

**AENBUSLM**

**AENBUSLM**



**T1**

**Quick Start Guide**

Contact Us  
Service Email: [AENBUSLM@outlook.com](mailto:AENBUSLM@outlook.com)

Scan the QR code to get  
the installation video



**USER MANUAL**

Thank you for purchasing a AENBUSLM T1-Series Engraving and Cutting Machine. We hope the T1-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.

AENBUSLM 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.

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

**AENBUSLM****Contact Us**

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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-50C. 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	AENBUSLM
Model	T1
Material	Aluminum Alloy+Plastic
Power input	DC 12V
Laser type	Semiconductor Laser
Working area	400*400mm
Laser output power	3.5W/6W/10W
Overall power	3.5W/40W/80W
Laser life	20000 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

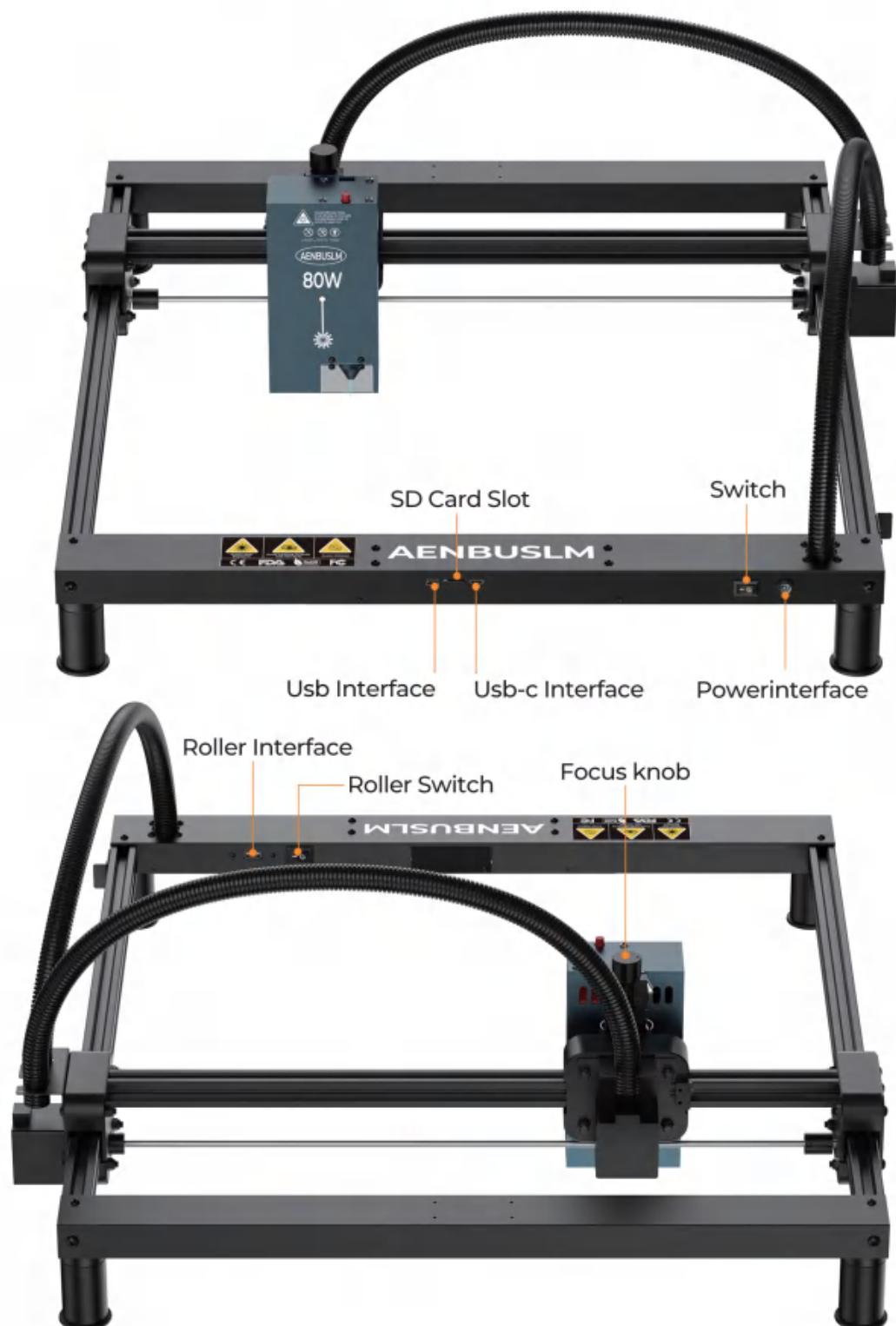
## 3.5W/40W/80W ENGRAVING PARAMETER GUIDE

