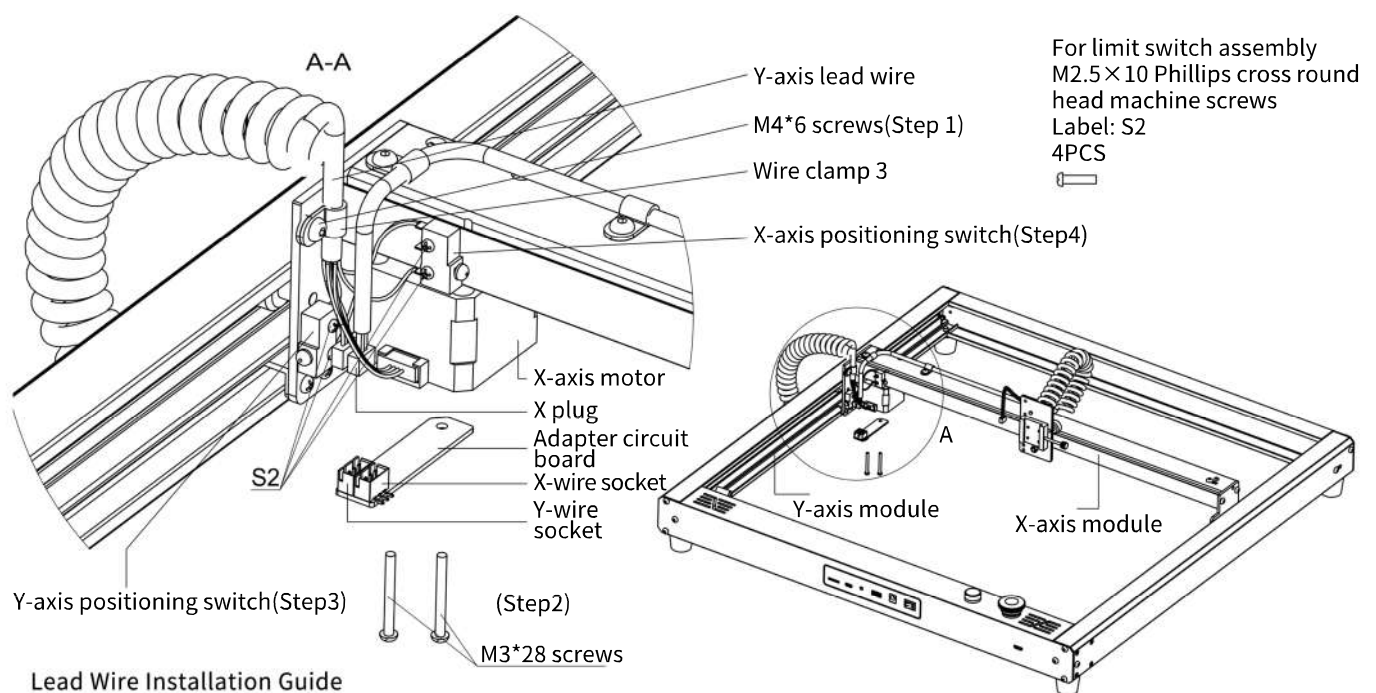
Step1, as shown in Figure A-A, loosen the M4x6mm screw, then fasten the Y-axis lead and wire clamp 1 with the screw that was previously loosened.

Step2, as shown in Figure B-B, loosen the M4x6mm screw, then fasten the Y-axis lead and wire clamp 2 with the screw that was previously loosened.

Step3, as shown in Figure A-A, insert the 4P wire plug into the motor socket.

Step4, as shown in Figure C-C, insert the 4P wire plug into the motor socket.

03 Structure and Assembly



Lead Wire Installation Guide

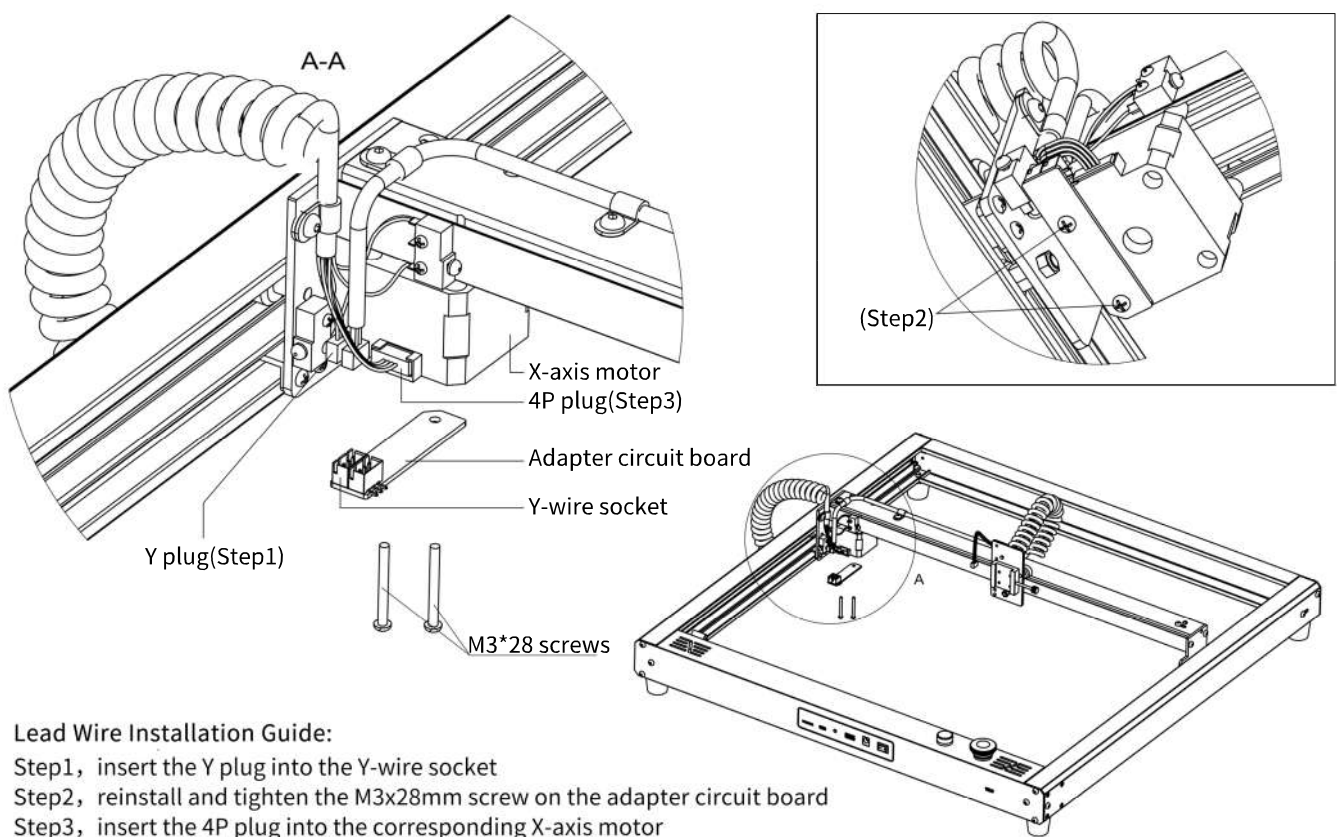
Step1,as shown in Figure A-A, loosen the M4x6mm screw, then fasten the Y-axis lead and wire clamp 1 with the screw that was previously loosened.

Step2,as shown in Figure B-B, loosen the M4x6mm screw, then fasten the Y-axis lead and wire clamp 2 with the screw that was previously loosened.

