



U1

Quick Start Guide



What's App

Contact Us

Service Email: Swor.spt@gmail.com

Official Website: www.srwor.com



USER MANUAL

Thank you for purchasing a SRWOR U-Series Engraving and Cutting Machine. We hope the U-Series machines will bring you a journey full of creativity.

For your smooth use of the machine, please read the user's manual carefully before use and follow the specific operation mode. This manual will provide you with a detailed description of the structure and the usage of the product, as well as a video presentation of how to use the product.

Srwor always provides high quality and excellent service to all people who love to create and love art. The simple installation and operation mode is suitable for beginners or professionals to use the machine more easily.

Anyway, if you have any problems with the machine, please contact us via WhatsApp on the homepage or email, and we will solve the problem for you as soon as we receive the message.

Thank you again for your support of srwor and enjoy your creative journey.



What's App

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SAFETY INSTRUCTIONS

1. Patients with photosensitive epilepsy are prohibited from using or approaching this laser equipment.
2. When using a laser engraving machine, the operator and anyone near the machine must wear the provided laser safety glasses. Or buy from the market wavelength protection 400-445nm (+-5nm), outer diameter +5, minimum L level L5.
3. When the laser engraving machine is working, the operator must pay close attention and must not leave it alone to prevent the engraving material from catching fire. Please place the laser engraving machine in a fire-proof area and ensure good ventilation.
4. When engraving products, please use it with a filter, which can effectively filter out toxic gases and protect the laser head.
5. When the machine is running, do not touch the laser beam or contact the laser beam with other objects, otherwise it may cause serious physical injury or beam reflection. Do not touch the radiator when the laser engraving machine just stops working, your body and hands may be burned.
6. Children and teenagers under 14 years old are not allowed to use the laser engraving machine alone
7. The suitable working temperature range of the machine is -5°C-50°C. The laser is not suitable for working for a long time in an environment where the room temperature exceeds 40°C - 70°C, which may cause the laser power to attenuate.
8. Do not shine mirrors or objects with strong reflective properties. Light reflection may cause damage to the laser tube.

USE CAUTION!



Avoid Laser Exposure



Avoid Looking Directly



Avoid children



PRODUCT PARAMETERS

Brand	Srwor
Model	SR-U
Material	Aluminum Alloy+Plastic
Power input	DC 12V
Laser type	Semiconductor Laser
Working area	400*400mm
Laser output power	2.5w/ 6w/ 10w
Overall power	15W/ 40W/ 80W
Laser life	>8000 hours/ >8000 hours />12000 hours
Wavelength	450nm
Focus accuracy	0.069*0.028/ 0.054*0.054/ 0.054*0.0152
Laser focus distance	400mm
Connection method	WiFi/USB
Applicable materials	Wood products, metal paint, leather, plastic, paper products, bamboo, stone
Support system	WIN7, WIN8, WIN10, Android, MAC, iOS
Picture format	JPEG/BMP/TIF/GIF/ SVG

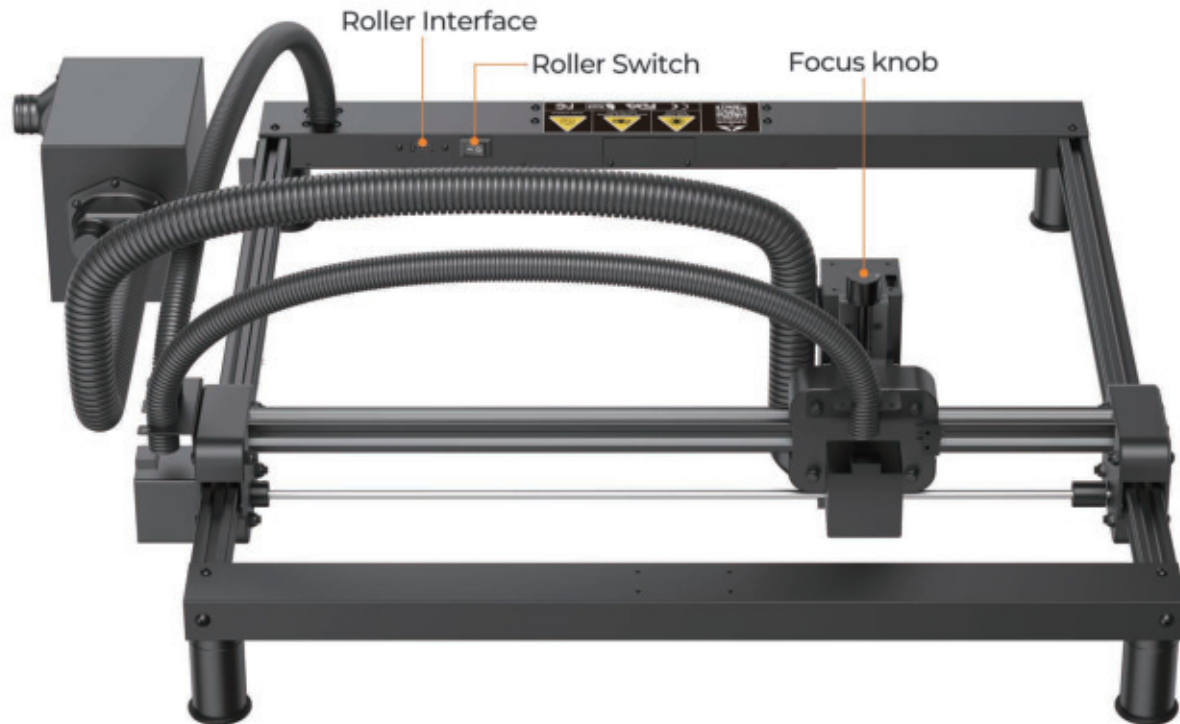
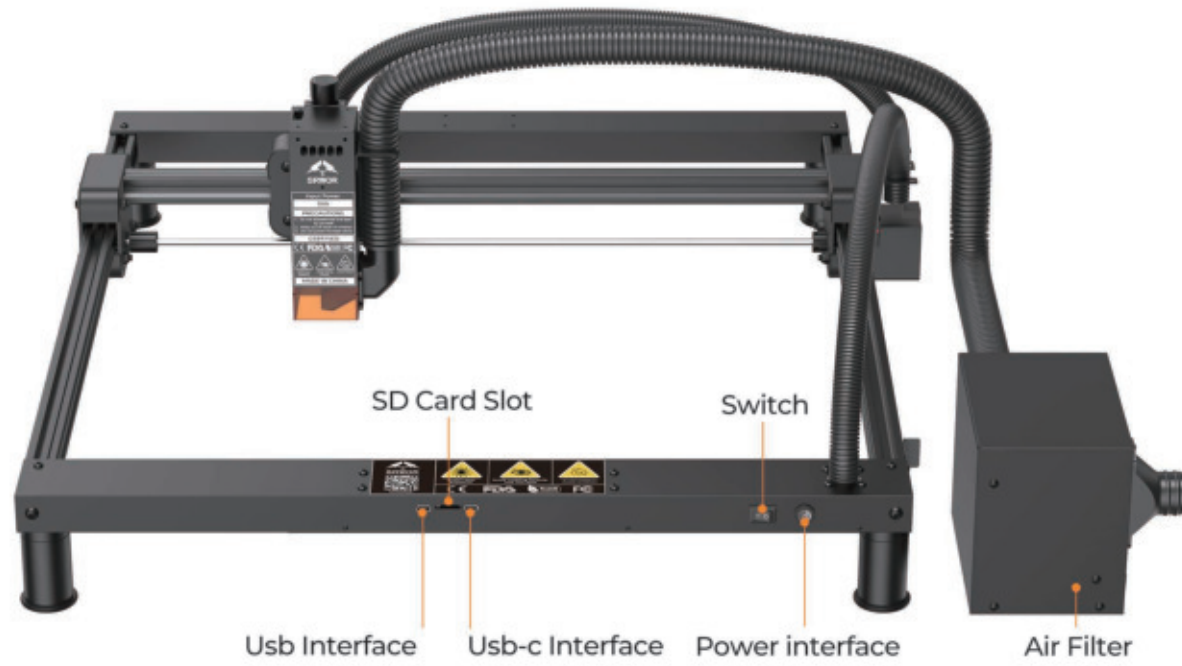
10W\6W ENGRAVING PARAMETER GUIDE

Material	Engraving speed	Cutting speed
2mm Plywood board	10W\6W(9000mm/min)	10W(650mm/min) 6W(330mm/min)
4mm Plywood board	10W\6W(9000mm/min)	10W(590mm/min) 6W(250mm/min)
6mm Plywood board	10W\6W(9000mm/min)	10W(420mm/min) 6W(160mm/min)
10mm Plywood board	10W\6W(9000mm/min)	10W\6W(80mm/min)
Stainless steel Engraving	10W(9000mm/min) 6W(6000mm/min)	\
6mm Acrylic	10W\6W(5000mm/min)	10W(350mm/min) 6W(100mm/min)
Stone	10W(5000mm/min) 6W(3500mm/min)	\
Leather	10W(9000mm/min) 6W(8000mm/min)	10W(650mm/min) 6W(300mm/min)
1mm Kraft paper	10W\6W(12000mm/min)	10W(1000mm/min) 6W(800mm/min)

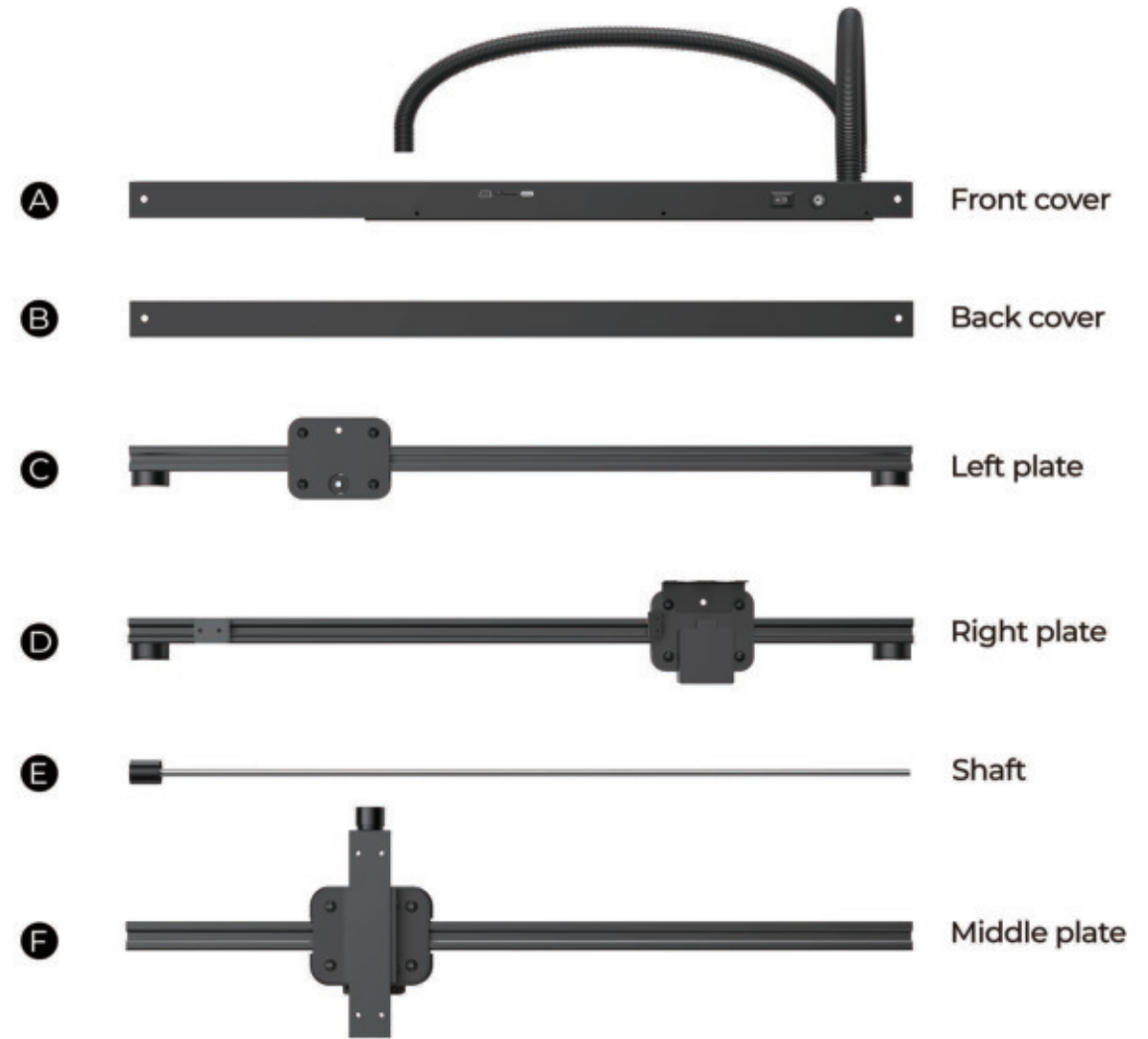
TABLE OF CONTENTS

PRODUCT STRUCTURE.....	01
PARTS & ACCESSORIES.....	02
INSTALLATION TEACHING.....	03
.....	11
HOW TO ADJUST FOCUS.....	12
FILTER INSTALLATION AND USE.....	13
AIR PUMP INSTALLATION AND USE.....	14
SOFTWARE DOWNLOAD.....	15
MOBILE PHONE DIRECTLY CONNECTED TO MACHINE.....	16
.....	18
OFFLINE SCREEN CONNECTION AND INTRODUCTION.....	19
.....	26
MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER.....	27
.....	29
APPLE TERMINAL SOFTWARE INTRODUCTION.....	30
.....	32
ANDROID TERMINAL SOFTWARE INTRODUCTION.....	33
.....	34
SOFTWARE INTERFACE INTRODUCTION.....	35
.....	44
CAMERA USER GUIDE.....	45
.....	48
HOW TO USE THE ROLLER.....	49
COMMON PROBLEM.....	50

PRODUCT STRUCTURE



PARTS & ACCESSORIES



INSTALLATION TEACHING



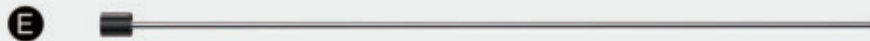
you can visit srwor.com or scan the QR code to find the tutorial video.