Material	Engraving speed	Cutting speed
Basswood board 5mm	\	3.5W(110mm/min)
Basswood board 6mm	\	40W(110mm/min)
Basswood board 10mm	\	40W\80W(110mm/min)
Stainless steel engraving	80W(5000mm/min) 40W(1000-1200mm/min)	\
stone carving	80W(2000-3000mm/min) 40W(500-2000mm/min)	\

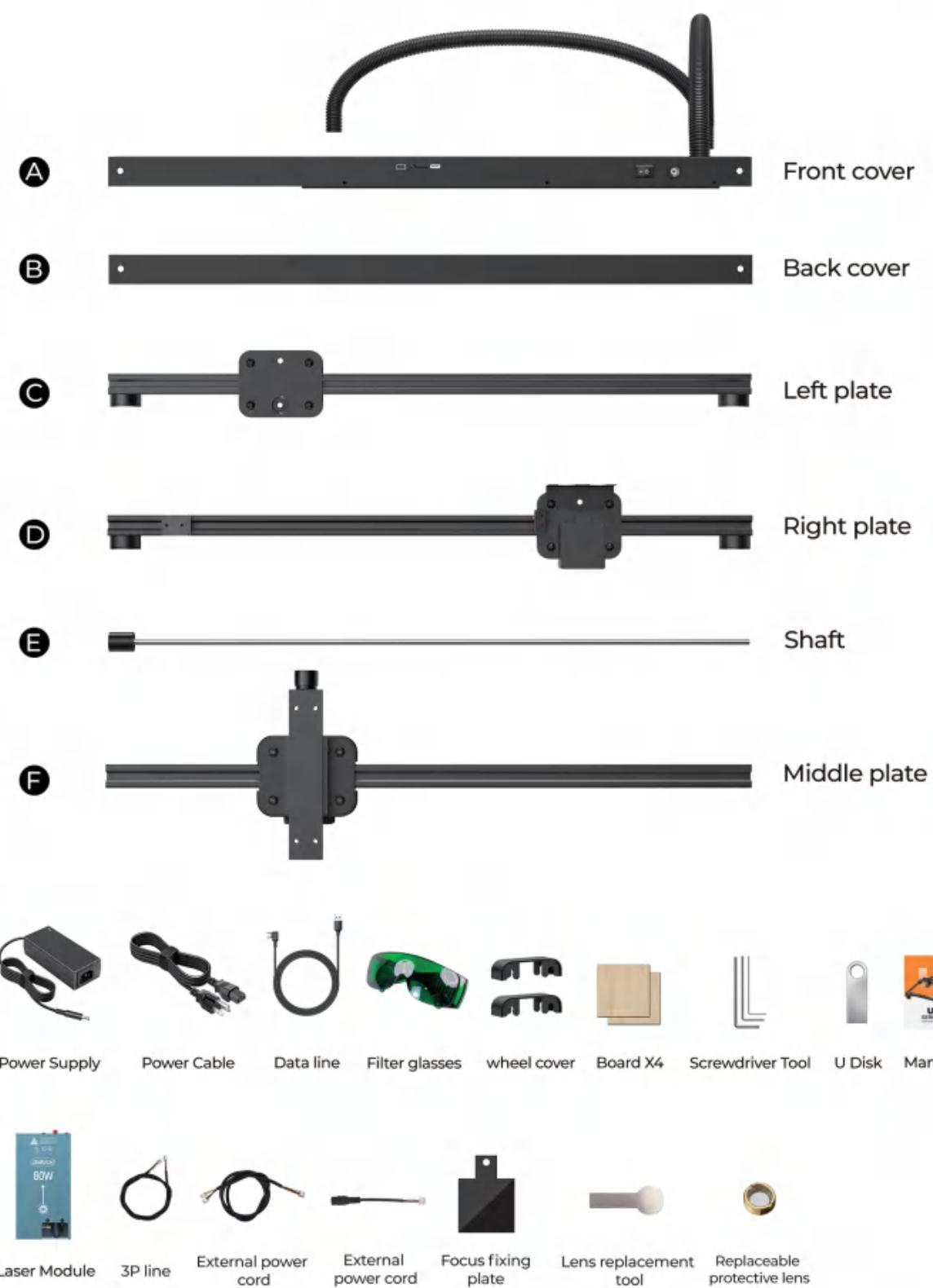
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## PRODUCT STRUCTURE