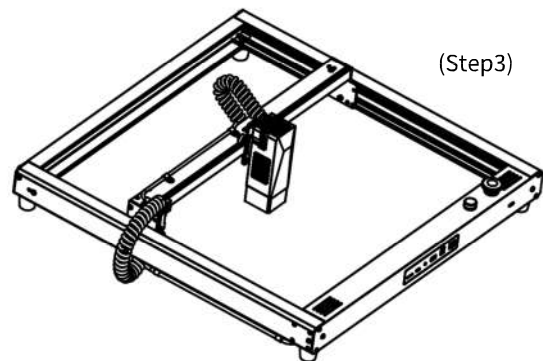
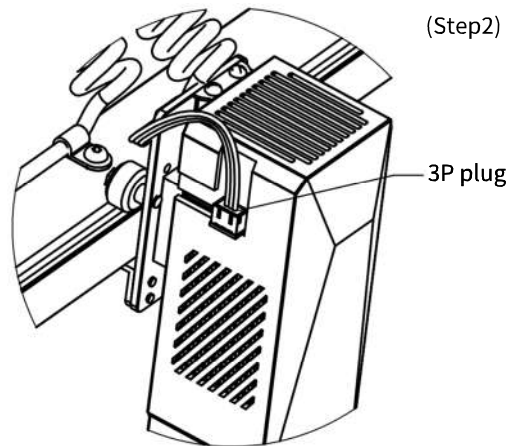
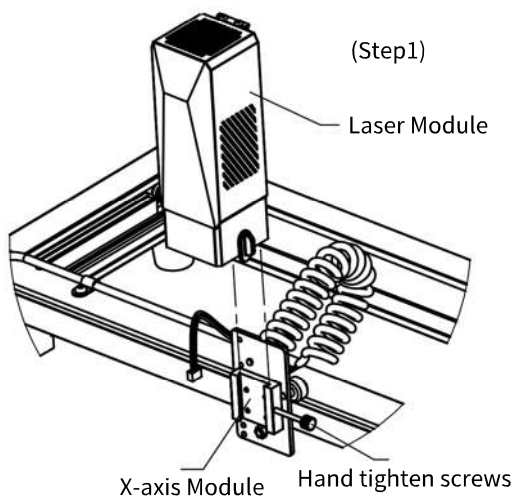
Step3,as shown in Figure A-A, insert the 4P wire plug into the motor socket.

Step4,as shown in Figure C-C, insert the 4P wire plug into the motor socket.

03 Structure and Assembly



03 Structure and Assembly



Step1,install the laser module into the X-axis module from top to bottom, adjust the height as necessary, and then secure them with hand tighten screws.

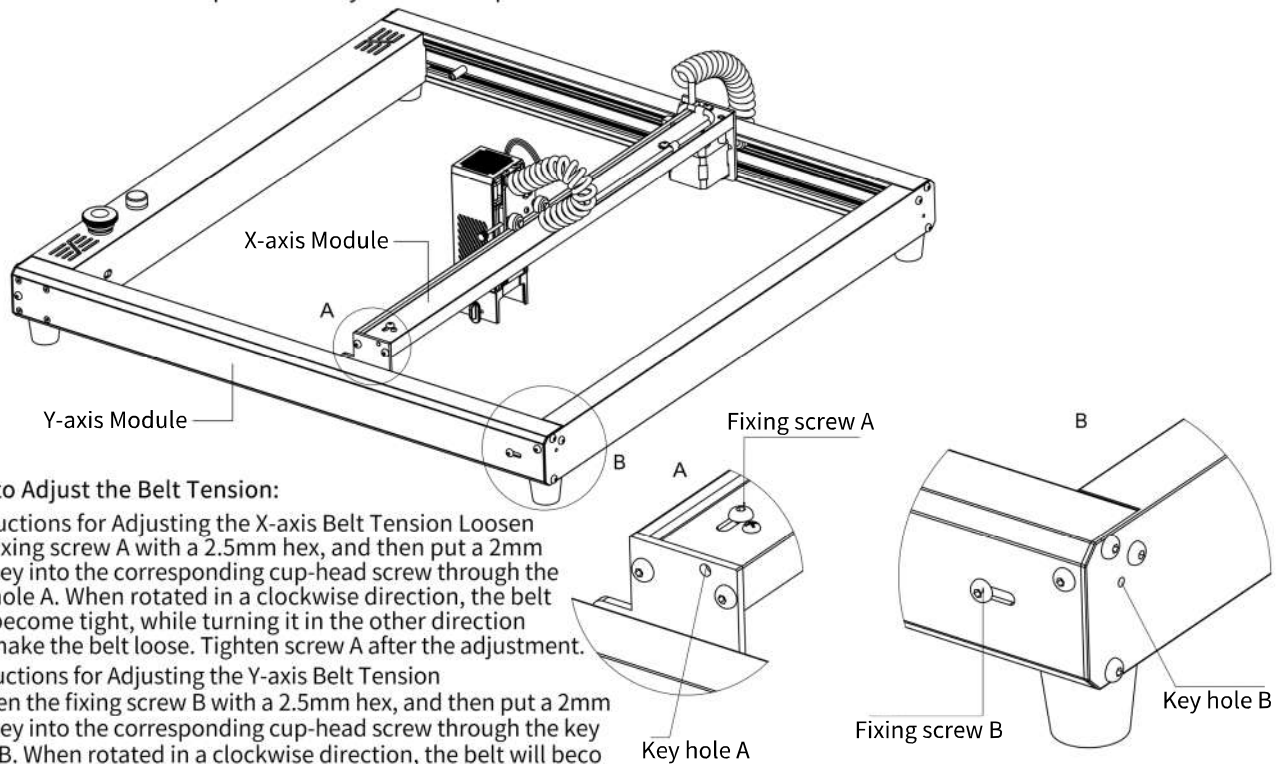
Step2,insert the 3P plug into the corresponding laser module socket.

Step3,the assembly is complete.

03 Structure and Assembly

Only adjust the timing belt when it is loose.

NOTE: Perform this operation only if there is a problem with the machine.



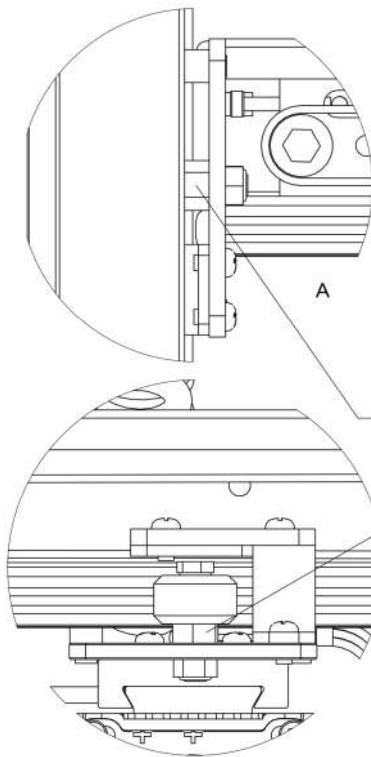
Steps to Adjust the Belt Tension:

1. Instructions for Adjusting the X-axis Belt Tension Loosen the fixing screw A with a 2.5mm hex, and then put a 2mm hex key into the corresponding cup-head screw through the key hole A. When rotated in a clockwise direction, the belt will become tight, while turning it in the other direction will make the belt loose. Tighten screw A after the adjustment.
2. Instructions for Adjusting the Y-axis Belt Tension Loosen the fixing screw B with a 2.5mm hex, and then put a 2mm hex key into the corresponding cup-head screw through the key hole B. When rotated in a clockwise direction, the belt will become tight, while turning it in the other direction will make the belt loose. Tighten screw B after the adjustment.

03 Structure and Assembly

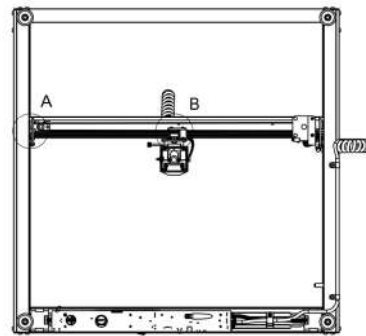
NOTE: Make adjustments only when the timing belt and guide rail are loose.

NOTE: Perform this operation only if there is a problem with the machine.



Tension Adjustment of Y-axis Timing Pulley: Align the eccentric pulley with an 8mm open-end wrench, and then rotate it clockwise/counterclockwise directions until the tension is appropriate.