INSTALLATION TEACHING



INSTALLATION TEACHING



1. Place the coupling onto the roller (no need to tighten)



2. Insert the roller into the coupling on one side



3. Move the coupling to the middle of the two shafts



4. Move the axes on both sides to the same horizontal line



5. Tighten the screws to complete the shaft installation

INSTALLATION TEACHING



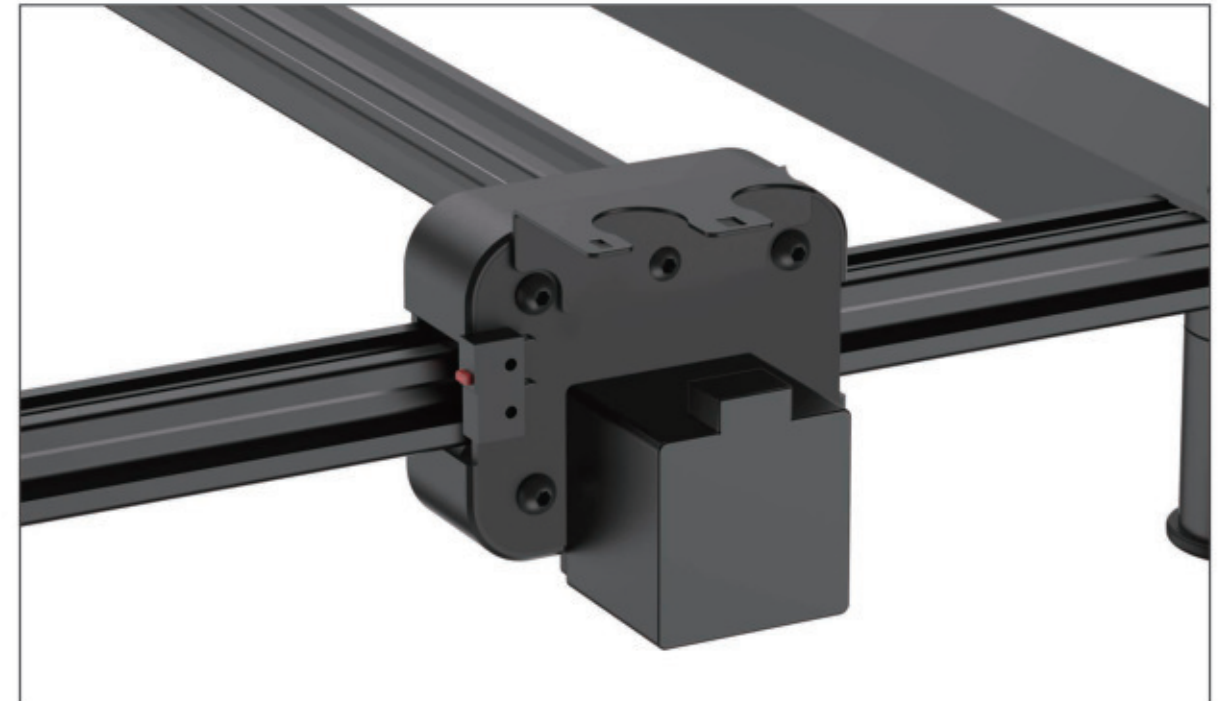
Tips In order to facilitate the demonstration, the red line segment selects the part for special hiding. Please refer to the actual object.

INSTALLATION TEACHING

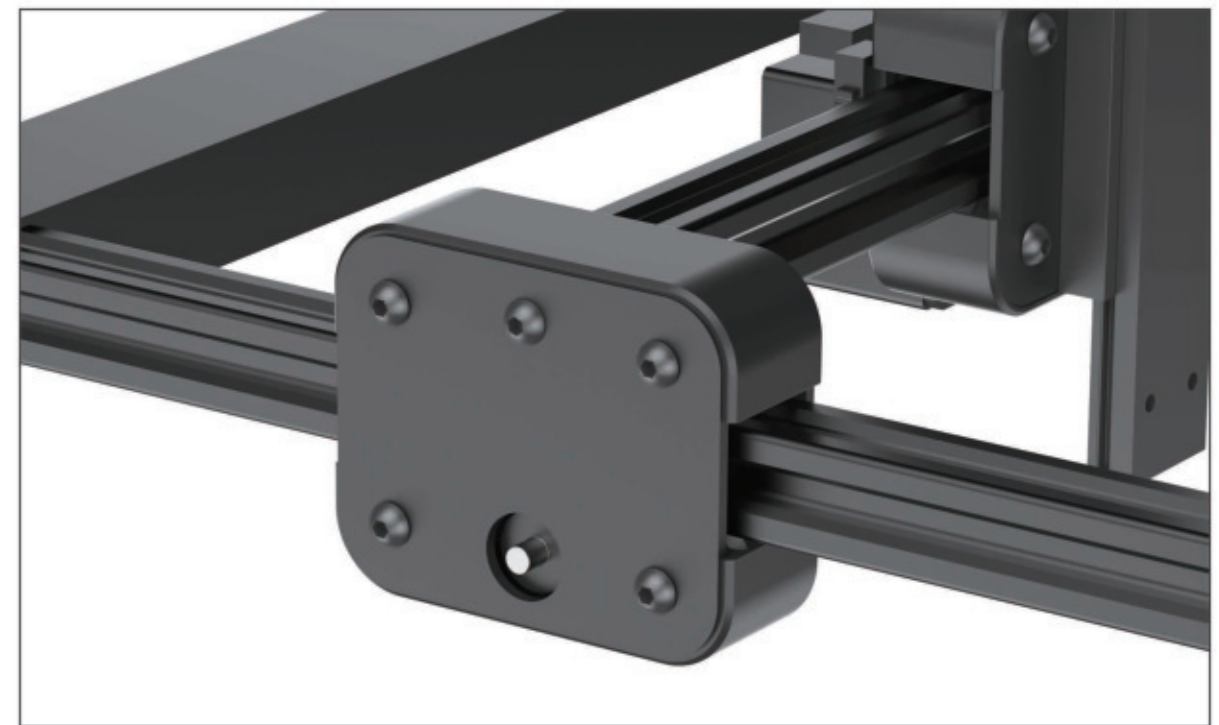


Install the two pulley protective covers

INSTALLATION TEACHING



local details



Installation completed display

INSTALLATION TEACHING

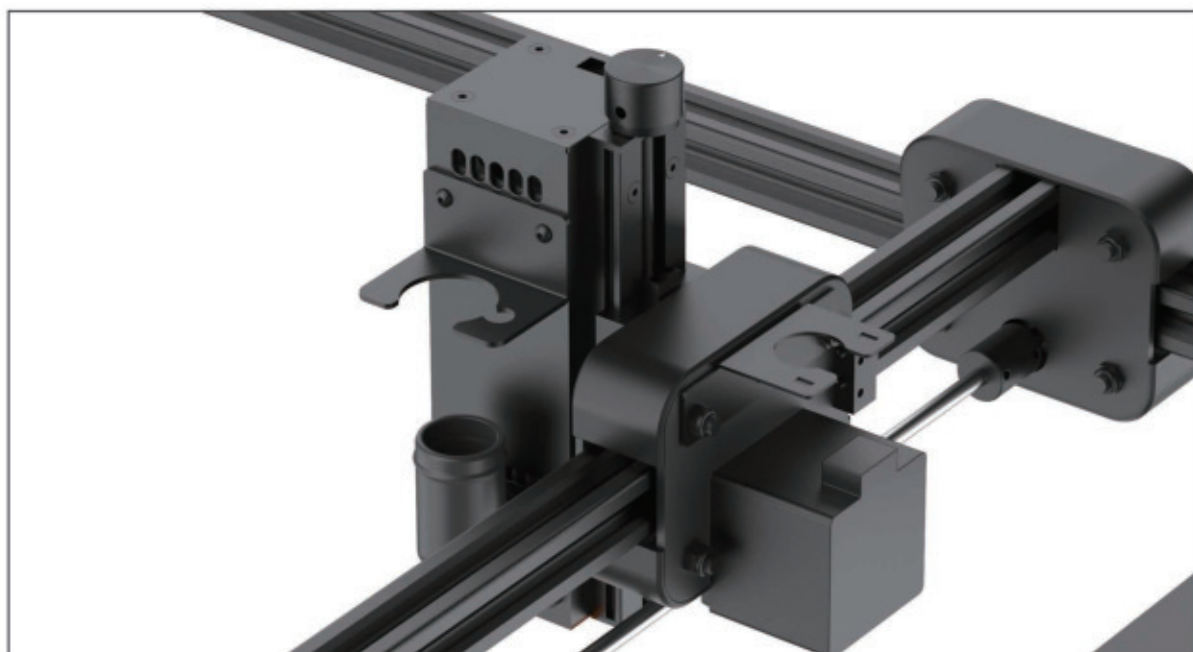
Laser Module



2mm Screwdrivers



3mm Screw x4



Installation completed display

INSTALLATION TEACHING



1.Install this component first



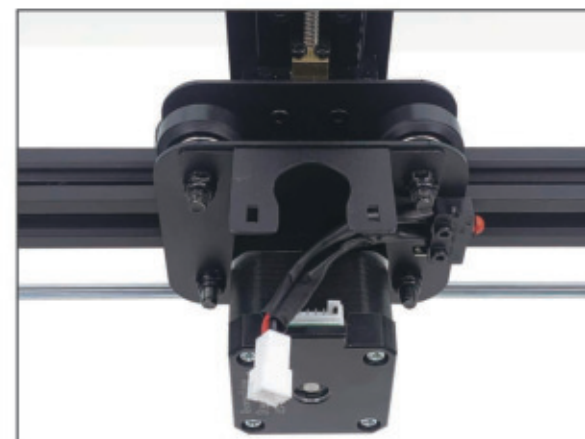
2.Connect limit switch



3.Connect the motor



4.Put the third layer of pipe into the buckle

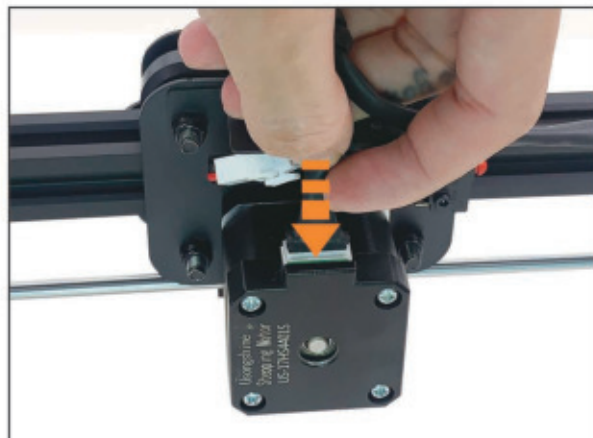


5.Install the component



6.Connect limit switch

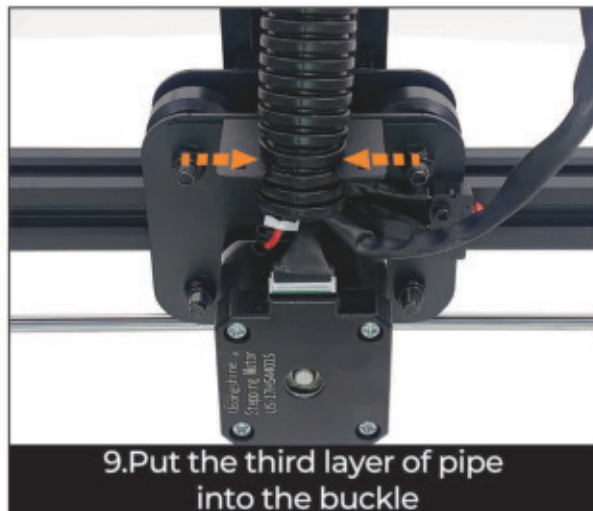
INSTALLATION TEACHING



7. Connect the motor



8. Install the laser power cord



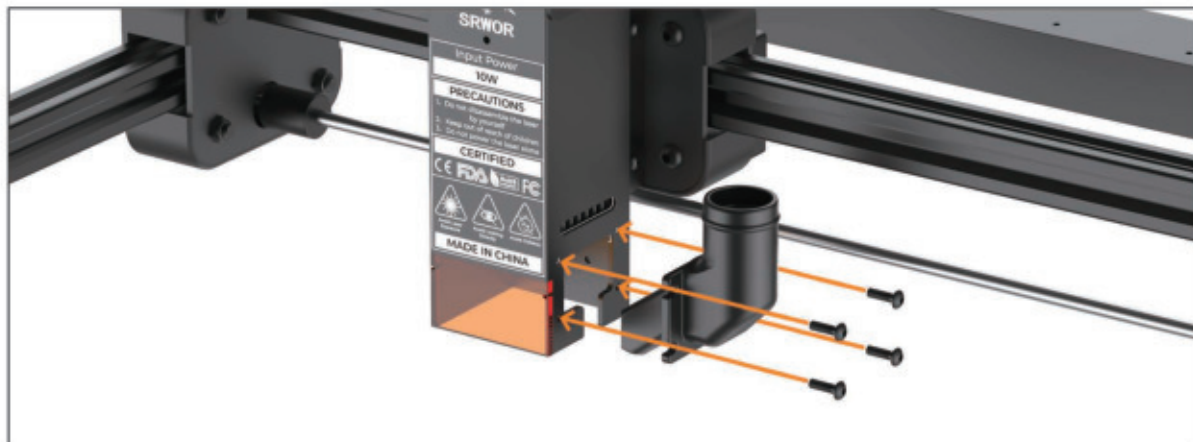
9. Put the third layer of pipe into the buckle

HOW TO ADJUST FOCUS



- 1 Place the prime lens on the object to be engraved
- 2 Turn the knob, the laser moves down until the fixed focus film is pressed tightly
- 3 Then take out the fixed focus film to complete the fixed focus

FILTER INSTALLATION AND USE



1. Install the smoking mouthpiece into the laser

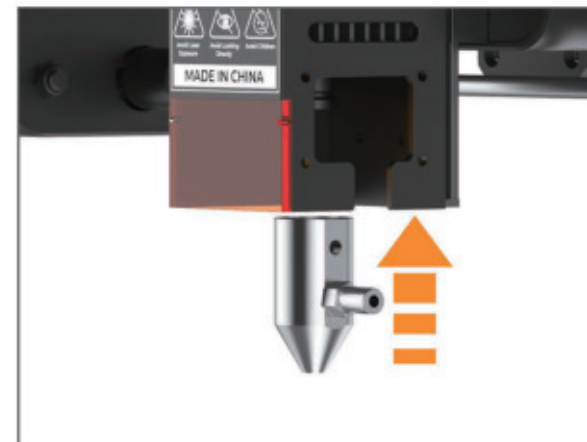


2. Connect the exhaust pipe to the exhaust tip



3. Connect the exhaust pipe to the filter, connect the power supply and start using it

FILTER INSTALLATION AND USE



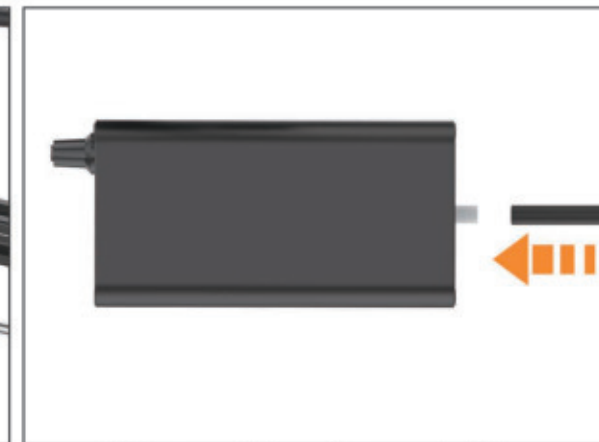
1. Install the air pump nozzle into the laser



2. Install screws to fix



3. Connect the air pump tube to the air pump nozzle and fix the tube in the buckle



4. Connect the other end of the pipe to the air pump



5. Connect the power and adjust Adjust the power of the knob to maximum



SOFTWARE DOWNLOAD



Download Link

<http://SRWOR.com>

<http://laserGRBL.com>

<http://Lightburn.com>



Android



ios

Note:

- 1.You can scan the QR code to download
2. APP software can be downloaded in major application stores
3. After the installation is successful, you need to give the corresponding permissions



MOBILE PHONE DIRECTLY CONNECTED TO MACHINE



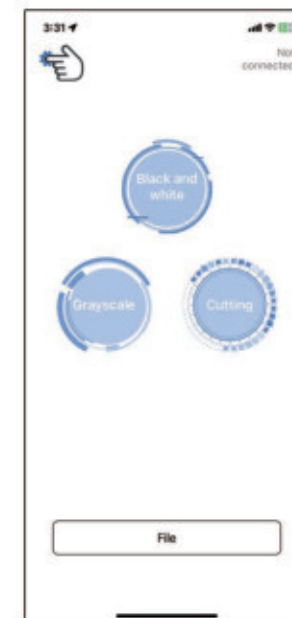
You can scan the QR code to get detailed usage tutorials.