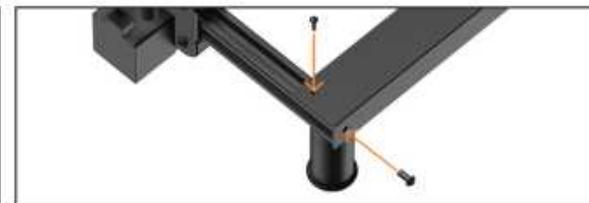
## PARTS &amp; ACCESSORIES



## INSTALLATION TEACHING



## INSTALLATION TEACHING



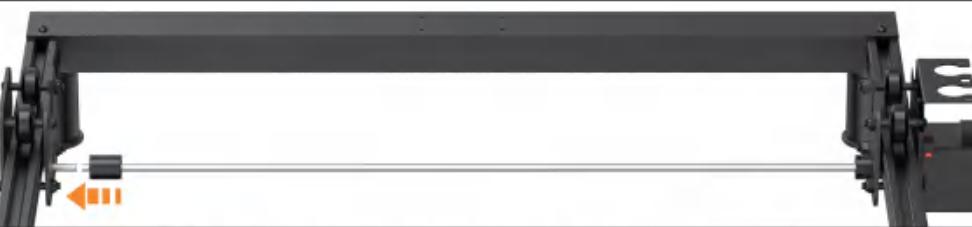
## INSTALLATION TEACHING



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



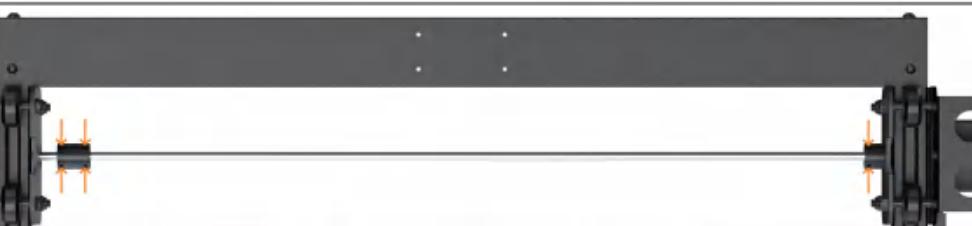
2. Insert the roller into the coupling on one side