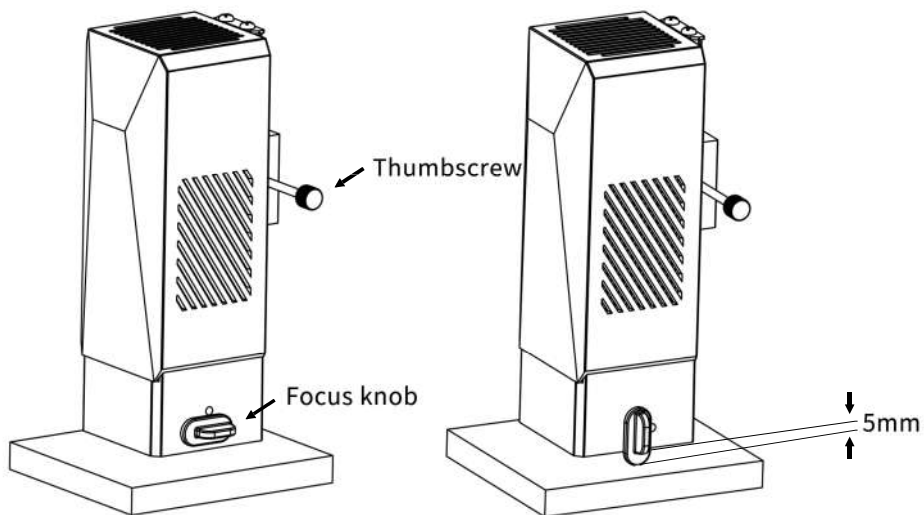
Tension Adjustment of X-axis Timing Pulley: Align the eccentric pulley with an 8mm open-end wrench, and then rotate it clockwise/counterclockwise directions until the tension is appropriate.



04 Laser Module Focus

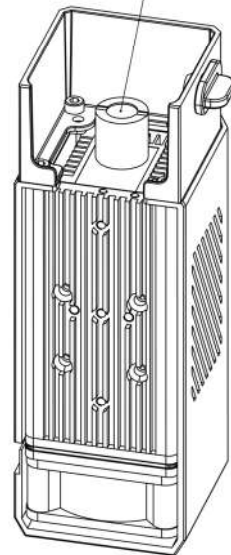
Focus

1. Turn the focus knob to make it vertically downward;
2. Loosen the thumbscrew to make the focus knob contact with the object to be engraved, then fix the thumbscrew and turn the focus knob.



Lens Cleaning

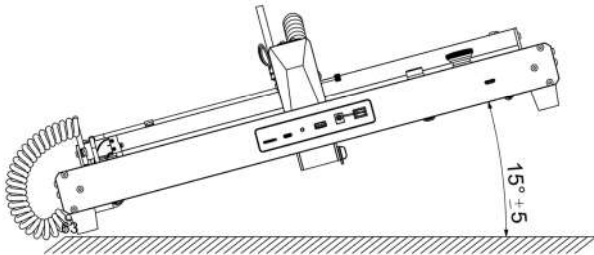
Please wipe the lens of laser head module gently with alcohol cotton to remove the dirt.



05 Function Display

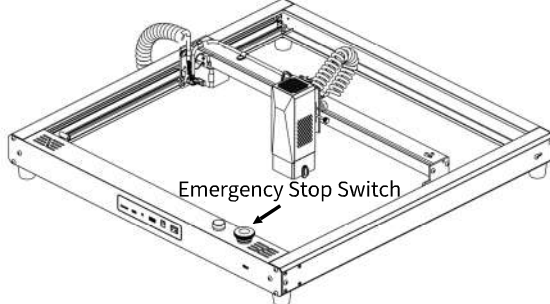
1. Inclination protection;

If the machine inclination is $15 \pm 5^\circ$ than the horizontal plane for over one second, the machine will stop running immediately, the laser module will stop strong laser output and change the laser into weak flickering at 0.5s of interval. The machine must be restarted to resume normal operation in the case of protection state.



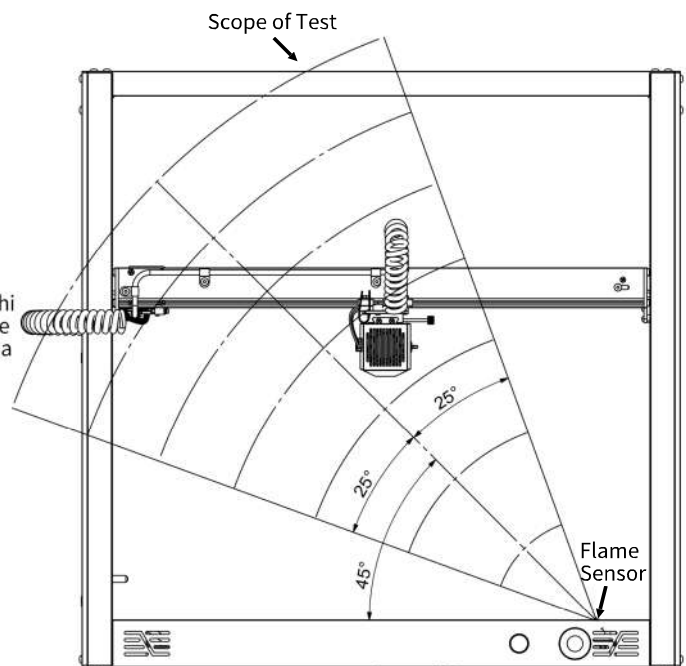
2. Emergency Stop Switch

When the emergency stop button is pressed, the power supply of the machine will be promptly shut off, and it will come to a complete halt. After the emergency stop switch has been released by turning it clockwise, the machine will go into the reset mode.



3. Fire Protection;

Upon detection of a fire, the flame sensor will trigger a sound and light alarm. When an open fire is detected, the machine will instantly stop working, and the laser module will immediately halt strong light output and transform into weak light flashing. After this, it will turn on and off in an alternate cycle for 0.5 seconds. After going into protection mode, the machine must be switched back on to work normally again.



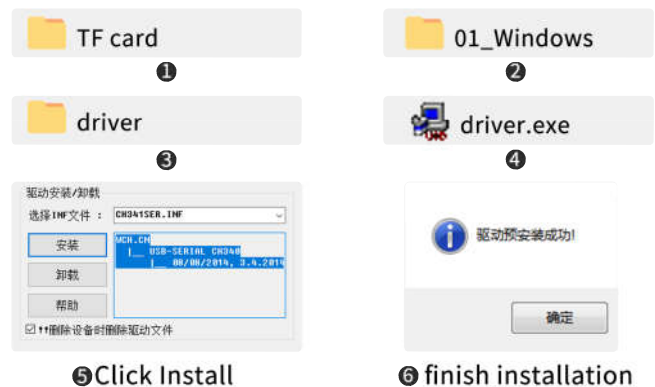
06 Software Download and Installation on PC

Software can be acquired as follows:

Method 1: Acquire the driver, software, photos and other data from the USB flash disc provided (Note: Before the use for the first time, please copy all the data from the USB flash disc to your computer as backup to prevent accidental loss due to improper operation.)

Method 2: Download at the designated website
Windows/MAC Download URL:
www.dkjxz.com

Driver installation in Windows



1.Path to Install Driver:

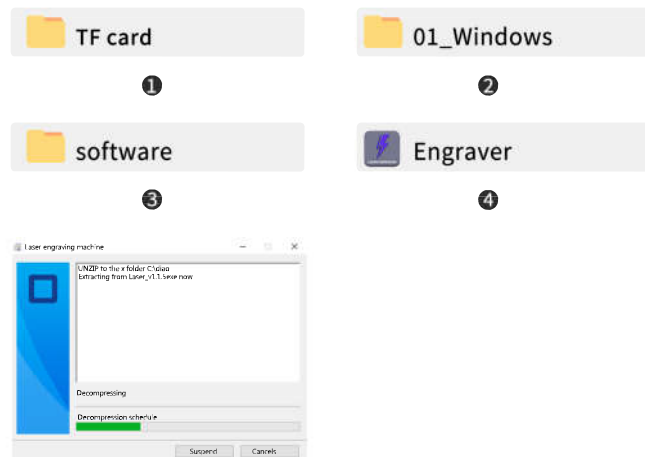
Enter the memory disk and double click the folder /01-windows/driver/driver.exe/click Install/ Driver installation completed. Please watch the relevant installation demonstration video in the USB memory disk for detailed installation steps.