1.When you do not have an offline screen and computer, power on the machine and the machine will have a wireless network named SRWOR



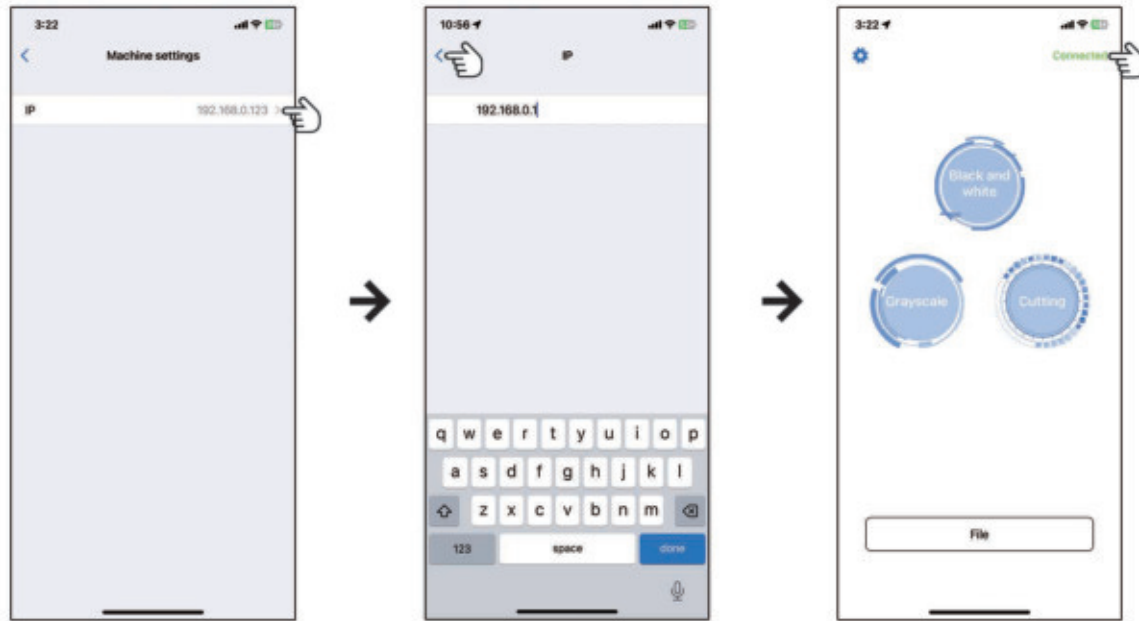
2. Apple connection method



Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

MOBILE PHONE DIRECTLY CONNECTED TO MACHINE

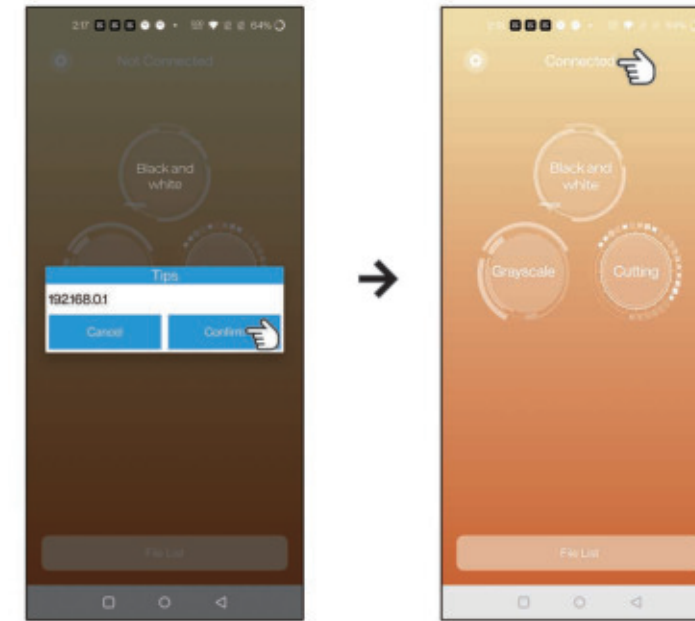
2. Apple connection method



Enter the IP address. Return to the homepage and "Connected" in the upper left corner turns green, connection succeeded.

MOBILE PHONE DIRECTLY CONNECTED TO MACHINE

4. Android terminal connection method



Enter the IP address. Return to the homepage, "Connected" is displayed in the middle to indicate successful connection.

3. Android terminal connection method



Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

OFFLINE SCREEN CONNECTION AND INTRODUCTION

1. Connect the offline screen to the machine when using it



2. Select Steps



Click the gear in the upper left corner

Click "Network settings"

Click "Parameter settings"

OFFLINE SCREEN CONNECTION AND INTRODUCTION

3. Mode introduction



Click "Mode"

Choose the connection method that suits you

We offer two connection methods

- **AP Mode** - (a network is generated by the machine and connected by mobile phone WIFI)
Account: SRWOR
Password: 12345678
- **STA Mode** - (control the machine by connecting to the same WIFI)

Users can choose their own method

4. AP Mode



Select AP

Click "Reboot"

Wait for network reset

OFFLINE SCREEN CONNECTION AND INTRODUCTION

5.AP Mode

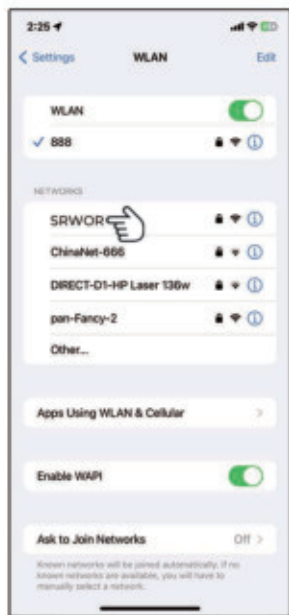


Check the IP in the upper left corner



parameter settings View IP name and password

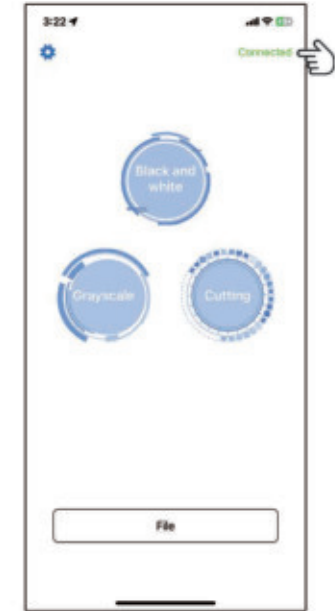
6. Apple terminal connects to AP mode



Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

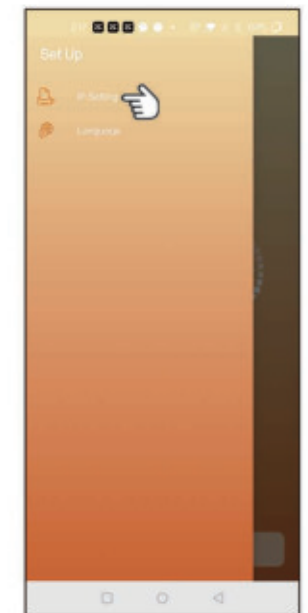
OFFLINE SCREEN CONNECTION AND INTRODUCTION

7. Apple terminal connects to AP mode



Enter the IP address. Return to the homepage and "Connected" in the upper left corner turns green. connection succeeded.

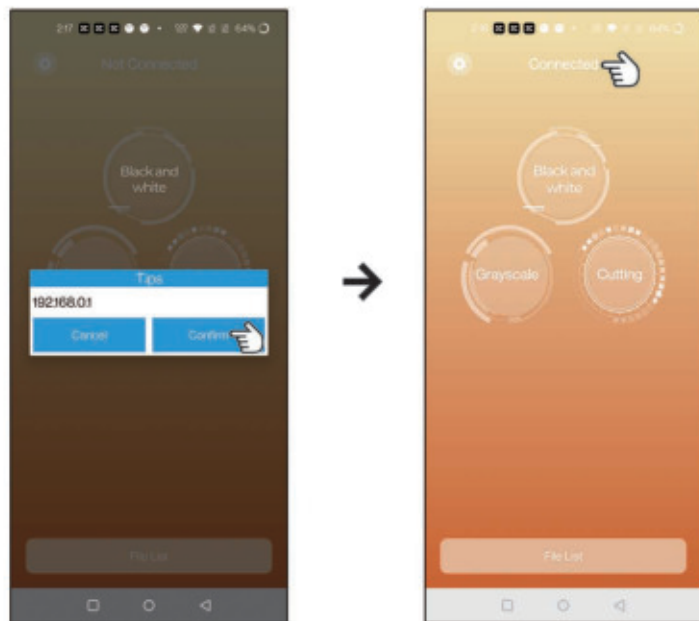
8. Android terminal connection AP mode



Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

OFFLINE SCREEN CONNECTION AND INTRODUCTION

9. Android terminal connection AP mode



Enter the IP address. Return to the homepage, "Connected" is displayed in the middle to indicate successful connection.

10. STA Mode



Select STA

Click "Reboot"

Wait for network reset

OFFLINE SCREEN CONNECTION AND INTRODUCTION

11. STA Mode



Find your wireless network

Enter the password for this account

Return to the desktop to view the IP address

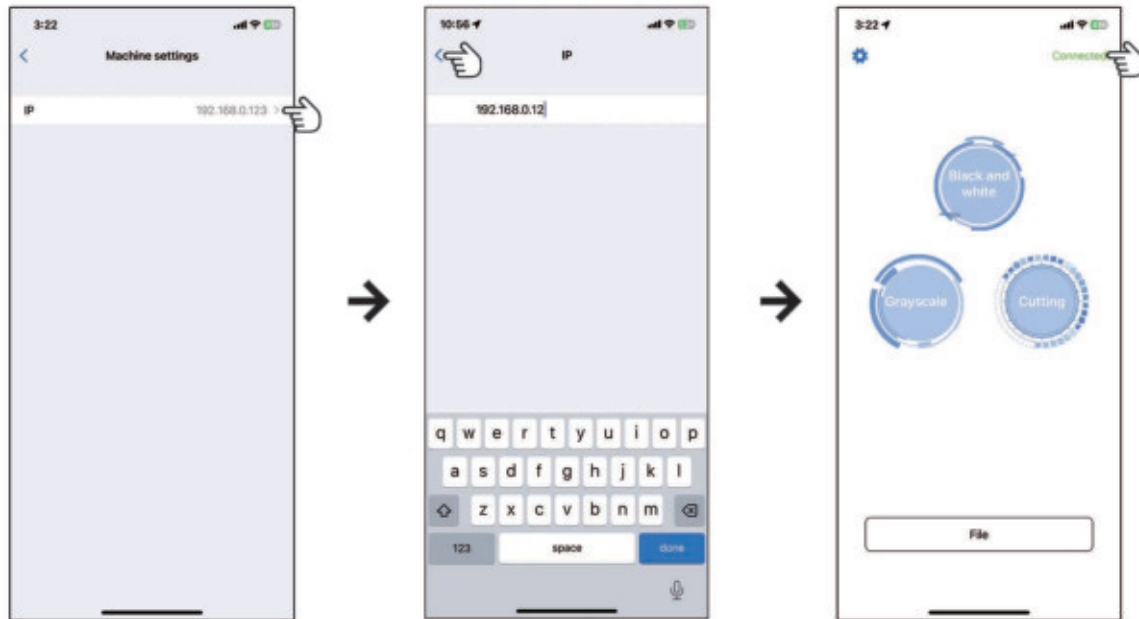
12. Apple terminal STA mode



Connect to your network, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

OFFLINE SCREEN CONNECTION AND INTRODUCTION

13. Apple terminal STA mode



Enter the IP address. Return to the homepage and "Connected" in the upper left corner turns green. connection succeeded.

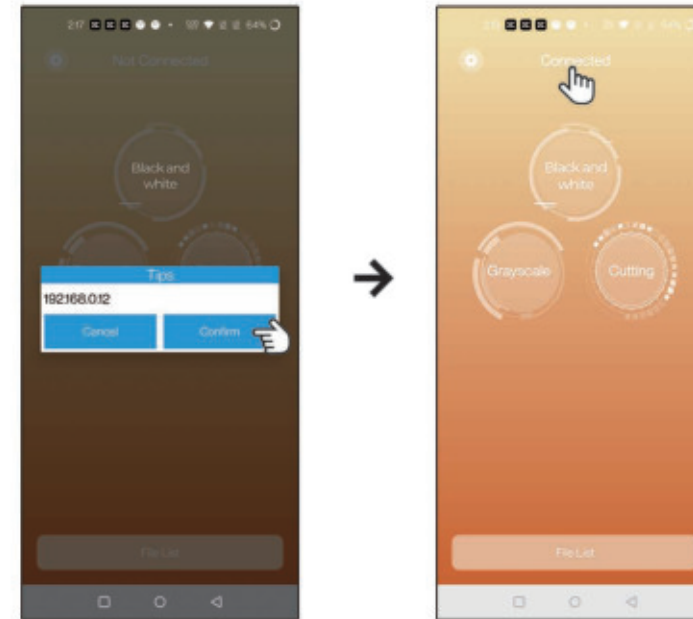
14. Android terminal connection STA mode



Connect to your network, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

OFFLINE SCREEN CONNECTION AND INTRODUCTION

15. Android terminal connection STA mode



Enter the IP address. Return to the homepage, "Connected" is displayed in the middle to indicate successful connection.

MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

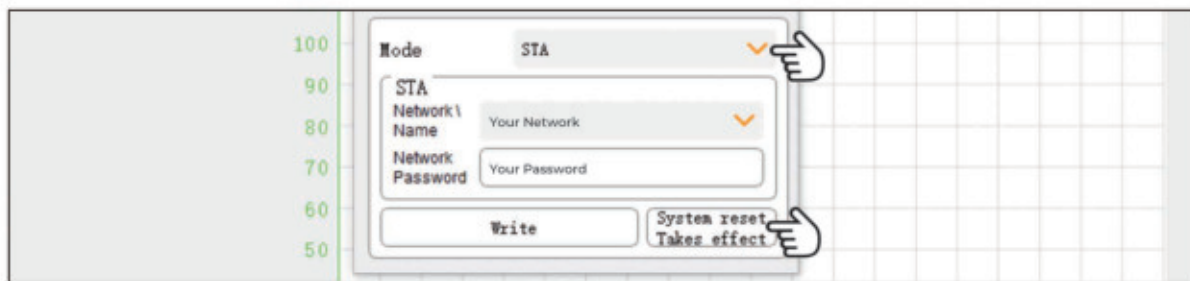
1. First you need to connect the machine to the computer



2. Open the SRWOR software, Network-Network Settings



3. Select STA as the mode, connect to the WIFI account, enter the password, click Write, and click System Reset to take effect.