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



3mm Screwdrivers 5mm Screw x2



local details



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

## INSTALLATION TEACHING

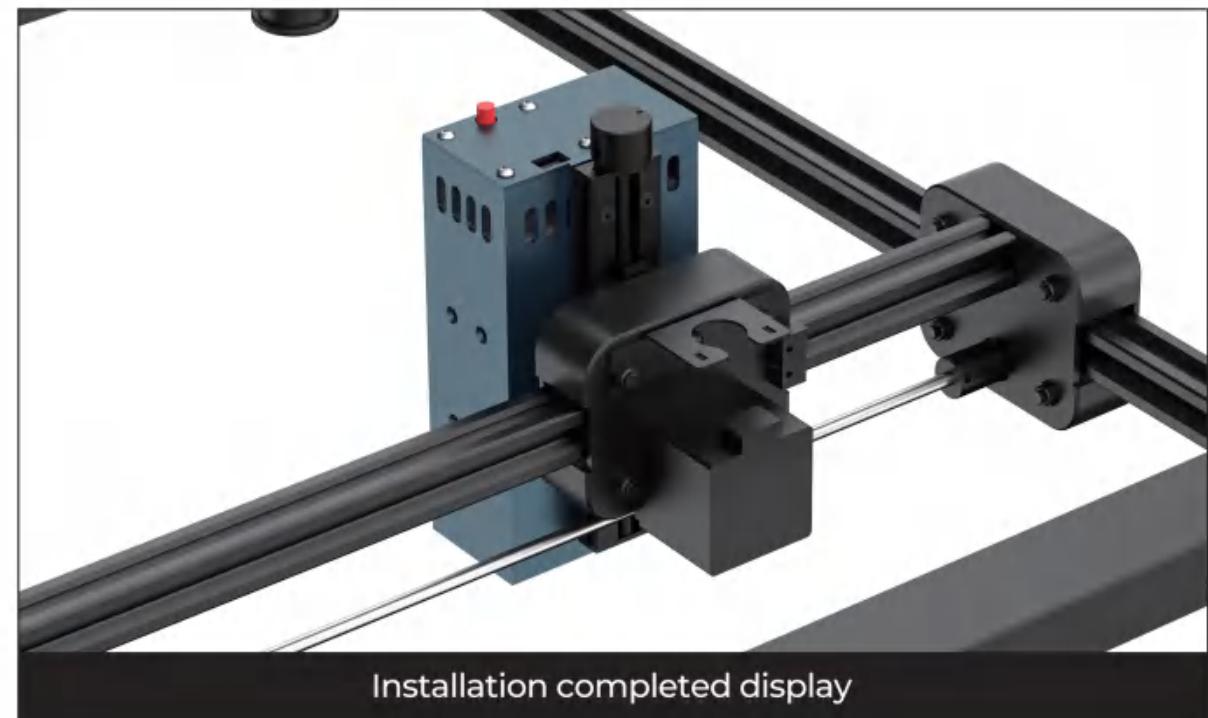


## INSTALLATION TEACHING



## INSTALLATION TEACHING

Laser Module



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 The fixed focus film is placed on the engraved object
- 2 Rotate to adjust the height until the fixed focus film is stored
- 3 Take out the fixed focus film and complete focusing

## SOFTWARE DOWNLOAD

AENBUSLM



Download Link

<http://laserGRBL.com><http://Lightburn.com>

Android



ios

## Note:

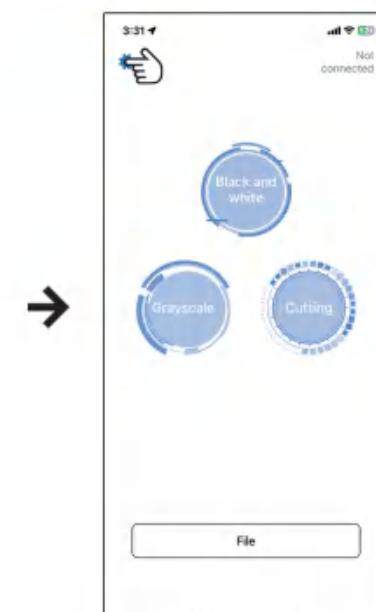
1. You can scan the QR code to download
2. APP software can be downloaded in major application stores
3. After the installation is successful, you need to give the corresponding permissions