 Video of Win driver and software installation

06 Software Download and Installation on PC

2.Path to Install Software:

Enter the flash disk and double click the folder:/win-
dows /software/Engraver/ After the progress
bar has done,the installation is completed /Laser.



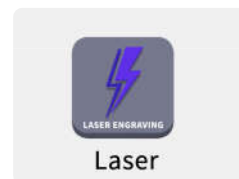
⑤ After the progress bar has
done, Laser installation is
completed.

Tips:

After clicking Engraver, if anti-virus software or PC Man-
ager prompts to warn the risks. Engraverfile is a win
system installation package. If it is misjudged as a suspi-
cious file,Please select “allow all operations” to com-
plete the software installation.

3.Online Operation:

Connect the machine to the computer with data cable
Double click the software icon — click the “connect device”
icon — the icon turns blue to complete the online connection



① Double click the
software icon



② Click the “connect
device” icon

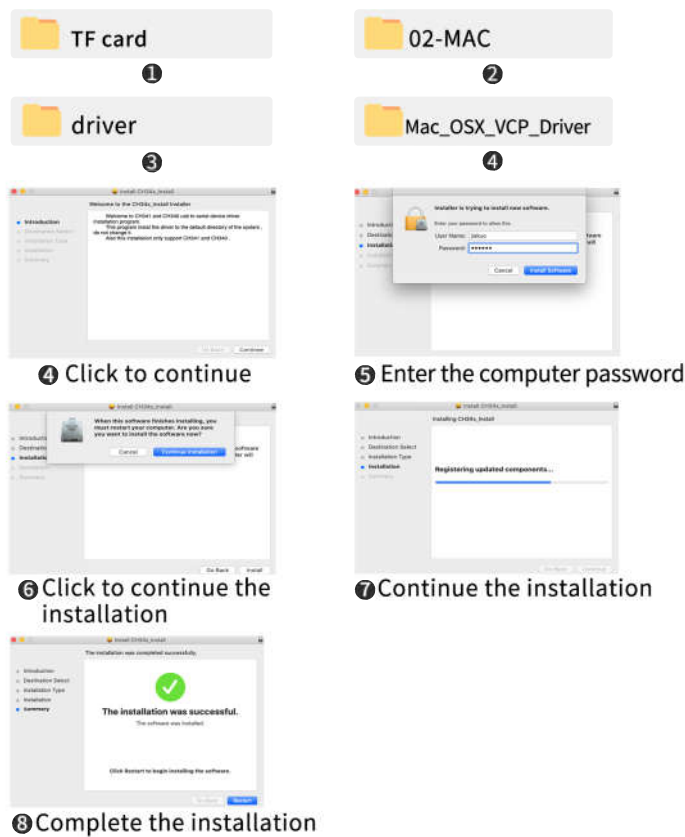


③ The icon turns blue to
complete the online
connection



06 Software Download and Installation on PC

Mac Driver Installation



1.Path to Install Driver:

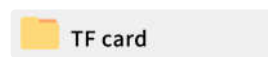
Path to Install Driver: Enter the USB flash disk and double click the folder: 02_MAC/driver/Mac_OSX_VCP_Driver/Installation introduction/installation type/installation/installation completed

Note: The software can be installed after the driver has been installed, please watch the video for detailed operation.

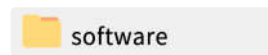
 Video of MAC driver and software installation

06 Software Download and Installation on PC

Mac software installation and online Introduction



①



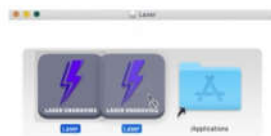
③



④ Double click the software icon



②



⑤ Left click the icon and drag into the Applications folder in the right



⑥ Complete installation

2. Path to Install Software:

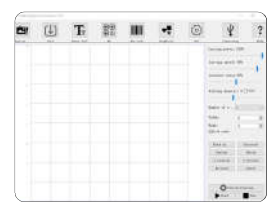
Enter flash disk and double click the folder: 02_MAC /software/Engraver/move software icon to the right/ complete installation

3. Online operation:

Connect the machine to the computer through data cable
Double click the software icon — click “connect device” icon — the icon turns blue to complete the online connection



① Double click the software icon



② Click “connect device” icon

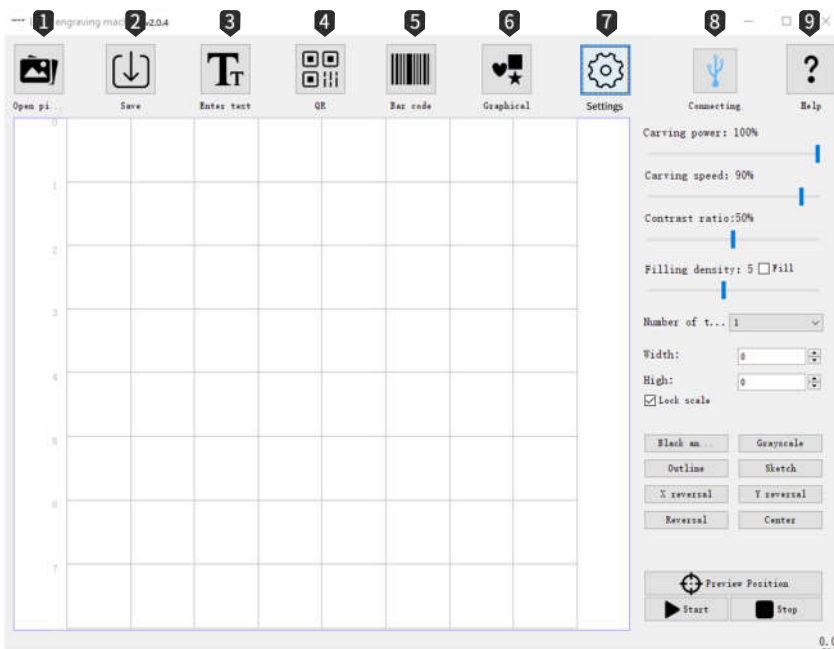


③ The icon turns blue to complete the online connection



06 Software Download and Installation on PC

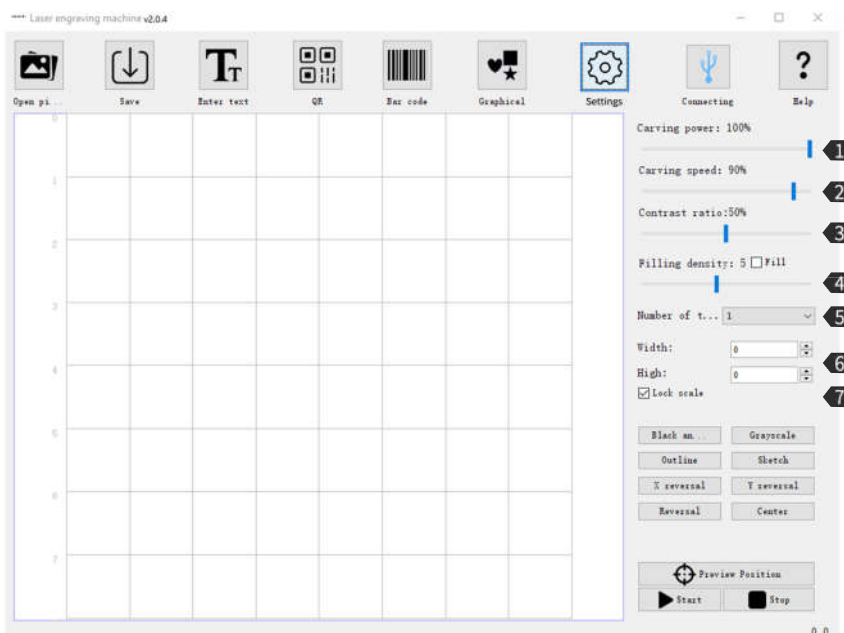
Introduction to Icon Functions in Software Interface:



- 1 Open**
Load photos from computer
- 2 Save**
Save the edited texts and photos
- 3 Input Text**
Import text, font, size, horizontal, vertical, vectorization Editing function
- 4 QR code**
Create QR code
- 5 Bar Code**
Create Bar code
- 6 Graphics**
Round-square-heart-pentagon, quick creation
- 7 Settings**
Set the parameters of low light power; set whether to activate the roller
- 8 Connect to device**
The icon turns blue after the connection is done
- 9 Help**
Open the link; watch the demo video and refer to the FAQ

06 Software Download and Installation on PC

Setting of Software Parameters:



① Engraving Power

Adjust the power level to engrave different materials

② Engraving Speed

Set the engraving speed, the engraving speed of determines the engraving depth

③ Contrast

Drag the slider to adjust the contrast of text and photo



④ Filling Density; Filling

The filling effect can only be effective for vector graphics, select vectorization, Click Fill on the text photo, drag the fill slider to adjust the filling density

⑤ Engraving Times

Set the number of engraving times

⑥ Width; Height

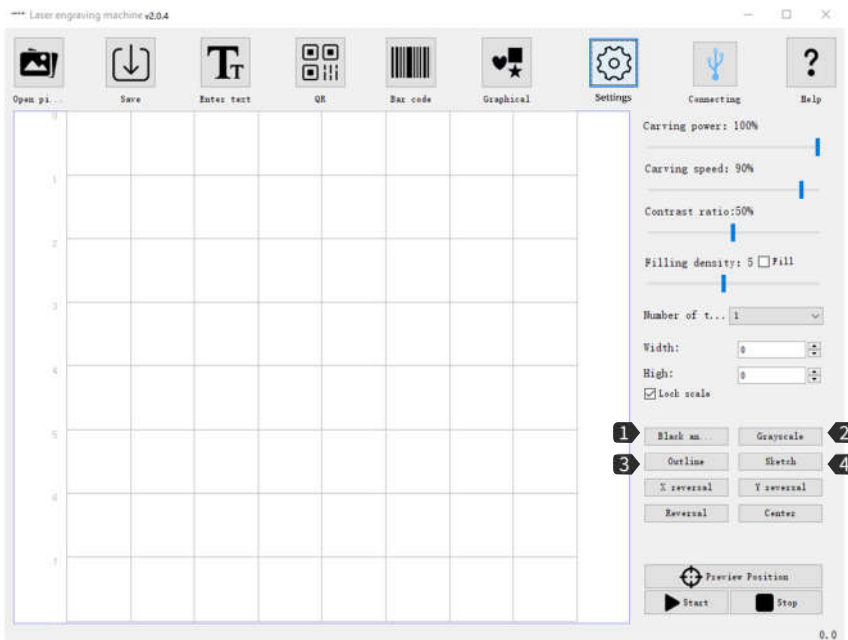
Adjust the width and height of text photo separately at will

⑦ Proportional Zoom

Lock photo text to proportionally zoom in/out

06 Software Download and Installation on PC

Setting of Software Parameters:



① Black and White

To process photos to black and white

② Grayscale

Grayscale mode, adopt the function for engraving photos to adjust photo grayscale

③ Contour

Cutting mode for wireframe cutting of engraving machine

④ Sketch

Sketch mode, enhance the 3D effect of photo outline



Black and White



Grayscale



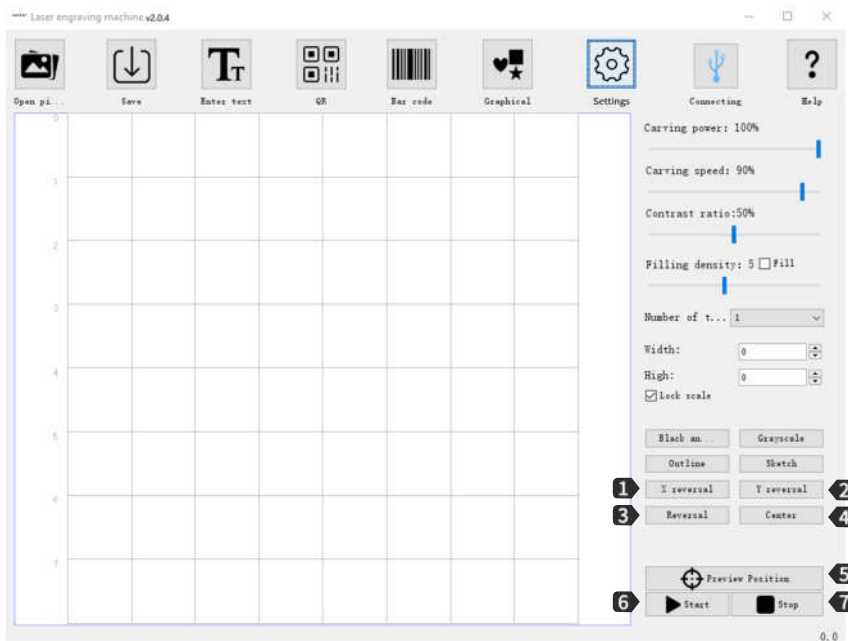
Contour



Sketch

06 Software Download and Installation on PC

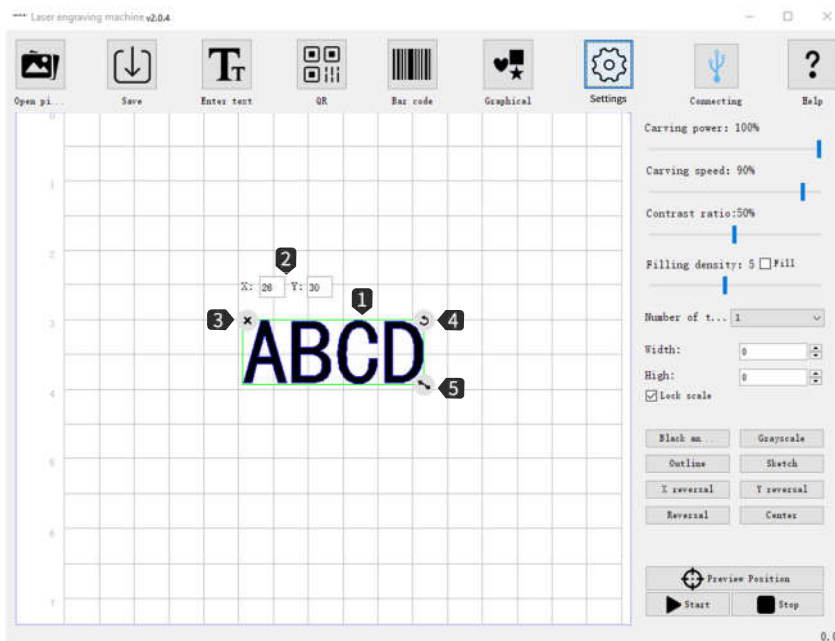
Setting of Software Parameters:



- ❶ **X Mirror**
Horizontal Rotation Effect
- ❷ **Y Mirror**
Vertical Rotation Effect
- ❸ **Reverse Color**
Reverse background color of text and photo
- ❹ **Center**
One click to center the text and photo in preview area
- ❺ **Preview Location**
Preview to confirm engraving position
- ❻ **Start**
Start engraving
- ❼ **Stop**
Stop engraving

06 Software Download and Installation on PC

Introduction to Interface Loading Content:



- ① After loading the text and photo, left click the mouse to move the position of the text and photo, right click the mouse to move the drawing board horizontally, roll mouse wheel to zoom in/out the drawing board.
- ② X:26 Y:30 only indicate the position coordinates where the text and photo stay; when move the text and photo, the coordinates will change based on different positions.
- ③ ✕ Clear the text and photo on the drawing board
- ④ ↻ Left click the mouse to rotate the text and photo 360°
- ⑤ ✎ Left click the mouse and drag to zoom in/out the text and photo

07 Software Download and Installation on Mobile Phone

1. Software Download and Installation:

Method 1: APP download URL:
www.dkjxz.com

Method 2: Scan the QR code to download.