4. The connection IP address is shown here

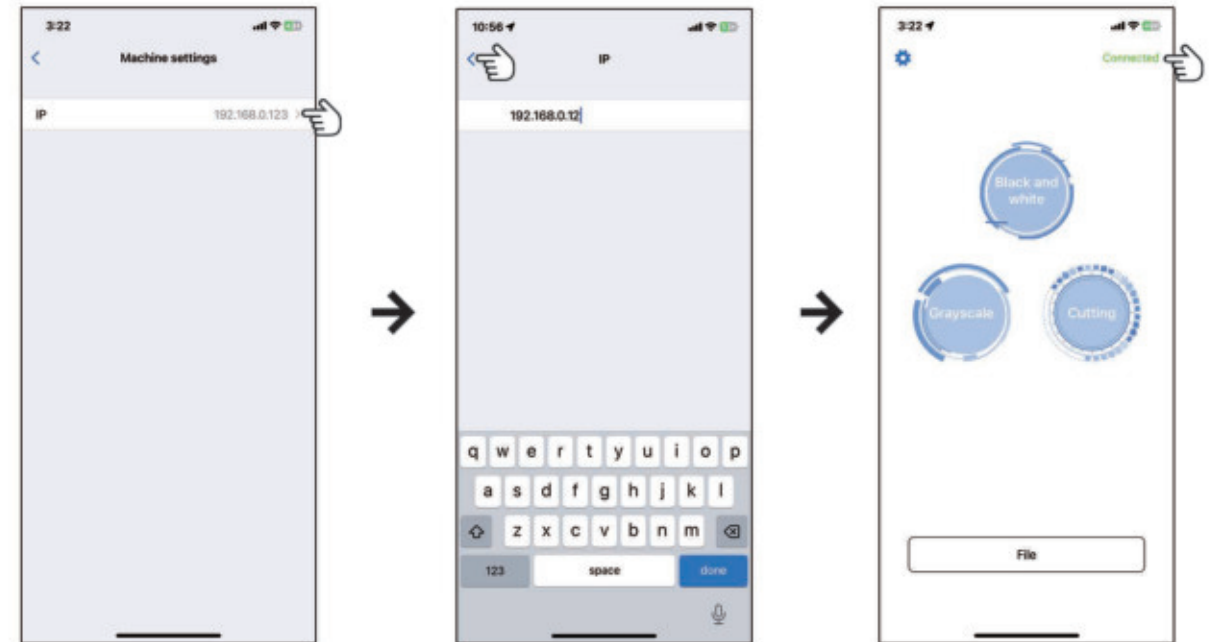


MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

5. Apple side operation steps



First connect to the designated WIFI, open the app, click the gear in the upper left corner, and click "Machine Settings"



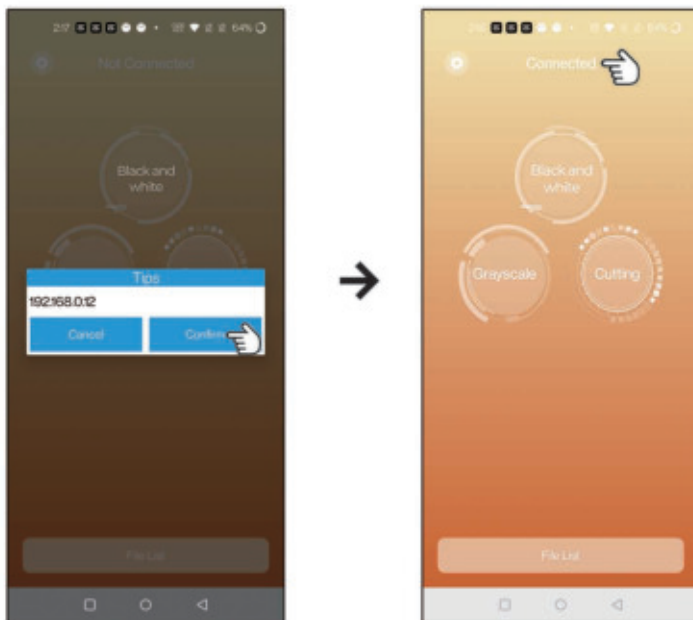
Enter the IP address of the software on your mobile phone. After returning to the main interface, "Connected" in the upper left corner turns green. Indicates successful connection.

MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

6. Android operation steps



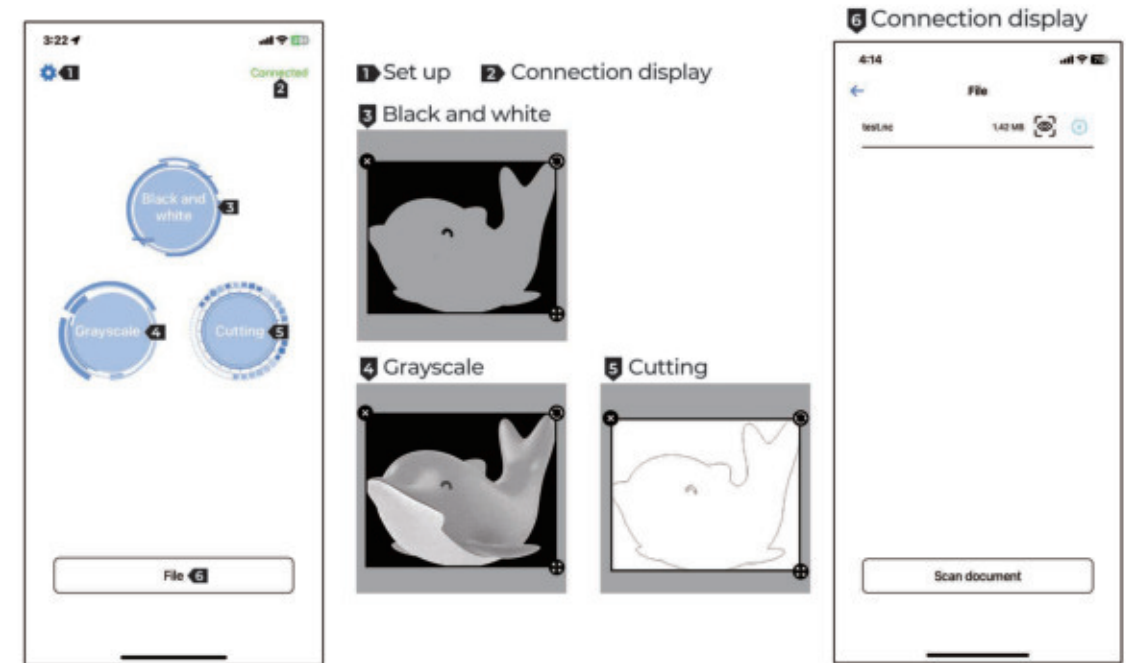
Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface



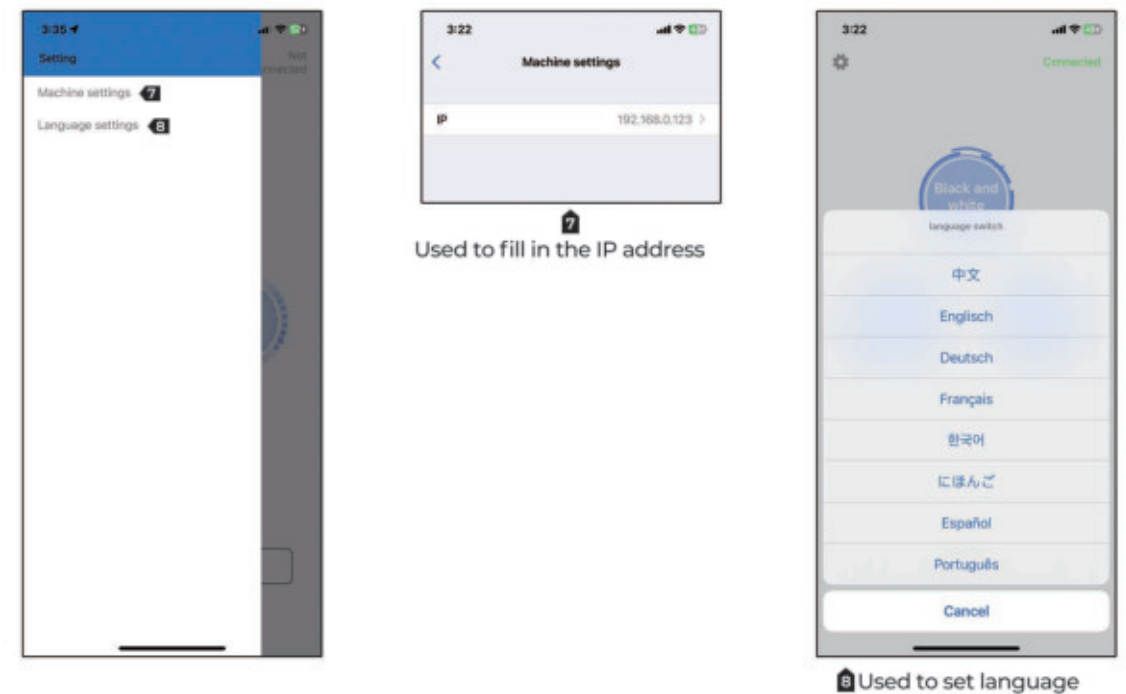
Enter the IP address. Return to the homepage, "Connected" is displayed in the middle to indicate successful connection.

APPLE TERMINAL SOFTWARE INTRODUCTION

1. Introduction to main interface functions



2. Introduction to the settings page

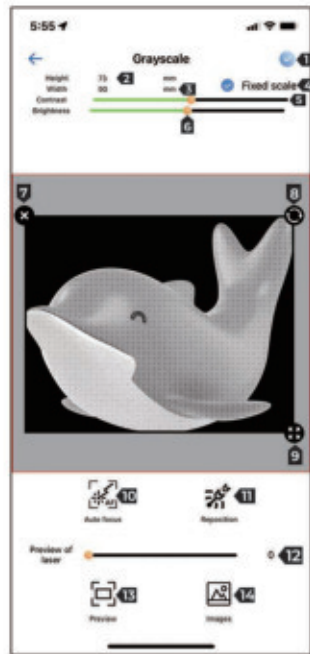


Used to fill in the IP address

Used to set language

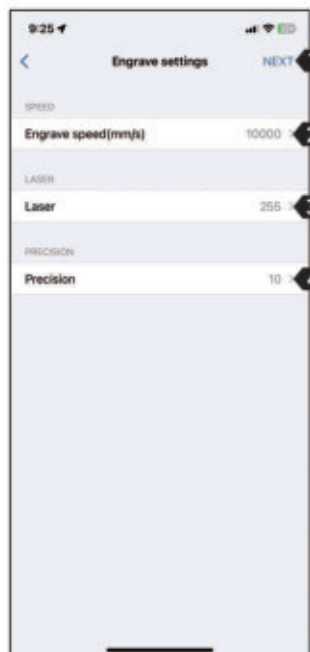
APPLE TERMINAL SOFTWARE INTRODUCTION

3. Introduction to function buttons



- 1 Next step
- 2 Height adjustment
- 3 Width adjustment
- 4 Fixed scaling
- 5 Adjust image contrast
- 6 Adjust image brightness
- 7 Delete picture
- 8 Rotate picture
- 9 Zoom picture
- 10 Automatically adjust laser height (Some models have this function)
- 11 Return to default center point
- 12 Preview the power of the laser (recommended around 100)
- 13 Preview image range
- 14 Select Image

4. Introduction to engraving parameters



- 1 Next step
- 2 Control machine engraving speed(Upper limit-12000)
- 3 Control laser engraving power(Upper limit-1000)
- 4 Control the precision clarity of the canvas

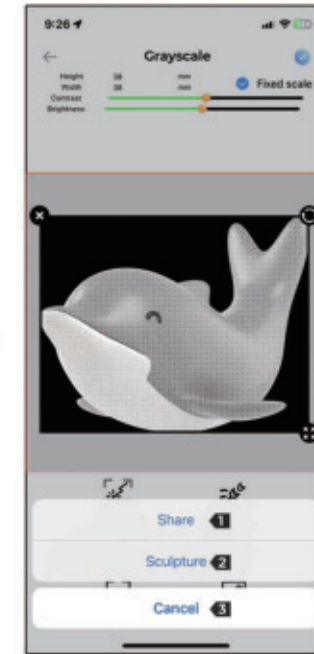
APPLE TERMINAL SOFTWARE INTRODUCTION

5. Modify name



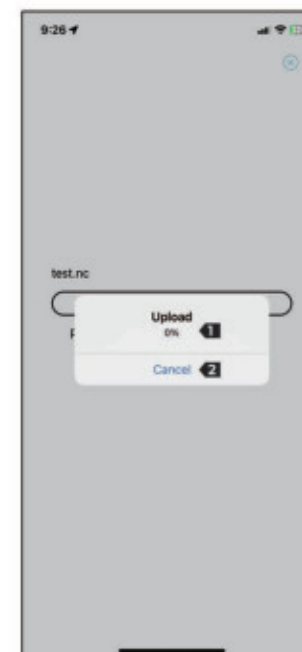
- 1 File name
- 2 Cancel
- 3 Determine the name

6. Share or engrave



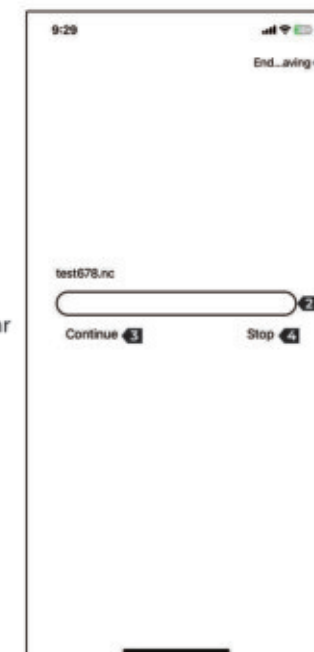
- 1 Share files with others
- 2 Carving now
- 3 Cancel file

7. Upload interface



- 1 Upload progress bar
- 2 Cancel file upload

8. Engraving interface



- 1 End engraving and close the interface
- 2 Engraving progress bar
- 3 Pause engraving
- 4 Stop engraving