## MOBILE PHONE DIRECTLY CONNECTED TO MACHINE

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



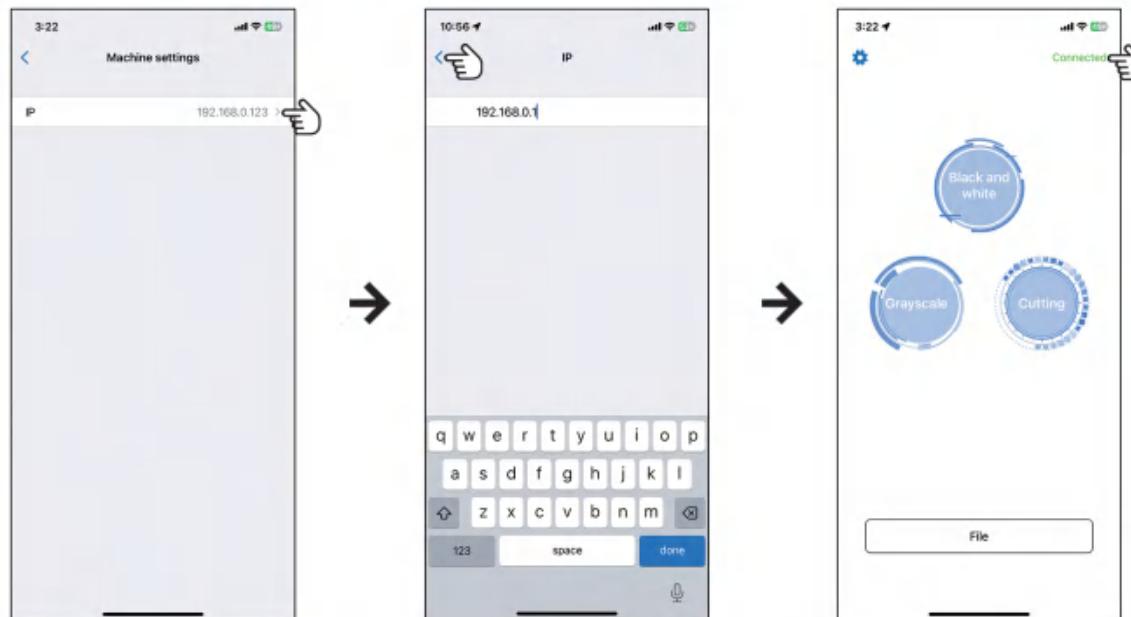
## 2. Apple connection method



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

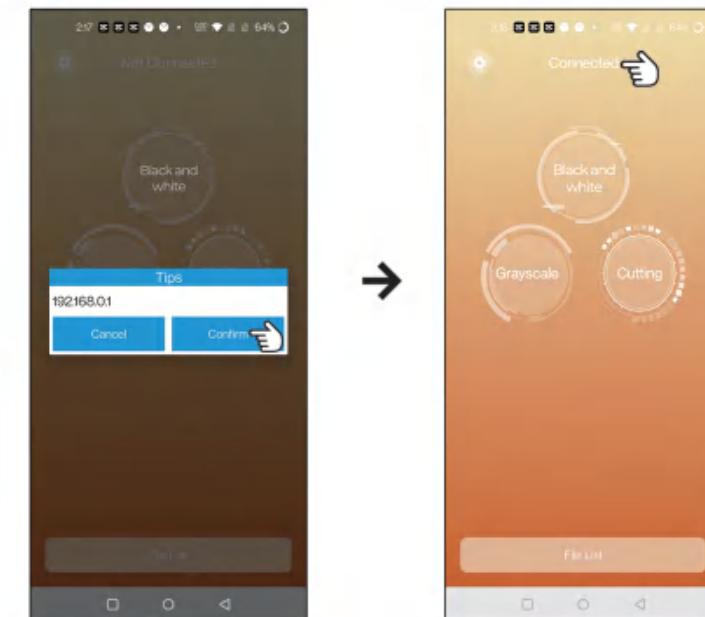
## 2. Apple connection method



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



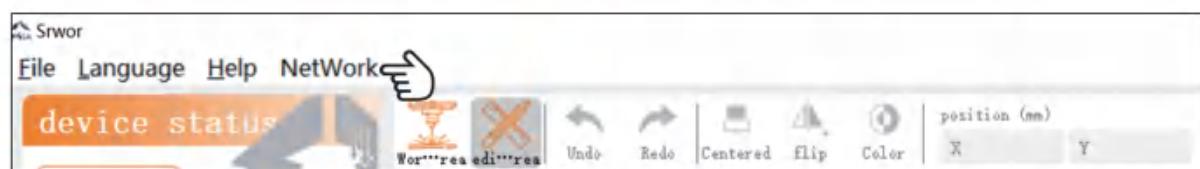
Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface

## MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

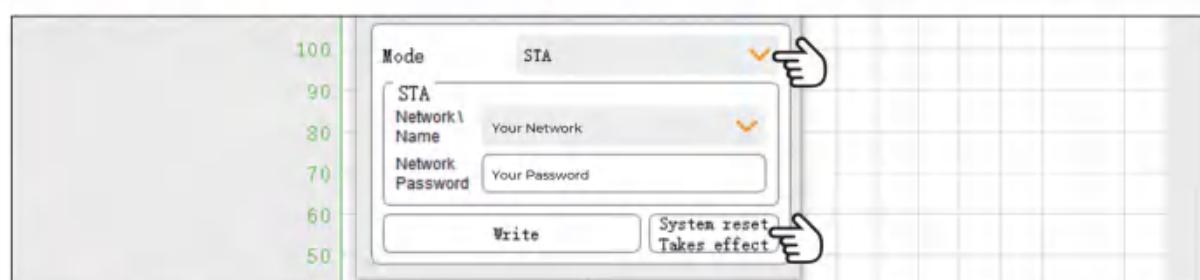
## 1. First you need to connect the machine to the computer