Google Play



Android



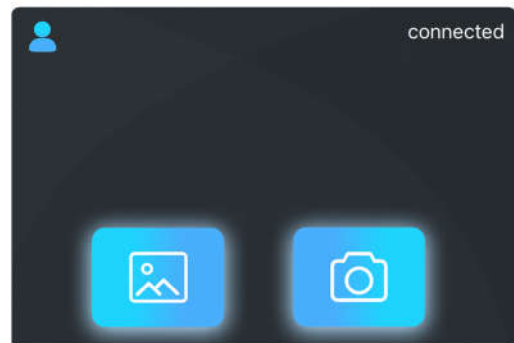
iOS

URL to Obtain Information:

User Manual Download URL:
www.dkjxz.com

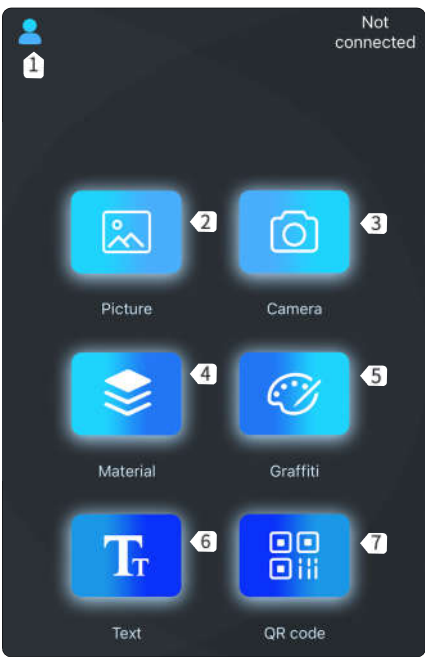
2. Connect APP with Machine

- ① Connect the machine to power supply;
- ② Activate Bluetooth function in the mobile phone;
- ③ Open engraving software in the phone, click "No Connection" in the upper right corner to automatically search for the device;
- ④ Then click "Engraver-000###";
Note: "000###" represents the serial number of the machine.
- ⑤ Wait for 1~2 seconds till "Connected" displayed in the upper right corner, which indicates that the APP has successfully connected to the machine, then continue with the next step.



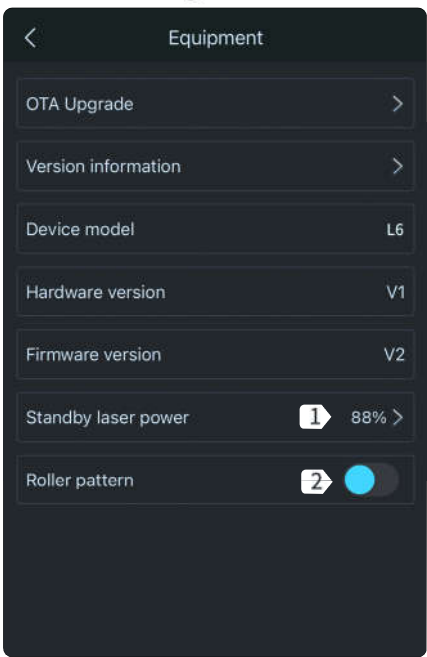
07 Software Download and Installation on Mobile Phone

Introduction to Software Interface (Load Content):



- 1 Settings
New User Guide/Feedback/User Agreement and Privacy Clauses/Equipment/Language Setting
- 2 Load Photos for Engraving
Add photos from Album, Add photos from Gallery
- 3 Take photos via camera
- 4 Software Built-in Graphics
- 5 Add Graffiti
Self-draw Text/Photo
- 6 Edit Text
- 7 Add QR code
QR Code, Barcode

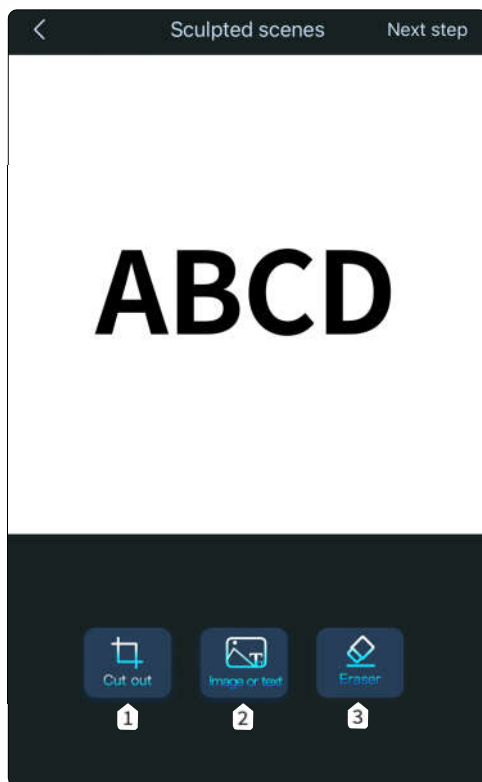
Roller Settings



- 1 Standby laser power
Set the laser power in standby
- 2 Roller mode
Activate/inactive the roller mode. When it is activated, it can rotate 360° to engrave

07 Software Download and Installation on Mobile Phone

Introduction to Software Interface (Load Content):



① Cutting

Customized Cutting
Round Cutting
Square Cutting

② Photo or Text

(Content can be overlapped)



Input Text



Load Photos
from Album



Shoot via
Camera



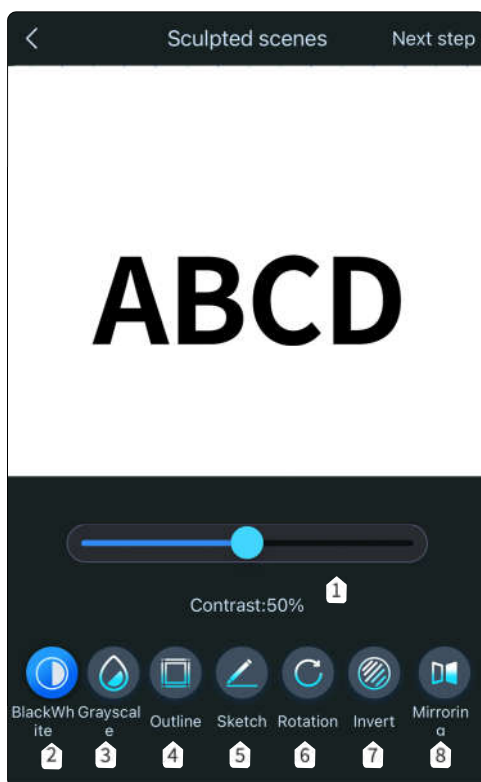
Add Photo from
Material Library

③ Eraser

Modify the photo with erase

07 Software Download and Installation on Mobile Phone

Introduction to software interface (Loading content) :



- ① **Contrast**
Drag the slider to adjust the contrast of text and photo
ABCD Contrast 16 ABCD Contrast 50 ABCD Contrast 80
- ② **Black and White**
To process photos to black and white
- ③ **Grayscale**
Grayscale mode, adopt the function for engraving photos to adjust photo grayscale
- ④ **Contour**
Cutting mode for wireframe cutting of engraving machine
- ⑤ **Sketch**
Sketch mode, enhance the 3D effect of photo outline