ANDROID TERMINAL SOFTWARE INTRODUCTION

1. Introduction to main interface functions

1 Tips
Require file permissions
Confirm Cancel

You need to give permission to the software before using it

1 Set up
2 Connection display
3 Black and white
4 Grayscale
5 Cutting
6 Connection display

2. Introduction to the settings page

7 Used to fill in the IP address

8 Used to set language

ANDROID TERMINAL SOFTWARE INTRODUCTION

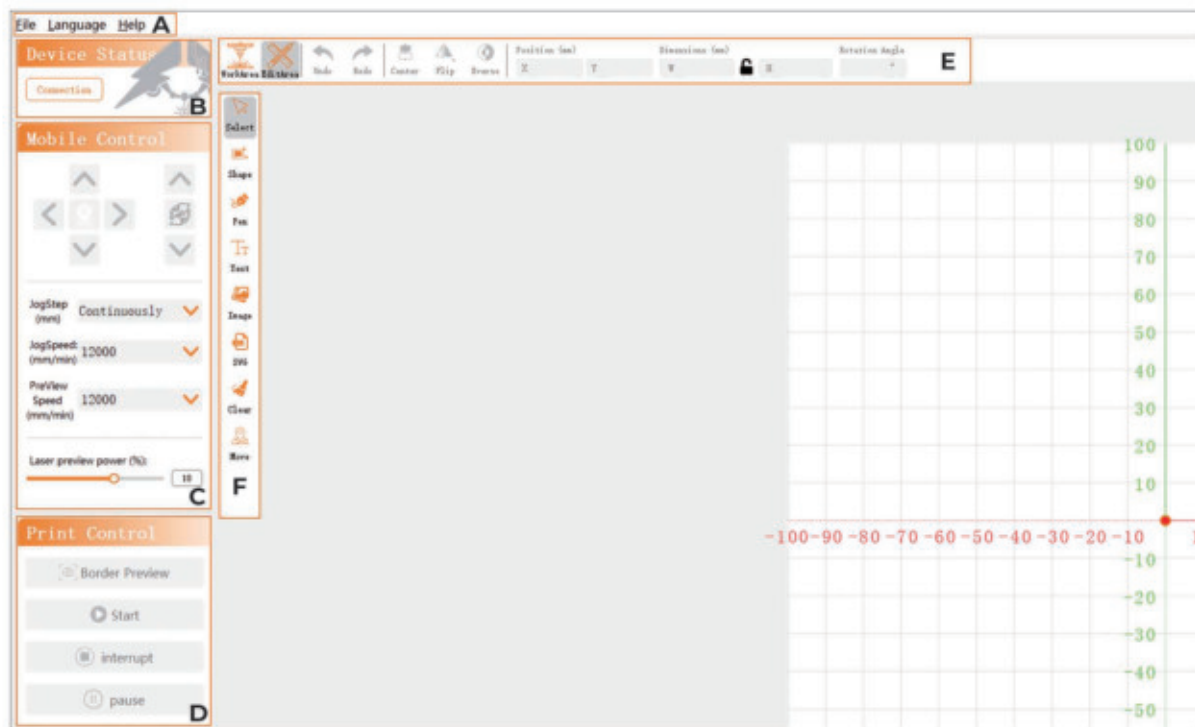
3. Introduction to function buttons

- Next step
- Height adjustment
- Width adjustment
- Fixed scaling
- Adjust image contrast
- Adjust image brightness
- Picture goes up one level
- Picture goes down one level
- Edit selected image
- Clear canvas
- Preview the power of the laser (recommended around 100)
- Automatically adjust laser height
- Return to default center point
- Preview picture
- Brush function
- Resource library
- Select Image

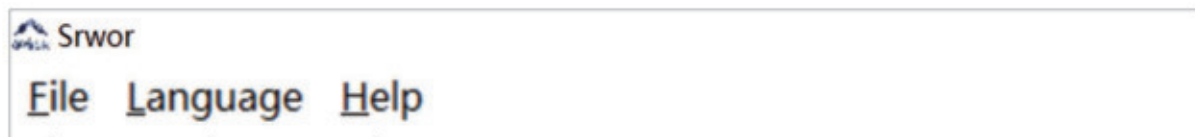
4. Introduction to engraving parameters

- Next step
- Control machine engraving speed
- Control laser engraving power
- Pause Printing
- Resume Printing
- Stop printing

SOFTWARE INTERFACE INTRODUCTION



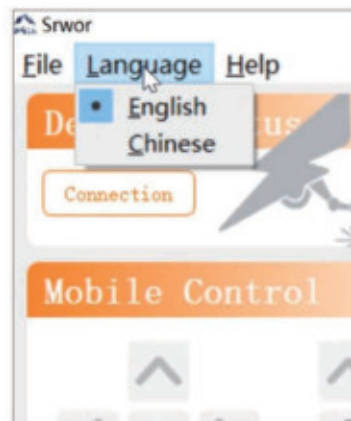
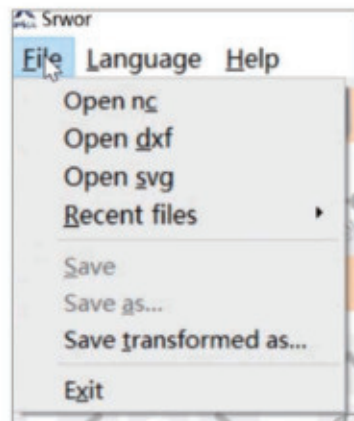
A: SOFTWARE NAVIGATION BAR



1 Load photos or other file from computer

2 Language

3 The first time you use the engraving machine, you need to install the driver

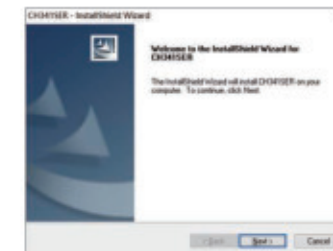


A: SOFTWARE NAVIGATION BAR

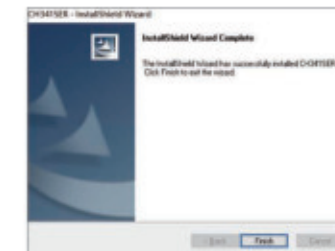
3.1 Select the language to install and click Next



3.2 Wait for the installation the next step after completion

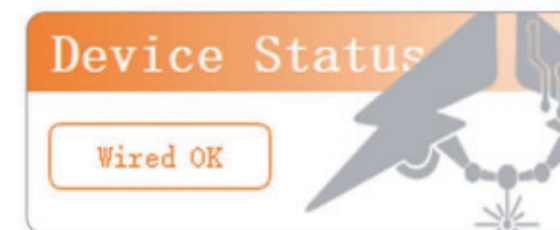


3.3 The installation is complete, click to exit

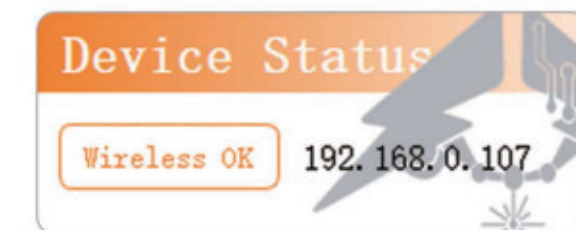


B: MACHINE CONNECTION STATUS

1 Display of the interface during wireless connection



2 Interface displayed during wired connection



1.1 The port number to connect to. Normally, the machine will connect automatically after connecting to the computer. (The driver needs to be installed for the first use, method A, step 3, 3.1, 3.2, 3.3)

2.1 The IP address of the machine, the computer and the machine are located in the same LAN, enter the IP address of the machine here, and the software will connect to the machine through Wifi

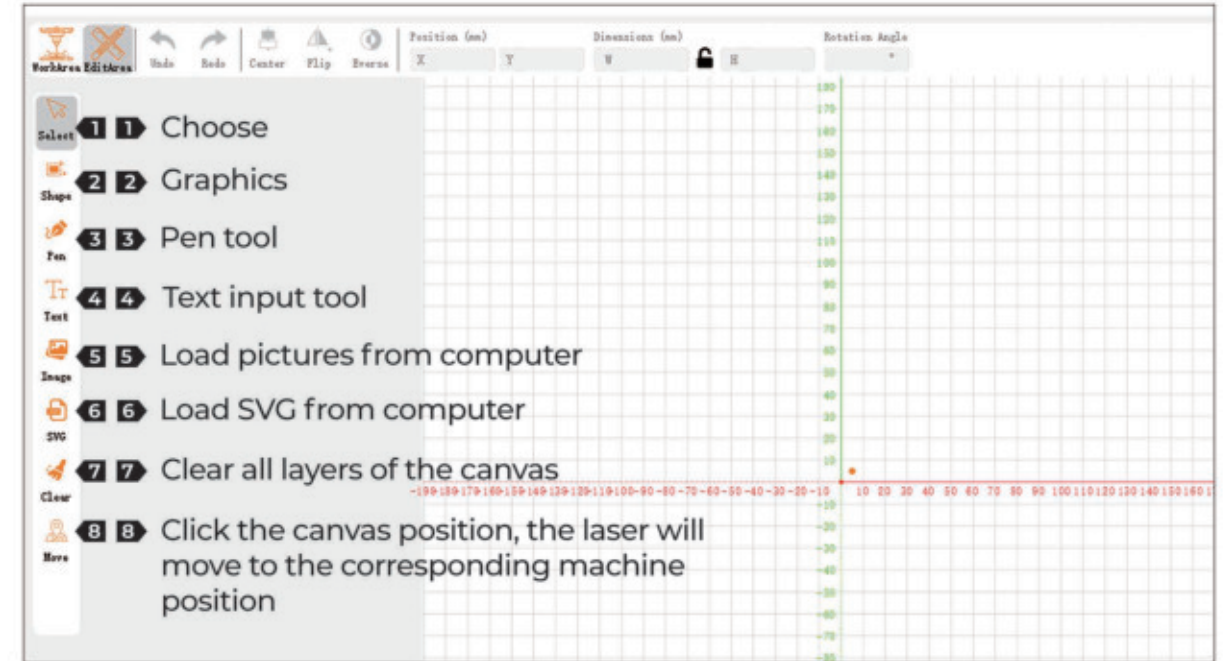


C: MACHINE CONSOLE



- 1 Move button
- 2 Back to the start
- 2 **2** Click the "move button" to move the distance
- 3 **3** The speed at which the "move button" is clicked
- 4 **4** Speed during laser preview
- 5 **5** Laser intensity while previewing

F: LAYER EDITING MODULE



- 1 **1** Choose
- 2 **2** Graphics
- 3 **3** Pen tool
- 4 **4** Text input tool
- 5 **5** Load pictures from computer
- 6 **6** Load SVG from computer
- 7 **7** Clear all layers of the canvas
- 8 **8** Click the canvas position, the laser will move to the corresponding machine position

D: Machine Command Control



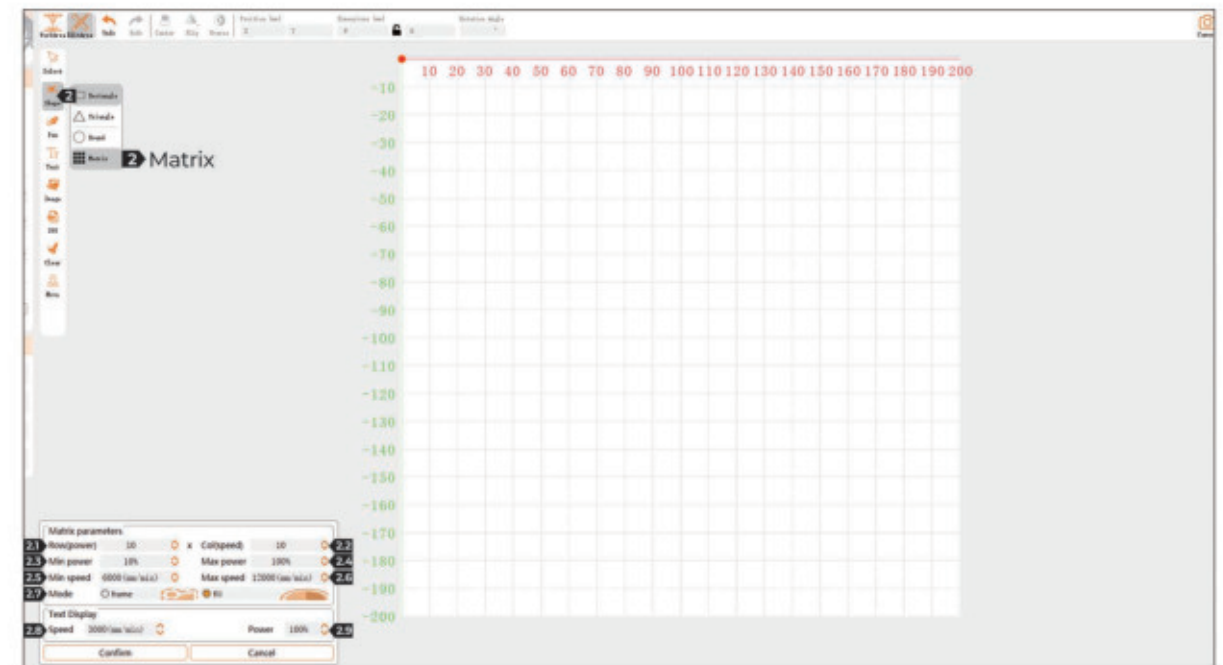
- 1 **1** Preview the engraved extents on the canvas
- 2 **2** Start carving
- 3 **3** interrupt engraving
- 4 **4** Pause engraving/Continue engraving

E: SOFTWARE EDITING MODULE



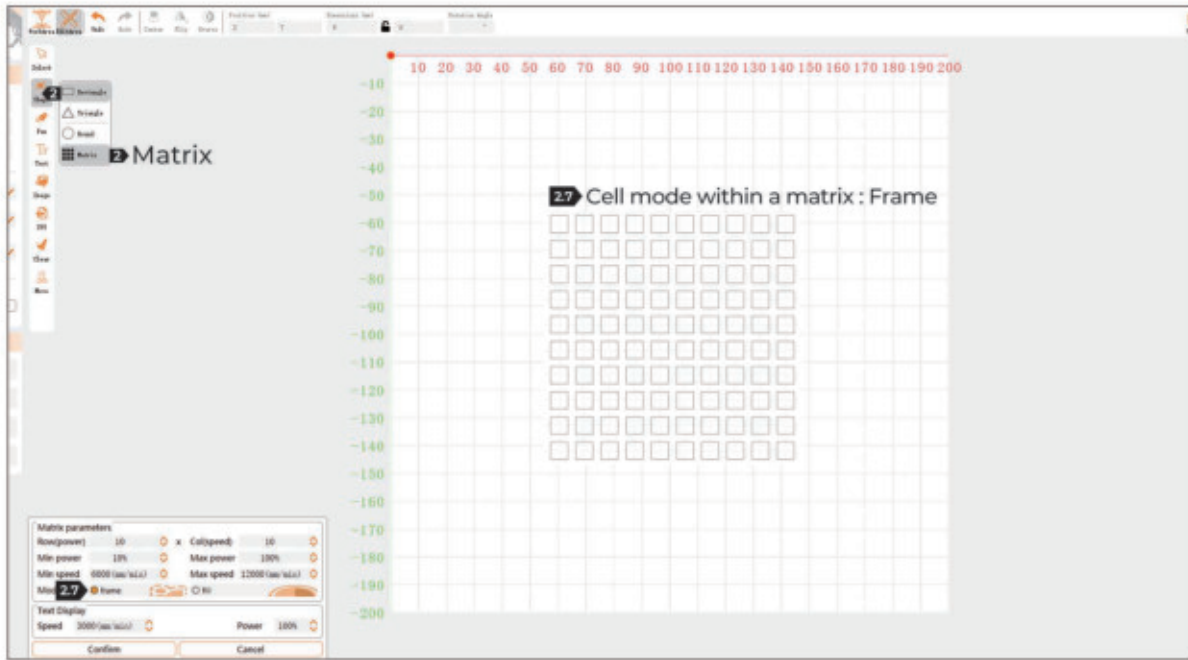
- 1 workspace (file used to display files saved from the editor)
- 2 The editing area can be edited on the canvas
- 3 Roll back operations on the canvas
- 4 Resume operations on the canvas
- 5 Center the selected layer in the canvas
- 6 Mirror selected layers
- 7 Invert selected layers
- 8 Adjust the coordinates, scale angle of the selected object
- 9 Open camera in canvas
- 10 Save the content of the editing area to the work area