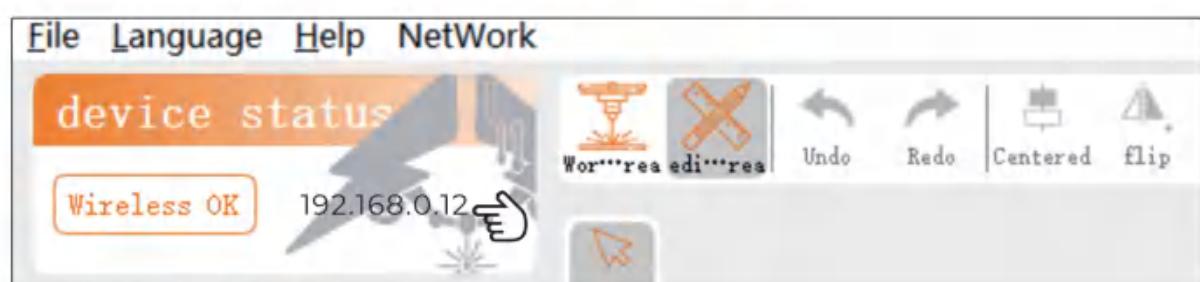
## 2. Open the SRWOR software, Network-Network Settings



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

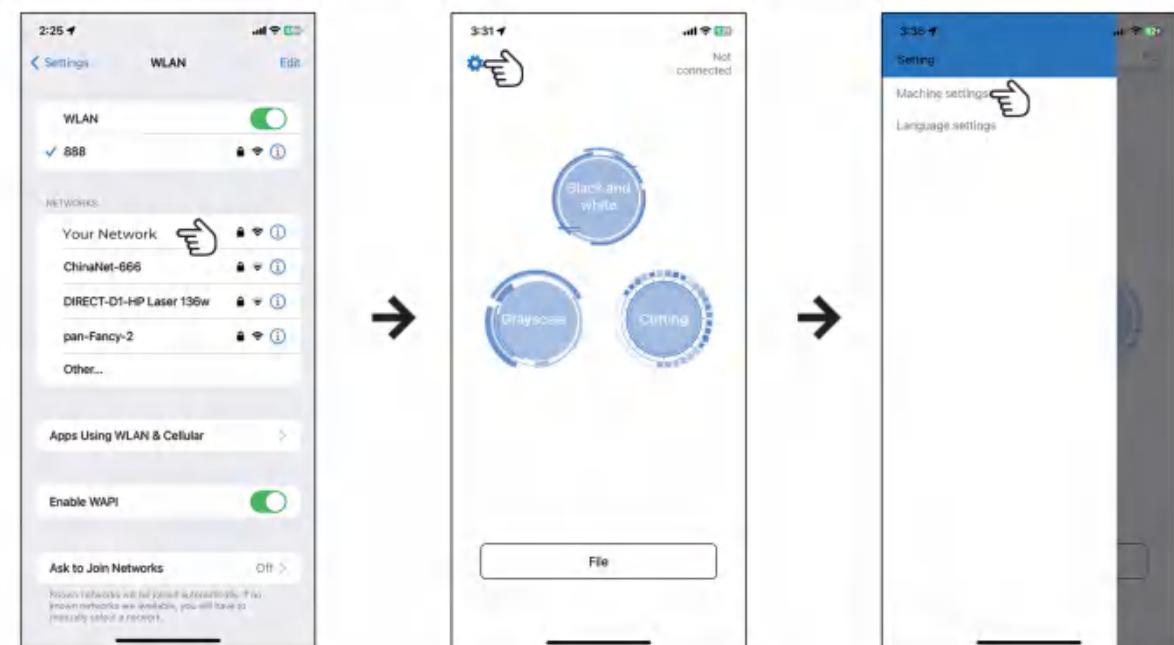


## 4. The connection IP address is shown here

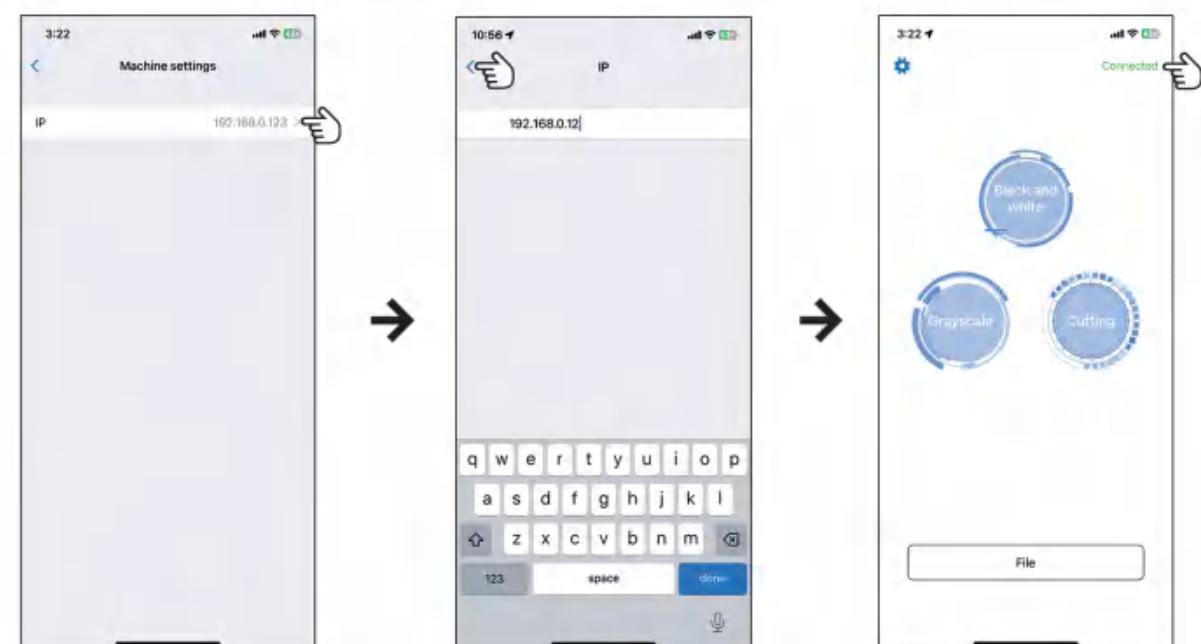


## MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

## 5. Apple side operation steps



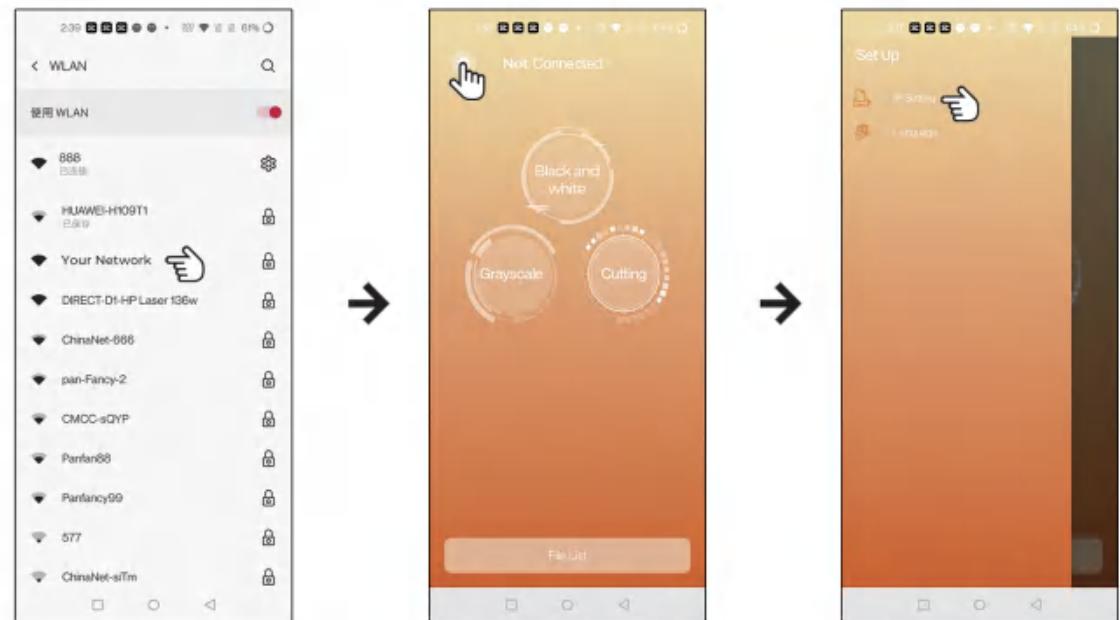
First connect to the designated WIFI, open the app, click the gear in the upper left corner, and click "Machine Settings"