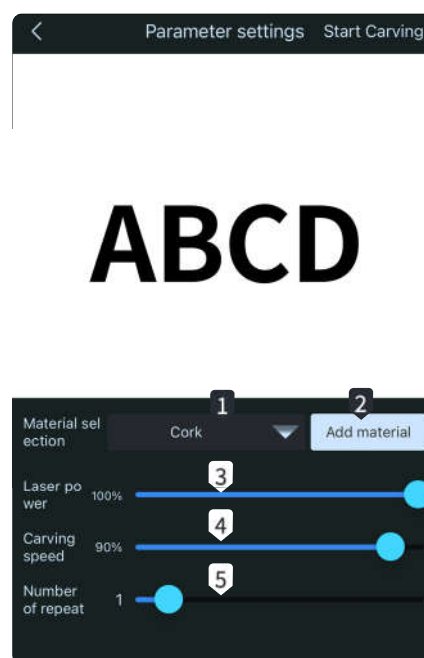
Black and White Grayscale Contour Sketch
- ⑥ **Whirling**
Can rotate 90 degrees, 180 degrees or 360 degrees
- ⑦ **Reverse Color**
Reverse background color of text and photo
- ⑧ **Mirroring**
Horizontal Rotation Effect, Vertical Rotation Effect

07 Software Download and Installation on Mobile Phone

Introduction to Software Interface (Load Content):



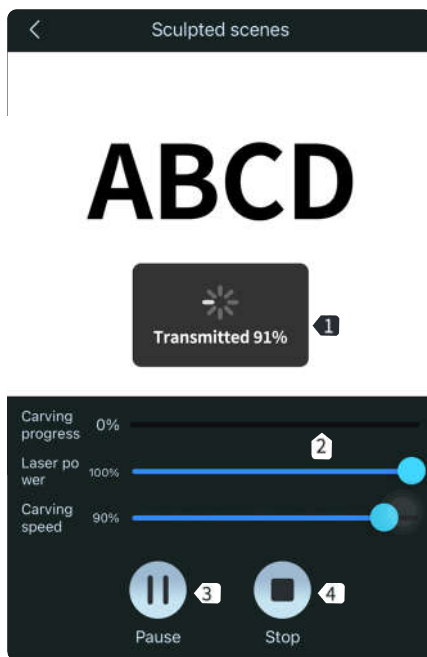
- ① Width
Set engraving width
- ② Height
Set engraving height
- ③ Lock Ratio
Scale engraving size proportionally
- ④ Region Positioning
Preview Engraving Position Determine Engraving Position



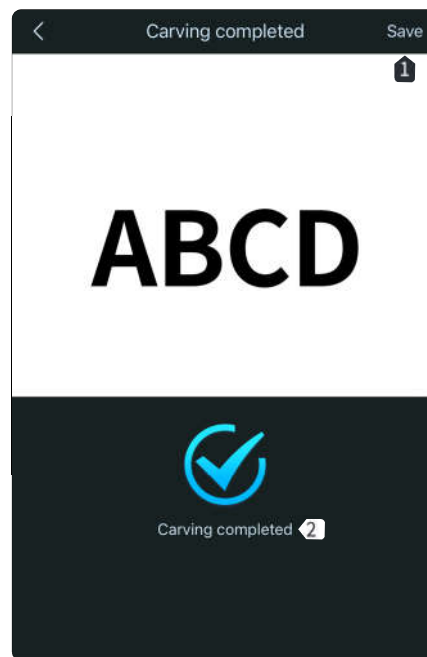
- ① Material Selection
App built-in materials, which can be directly selected based on the materials to be engraved
- ② Add Materials
Add and set materials, material name/laser power/engraving speed
- ③ Laser Power
Adjust power level to engrave different materials
- ④ Engraving Speed
Engraving speed setting, engraving speed determines the engraving depth
- ⑤ Repetition Times
It represents the number of engraving times

07 Software Download and Installation on Mobile Phone

Introduction to Software Interface (Load Content):



- ① **Uploading content**
When the transfer progress has been 100% completed, the engraving can be started.
- ② **Carves Progress**
Show me the progress of the sculpture
- ③ **Suspend**
Suspend engraving
- ③ **Stop**
Stop engraving



- ① **Save**
Save the current engraving content and view in the phone album
- ② **Engraving Completed**
Current content has been engraved

08 Open-Source Program

Notice!

The product can support GRBL open source software by updating GRBL firmware. Once GRBL firmware is updated, this product will not support phone software, original PC software and the roller components any longer

Path to install GRBL:

FirmwareUpdate/GRBL Firmware/For detailed steps, please watch the demo video in USB memory disk



GRBL_FirmwareUpdate

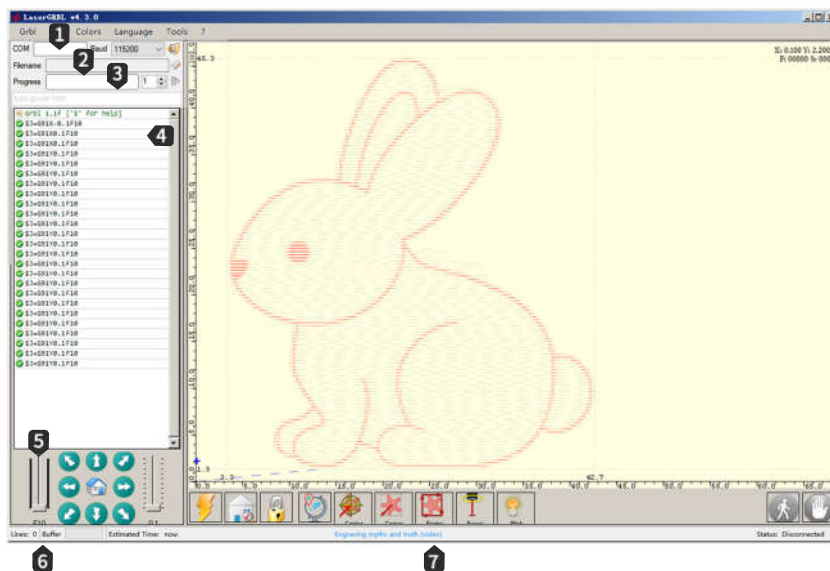
Laser GRBL

GRBL website: <https://lasergrbl.com/>



08 Open-Source Program

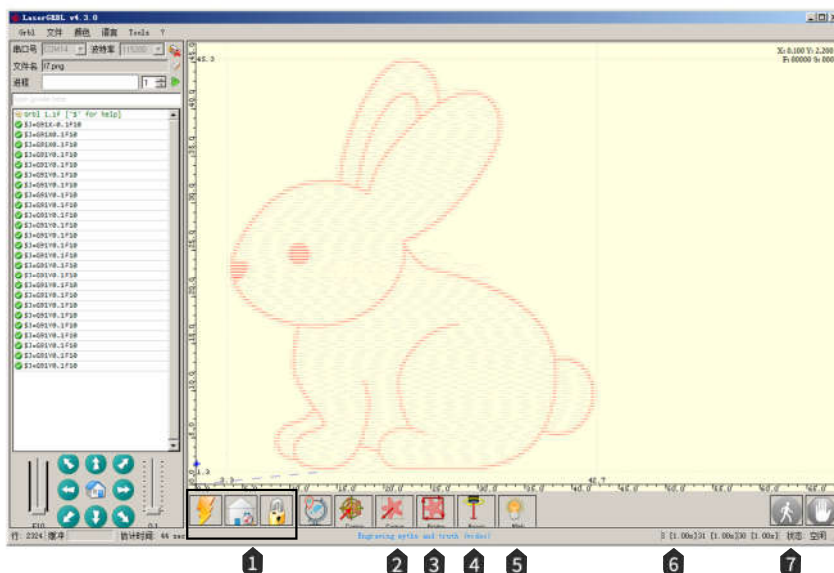
Introduction to LaserGRBL software interface icon functions:



- ❶ **Connection settings:**
Select serial port and appropriate connection baud rate according to the grbl firmware configuration
- ❷ **File control:**
Display the loaded file name and the engraving process. Green "Play" button will start to execute the program
- ❸ **Manual command:**
You can enter any G code line here then press the "input" button, the command will be placed in the queue
- ❹ **Command log and command return code:**
Display the commands in queue as well as the execution status and errors
- ❺ **Step control:**
Allow manual laser positioning. The vertical slider on the left can control the speed of movement, while the slider on the right can control the step length
- ❻ **Prediction of line number and time:**
LaserGRBL can estimate the program execution time based on actual speed and work progress
- ❼ **Engraving preview:**
The final work will be previewed in this zone. During the engraving process, a small blue cross will display the current laser position during the machine operation

08 Open-Source Program

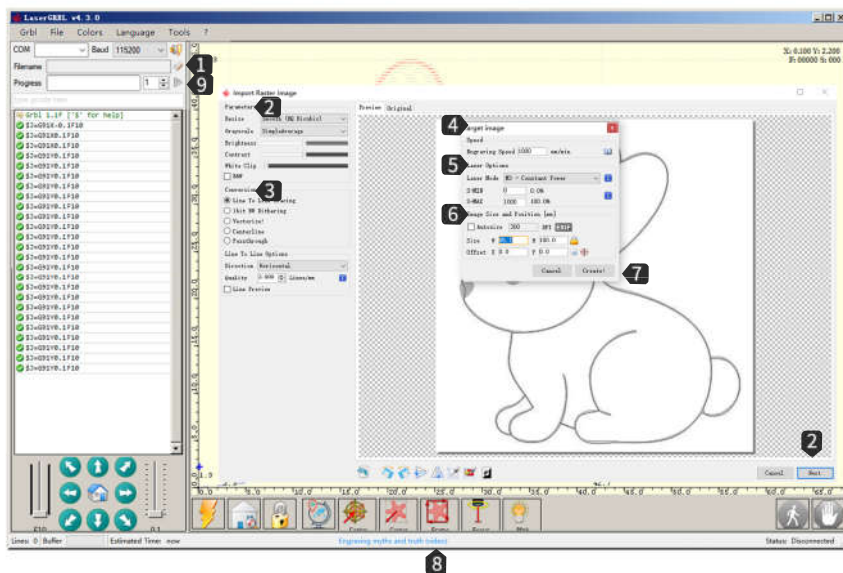
Introduction to LaserGRBL software interface icon functions:



- ❶ Grbl reset/home/unlock:
These buttons submit soft reset, home and-unlock commands to the grbl board. On the right side of the unlock button, you can add some user customized buttons
- ❷ Move to the lower left corner:
Move the coordinate to the lower left corner of the frame
- ❸ Preview of engraving position:
After the photo is loaded, click this icon to preview the engraving position
- ❹ Activate laser focus:
Active the laser and focus as required
- ❺ Laser:
Click the button according to actual needs such as laser test
- ❻ Coverage status control:
Display and change the actual speed and power coverage. Overrides is a new feature of grbl v1.1 which cannot be supported in the old version
- ❼ Pause and resume:
Press the button to pause and resume program execution, send Pause or Resume commands to the grbl board.

08 Open-Source Program

Introduction to LaserGRBL software interface:



- ❶ **Open:**
Click the icon "Open" or drag the file directly to the software interface;
- ❷ **Parameters:**
Adjust engraving parameters
- ❸ **Conversion tools:**
Select engraving mode: line-to-line tracking, lbit BW jitter, vectorization, Centerline, Passthrough
- ❹ **Speed:**
Set the engraving speed
- ❺ **Laser:**
Set laser parameters
- ❻ **Image size and position:**
Adjust image size and engraving position.
- ❼ **Create**
After settings have been completed, click Create.
- ❽ **Preview**
Click the "Preview" button to confirm the preview location;
- ❾ **Engraving:**
Click "engraving" button to start engraving.

08 Open-Source Program

Notice!

The product can support GRBL open source software by updating GRBL firmware. Once GRBL firmware is updated, this product will not support phone software, original PC software and the roller components any longer

Path to install GRBL:

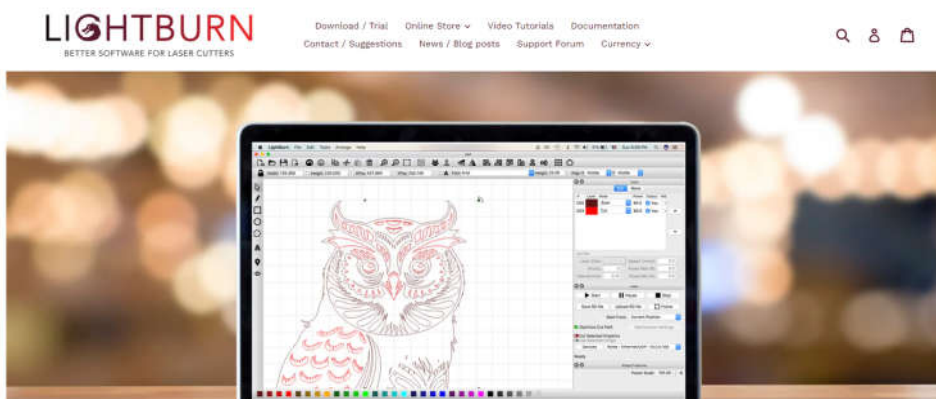
FirmwareUpdate/GRBL Firmware/For detailed steps, please watch the demo video in USB memory disk



GRBL_FirmwareUpdate

LightBurn

LightBurn website: <https://lightburnsoftware.com/>



09 Warranty

1-Year Limited Warranty

Dear Customer:

We would like to express our gratitude for your purchase of the JICCODA L1 Laser Engraving Machine. Customer feedback is extremely valuable to us, and we really hope that using this product will be a positive experience for you.

JICCODA L1 has given close attention to product quality and practicality, combining all laser supply chains to provide you with higher standards of quality and affordable products. We are prepared to offer the finest laser engraving and cutting services.

If you have any inquiries, please do not hesitate to get in touch with us at the e-mail address shown below. We provide a limited warranty that is valid for one year.

By visiting our online shop, you will be able to get further information on forthcoming items and accessories.

Once again, thank you very much for your continued support. As we always have, we will keep providing products and services of the highest quality.

Sincerely, JICCODA

After-sales Service E-mail:

Website: Service.Alfawise@gmail.com

10 FAQ

First、No response from the machine when being powered on.

1. No power supply: Please check the socket and switch as well as the machine power socket to ensure that they have been correctly plugged with normal power supply.

Second、It cannot be connected to computer

1. USB cable not connected: Please check the USB data cable interface on the machine and computer to ensure it's correctly plugged. The USB interface on the front panel of some desktop computers is invalid, it's better to connect to the interface on the back.
2. Driver not properly installed: Install the driver according to the instructions. After the installation is done, the computer will recognize the device as a serial port, which means the hardware connection is OK.
3. Other special problems: Pull out the USB data cable and power cable, keep the machine power off for 5 seconds and then try the connection once again.

Third、No response from the phone APP when being connected to the machine.

1. Wrong Bluetooth connection: Make sure it's connected to the Bluetooth released by the machine. Please read "App Connection" in the User Manual for details.
2. Incompatibility: In the case of abnormal connection due to incompatibility of newly-released phone or upgraded system, please contact our customer service with the screenshot of phone configuration so as to get technical support as soon as possible.

Fourth、Shallow engraving effect or no traces.

1. Inaccurate focus: Refer to the "Focus Adjustment" in the User Manual to make the correct focus.
2. Engraving speed: Too fast speed is due to short burning time. Please read the "Engraving Parameters" in the User Manual to readjust the parameters.
3. Photo color is too light: The photo added should be clear. If the line is too thin or the color is too light, the engraving effect will be directly influenced.
4. Position of object to be engraved: If the object is placed obliquely, the focal length of laser is fixed, so the object should be placed horizontally in parallel to the machine; otherwise, the inaccurate focal length will result in bad engraving effect.

Fifth、Offline engraving unexpectedly stops

1. It's due to the incomplete image download when the machine is online, please download it once again.

FCC Warning:

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

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