2 Graphics - Matrix

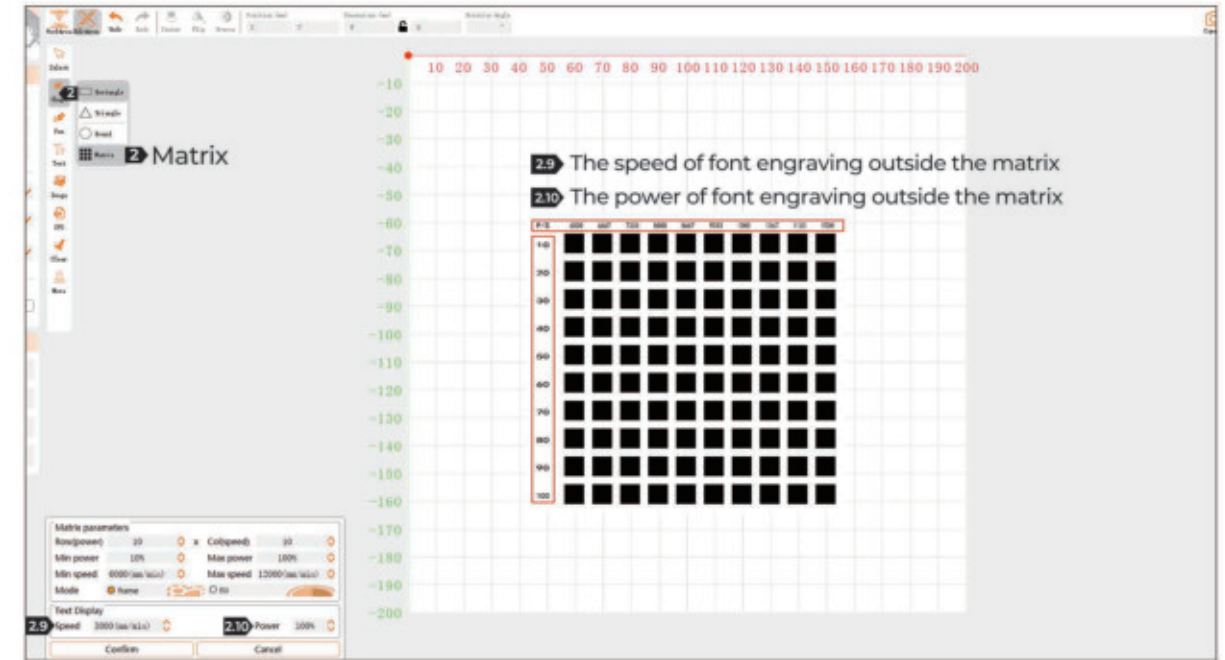


- 2.1 The number of columns of the matrix, used to represent the laser power will be arranged in order according to the values of 2.5 and 2.6
- 2.2 The number of rows of the matrix, used to represent the engraving speed will be arranged in order according to the values of 2.3 and 2.4

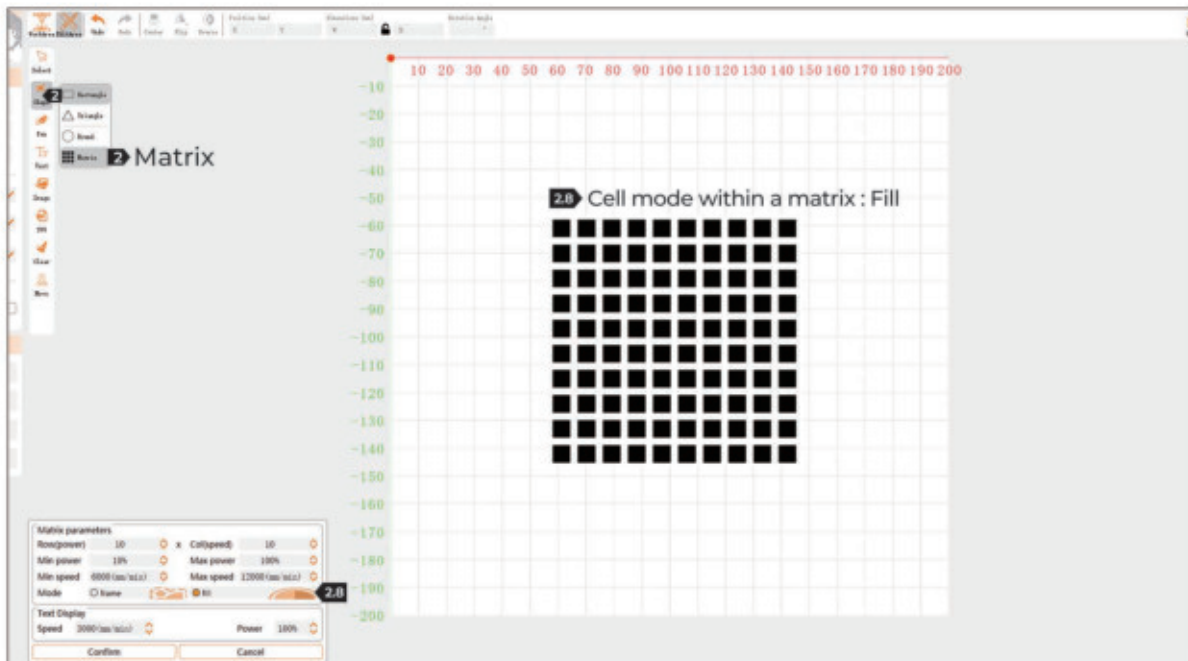
2 Graphics - Matrix



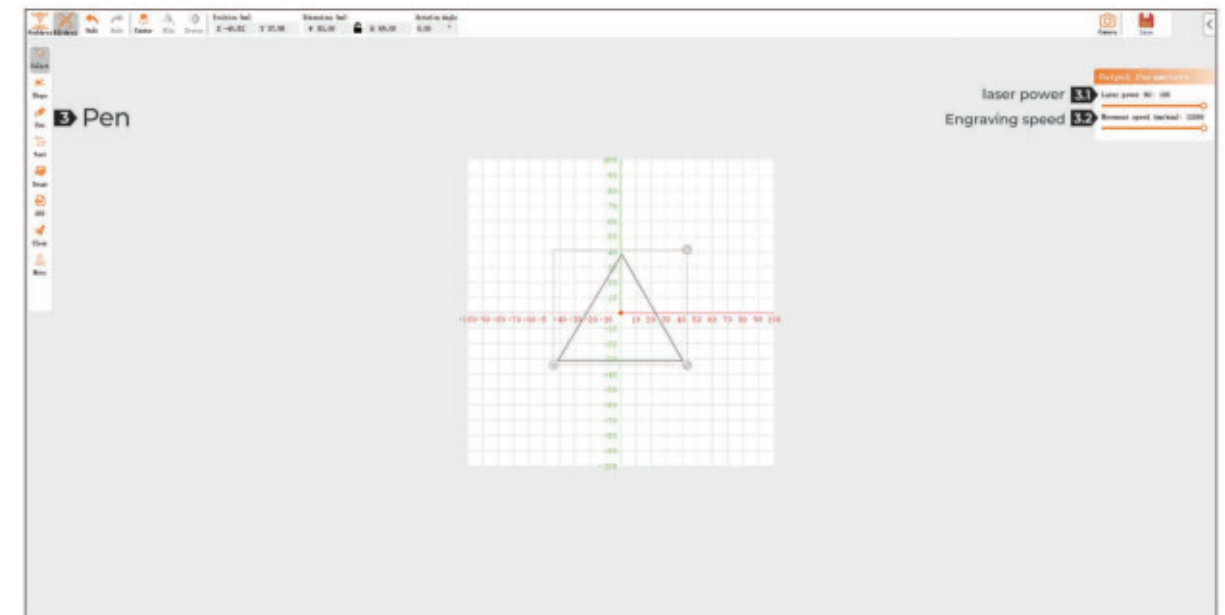
2 Graphics - Matrix



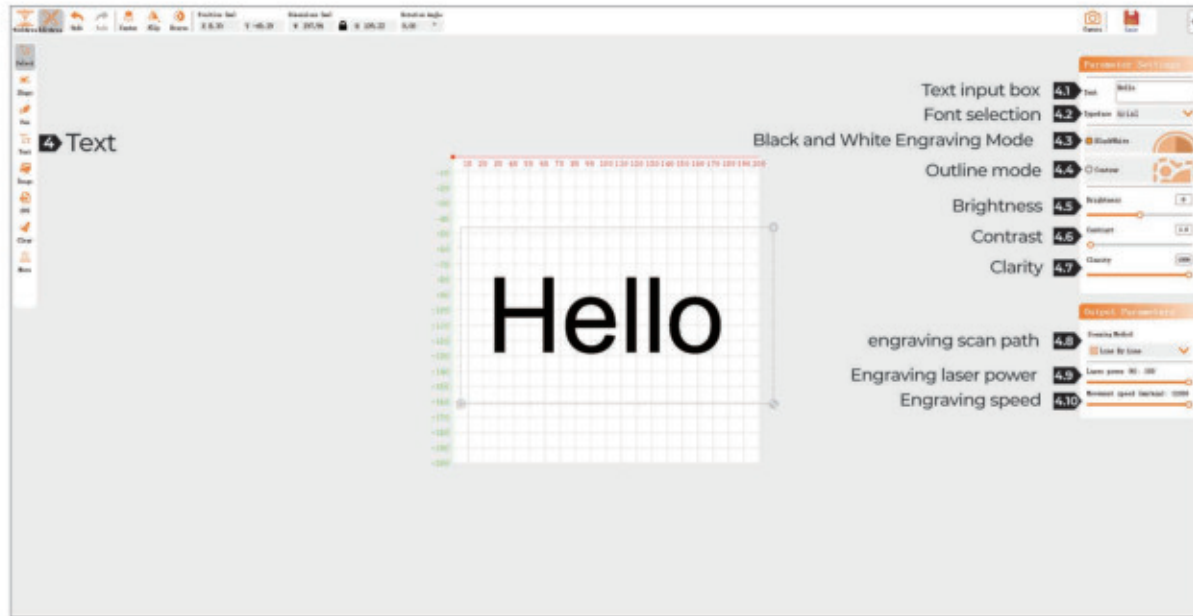
2 Graphics - Matrix



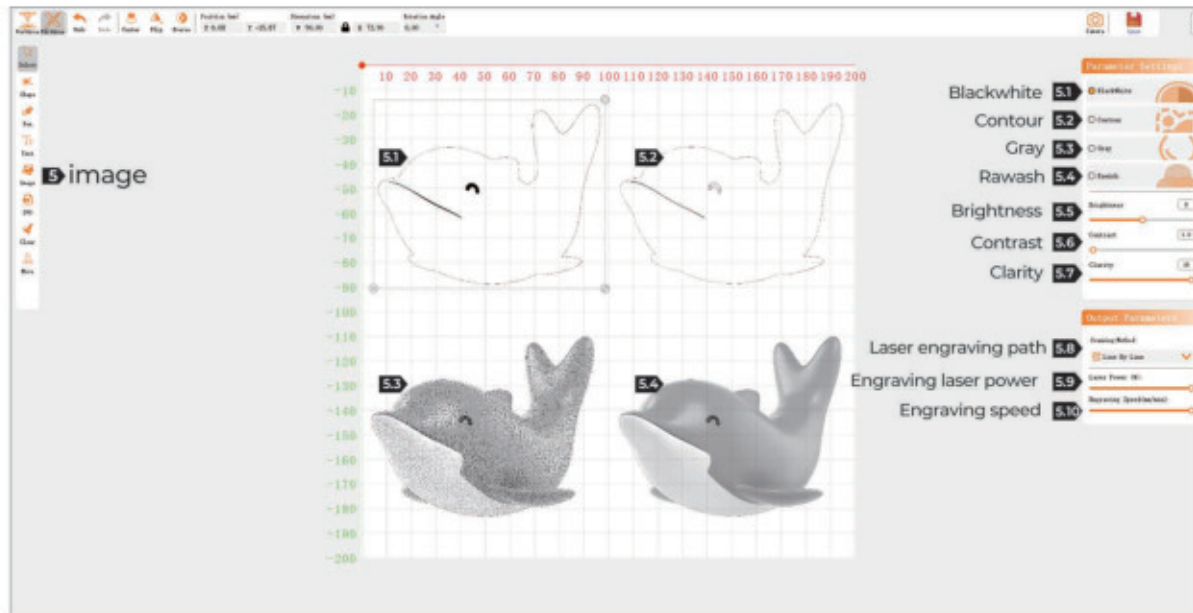
3 Pen tool



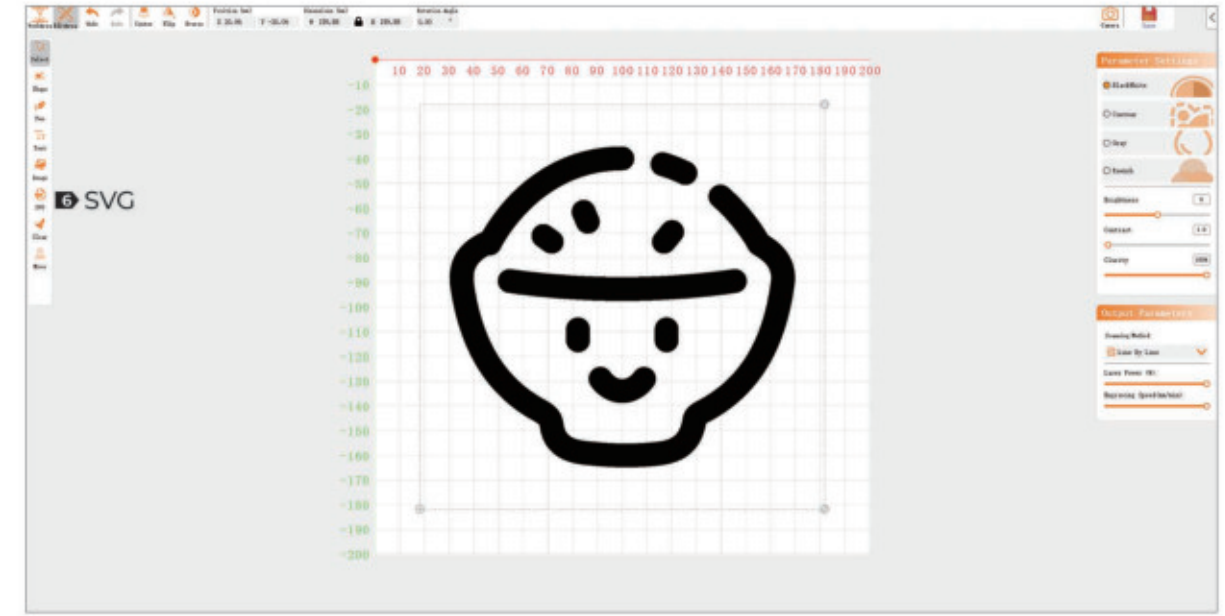
4 Text input tool



5 Load pictures from computer



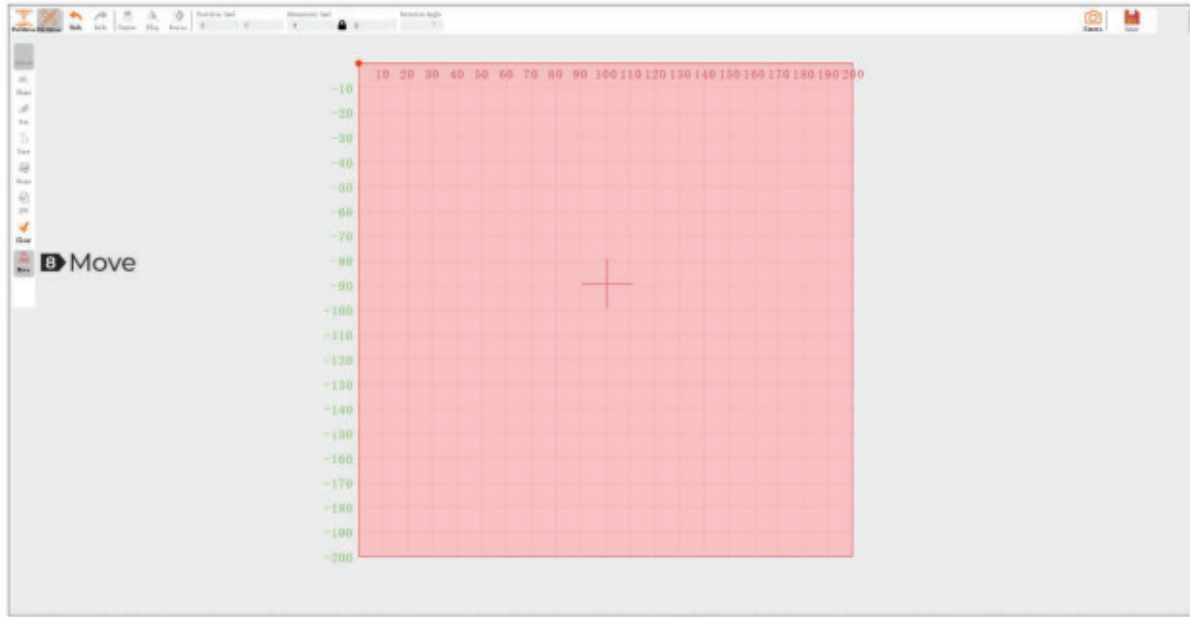
6 Load SVG from computer




7 Clear all layers of the canvas

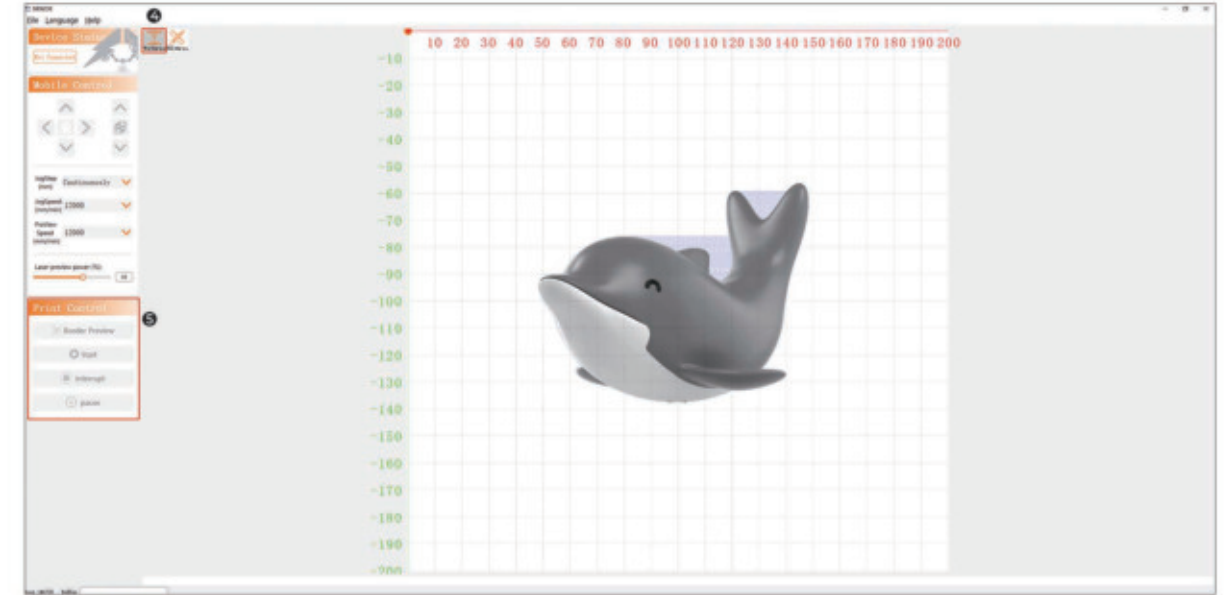


B CLICK THE CANVAS POSITION, THE LASER WILL MOVE TO THE CORRESPON



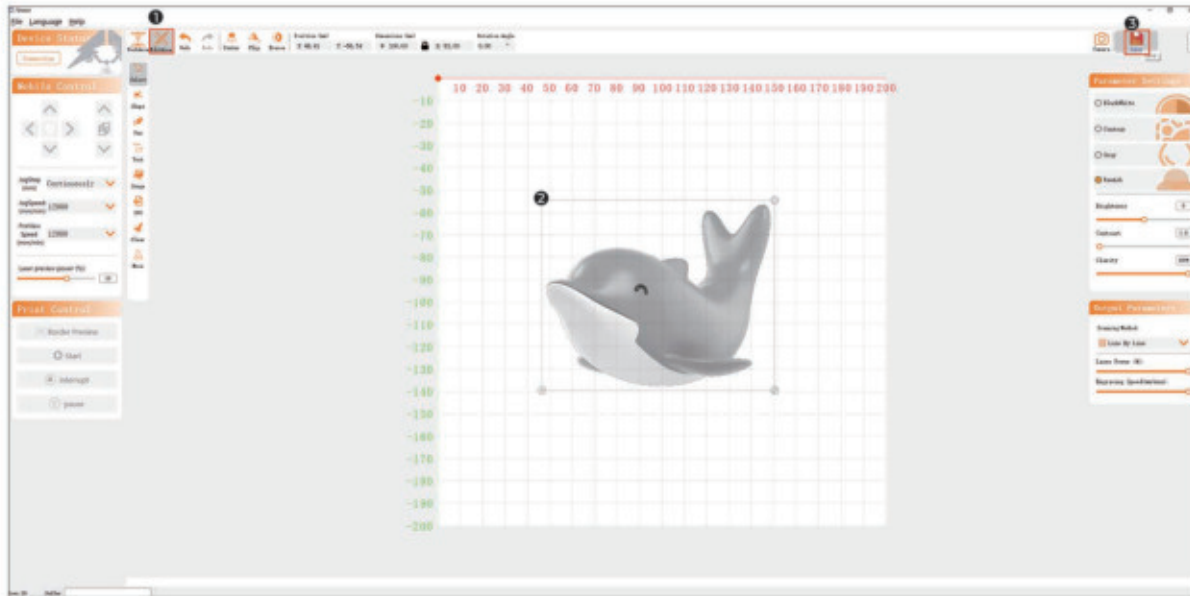
(tips:After editing in the editing area, you need to click  The content of the editing area is saved to the work area)

Engraving process



- 4 in work area
- 5 You can adjust, preview, start working, stop working, suspend working, etc.

Engraving process



- 1 Click on the editing area
- 2 Finish editing in the editing area
- 3 Click "SAVE"

CAMERA USER GUIDE

1.0 You need to connect the camera's data cable to the computer



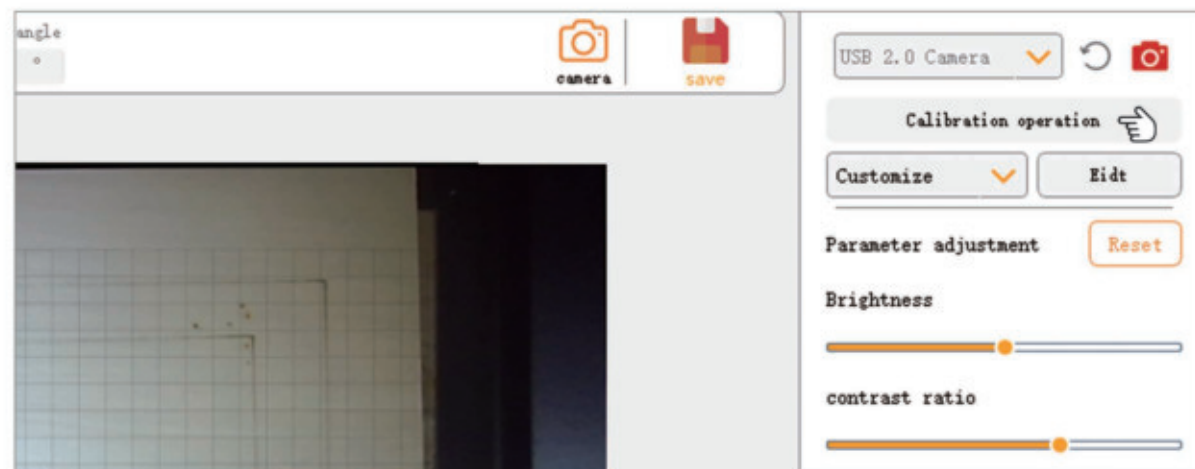
1.1 Open the camera module



1.2 Select camera and open camera

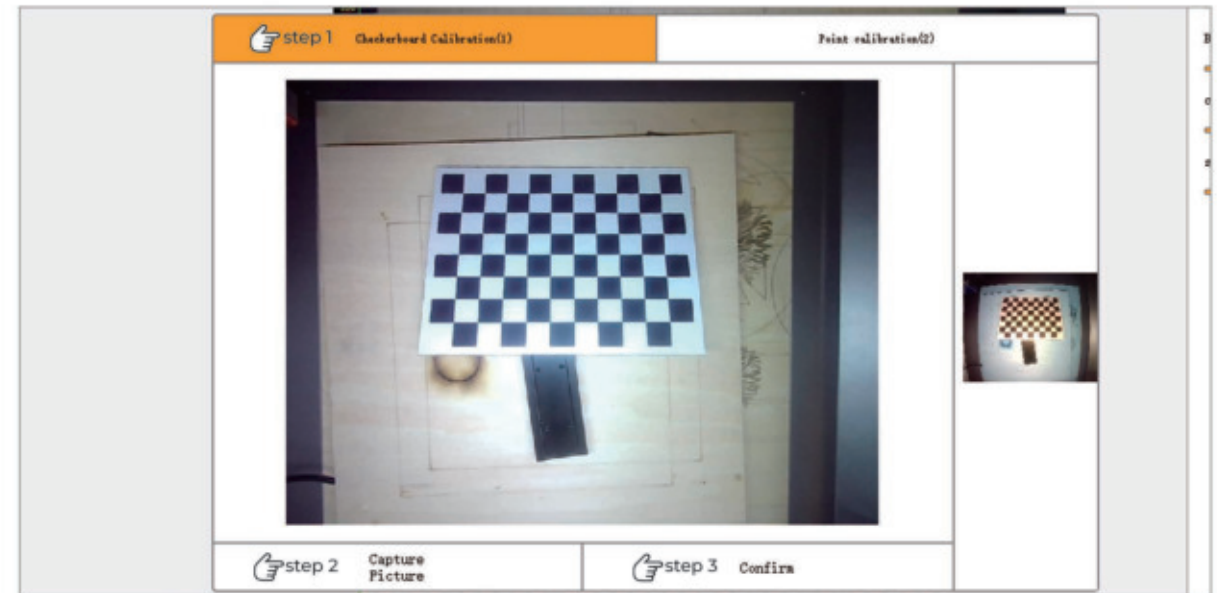


1.3 If the camera has not been calibrated, click the calibration button

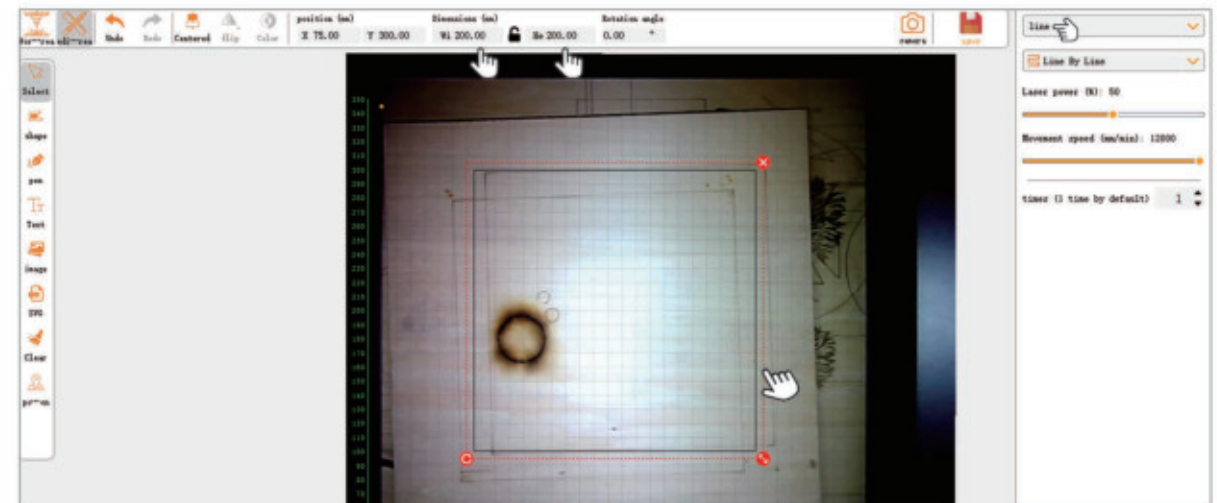


CAMERA USER GUIDE

1.4 Calibrate the chessboard first and put it into the chessboard. Each time you capture a picture, please put the chessboard in a different position. Note: the chessboard can only be horizontal. The first square on the upper left must be black. It can be tilted at a certain angle (vertical tilt or horizontal tilt). Generally, it is best to capture 12 pictures (4 corners + upper, lower, left, middle, and 3 random positions) with a slight inclination. Every time a chessboard picture is successfully captured, the value will be displayed behind the capture picture button. Once 12 pictures are reached, it can be confirmed.

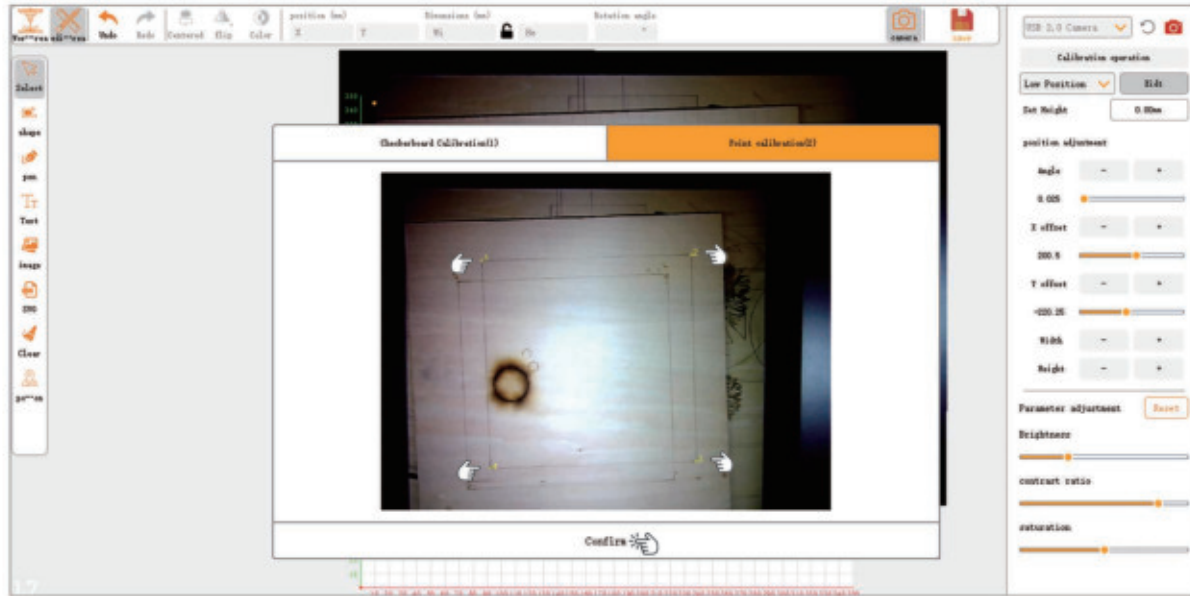


1.5 Use the laser to engrave a rectangular frame of about 200*200. There is no need to delete the rectangle after engraving. Remember that the rectangular frame and the carved wooden board cannot be moved.

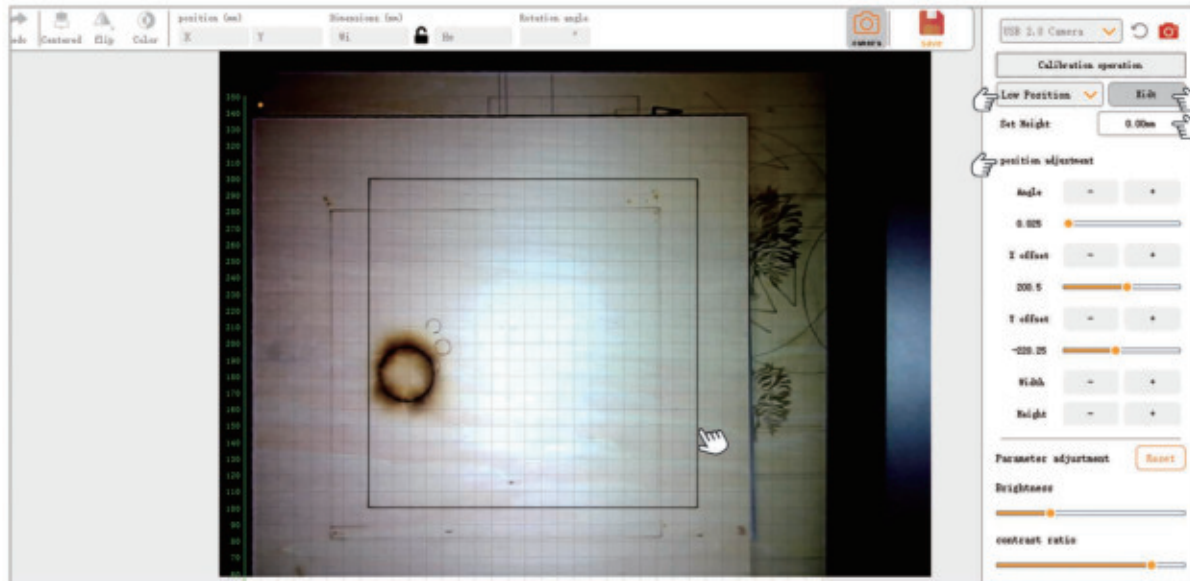


CAMERA USER GUIDE

- 1.6 Click on the camera interface, select tracing point calibration (2), left-click the mouse to trace 4 points (corresponding to the upper left, upper right, lower right, and lower left of the engraved rectangle respectively), and then confirm to complete the tracing point calibration. Note: Mouse wheel To enlarge the picture, press space+left mouse button to drag the picture, and ctrl+Z to cancel the most recently drawn point.

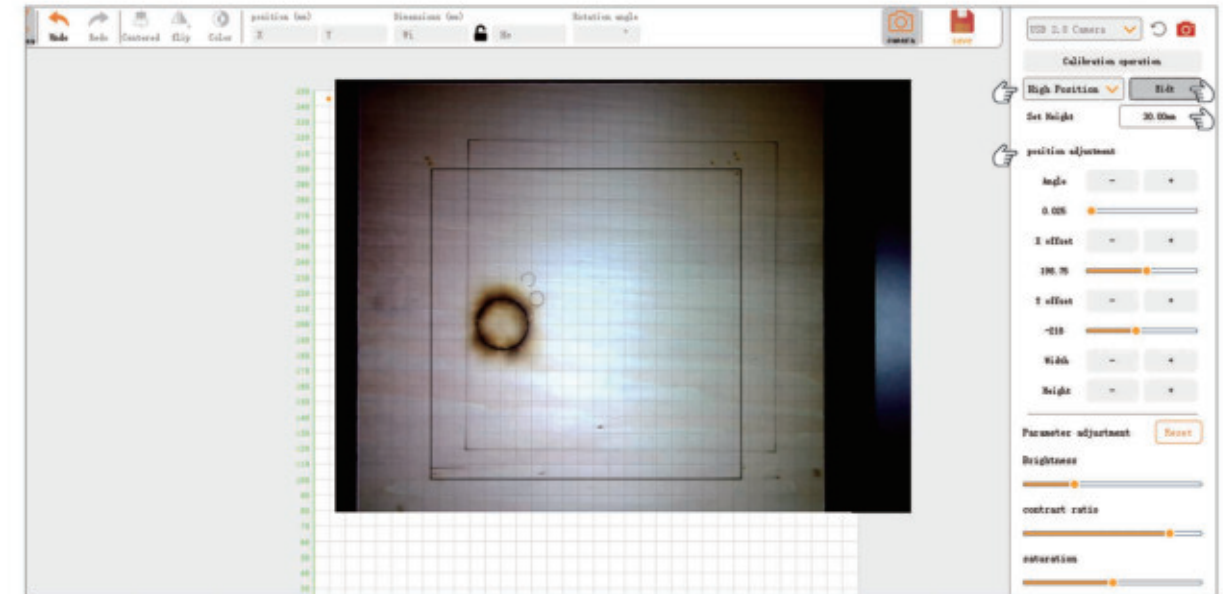


- 1.7 After tracing the points, select the low position, edit, set the height (it is generally recommended to set the low position to 0), and then adjust the position so that the rectangle is completely aligned and the adjustment is completed.

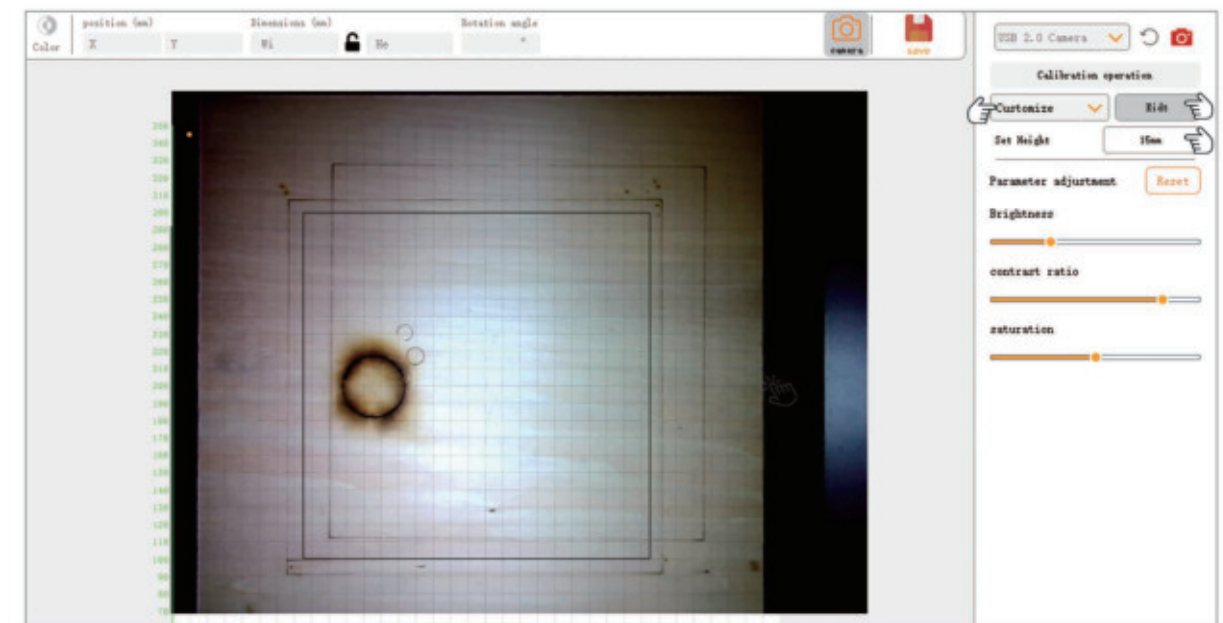


CAMERA USER GUIDE

- 1.8 After the low position is adjusted (if you only adjust this height, you can ignore the following steps and go directly to the step), then perform some steps 1.5, and then perform operations similar to step 1.7 (note that you need to select the high position here, edit, and set the height. The wooden board here is raised 30mm, so fill in 30)



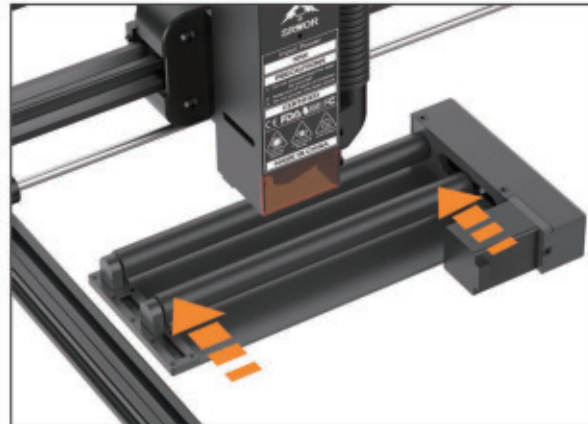
- 1.9 At this point, the cameras have all been adjusted. Select Custom and set different heights according to different engraving target engraving heights for normal use (the target height is only between the low position and the high position).



HOW TO USE THE ROLLER



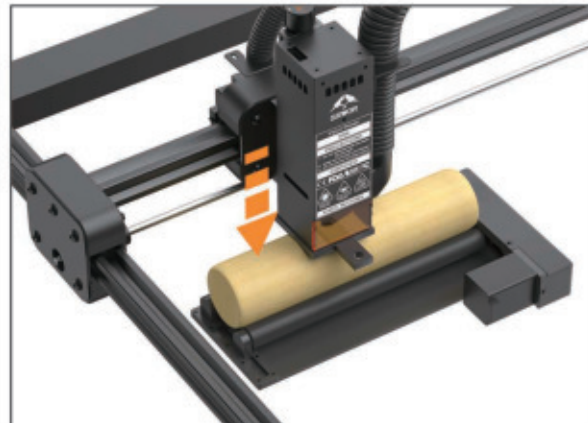
1. Connect the data cable of the drum to the machine



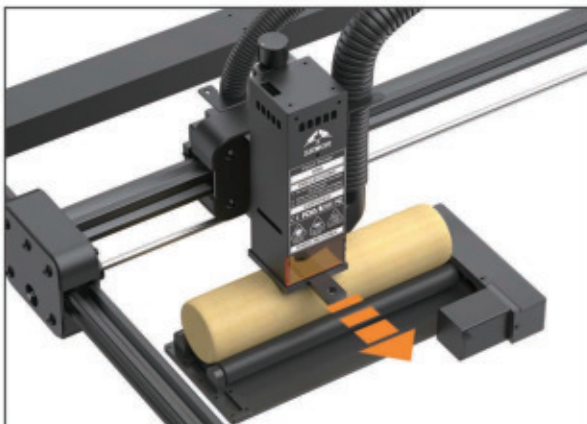
2. Adjust the roller to the appropriate width for the item to be engraved



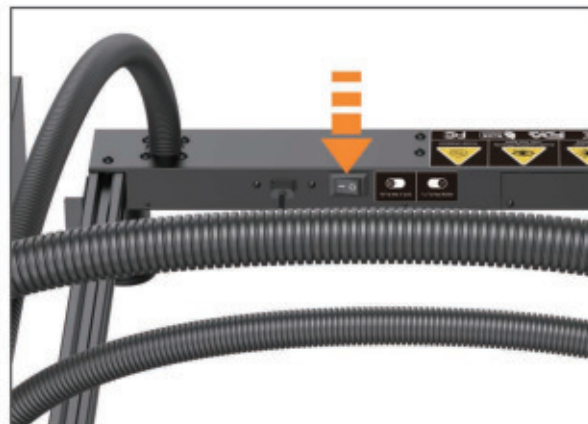
3. Place the engraved item on the drum



4. The top knob presses down the fixed focus piece to focus.



5. After focusing, take out the fixed focus film



6. "O" is the Y axis and "I" is the roller.

COMMON PROBLEM

A: The machine does not respond when powered on

1. Not powered on: Check the sockets, switches, body power sockets, etc. to make sure they are plugged in and powered on normally.

B: Unable to connect to computer

1. The USB cable is not connected: Check the computer end of the USB data cable and the machine interface to ensure that it is plugged in place. The USB interface on the front panel of some desktop computers is invalid and needs to be connected to the socket on the rear of the fuselage.
2. The driver is not installed normally: Complete the driver installation according to the operating instructions. After the installation is completed, the computer recognizes the device as a serial port, which means the hardware connection is OK.
3. Other special circumstances: Unplug the USB data cable and power supply, and then reconnect the device after it is completely powered off for 5 seconds.

C: The engraving effect is very shallow or has no traces

1. Inaccurate focus: Read the focus section of the user manual to focus accurately.
2. Engraving speed: too fast, caused by too short burning time. Read the engraving parameter section of the user manual to readjust the parameters.
3. The picture is too light: The imported picture must be clear. The lines are too thin and the color is too light, which will directly affect the engraving effect.
4. Place the object to be engraved: The object to be engraved is placed at an angle. The focal length of the laser is fixed, so the object to be engraved must be placed flat and parallel to the fuselage. Otherwise, the focus will be inaccurate, resulting in engraving. The effect is unusual.

D: Incorrect focus

1. Read the focusing section of the user manual. When focusing, please use the black focusing plate that comes with the fuselage. If the focusing plate is lost, you can use a thin and rough cardboard to replace it. You need to refocus. For relevant information, please contact us online customer service.

E: Unable to connect to Lightburn

1. Confirm whether the driver (CH340) has been installed and reinstall the driver
2. Confirm whether the baud rate in the setting parameters is 115200
3. Check whether the serial port is damaged