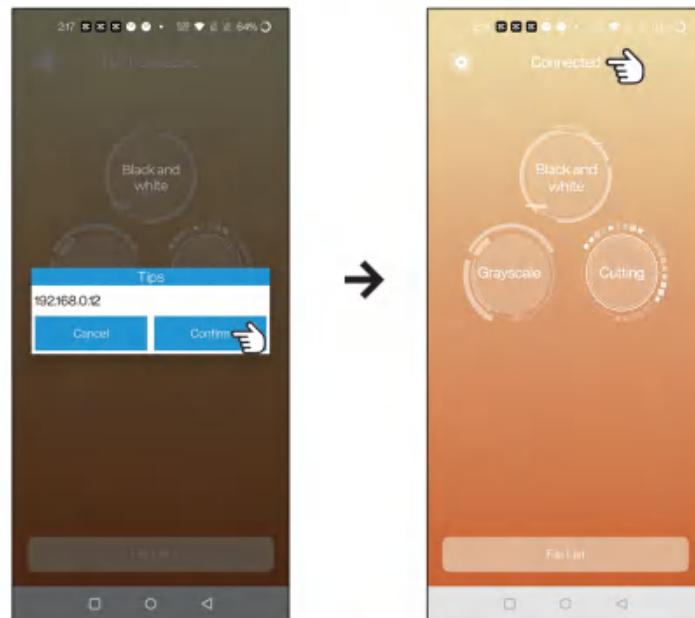
Enter the IP address of the software on your mobile phone. After returning to the main interface, "Connected" in the upper left corner turns green. Indicates successful connection.

## MOBILE PHONE CONNECTS TO MACHINE THROUGH COMPUTER

## 6. Android operation steps



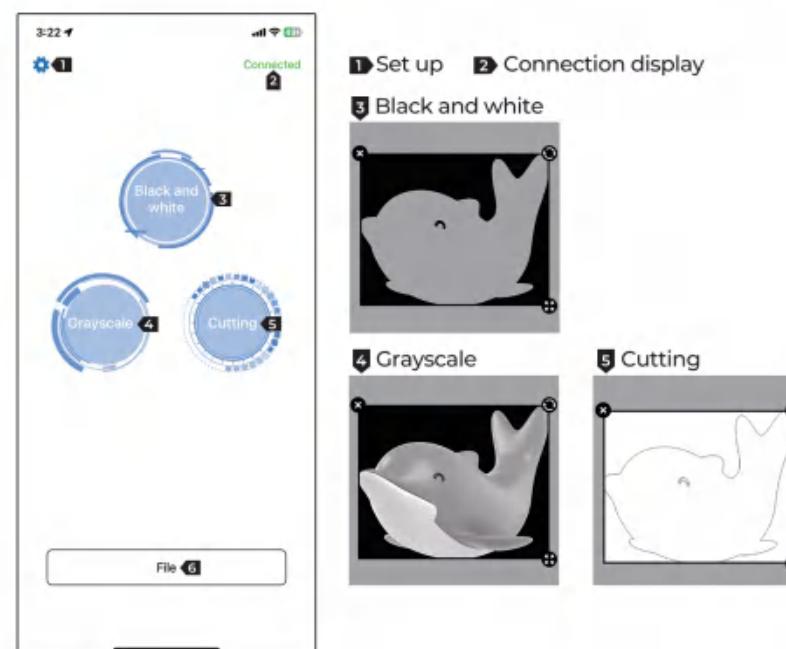
Connect to the designated WIFI, open the App, click the gear in the upper left corner, click "Machine Settings", and enter the IP address in the offline interface



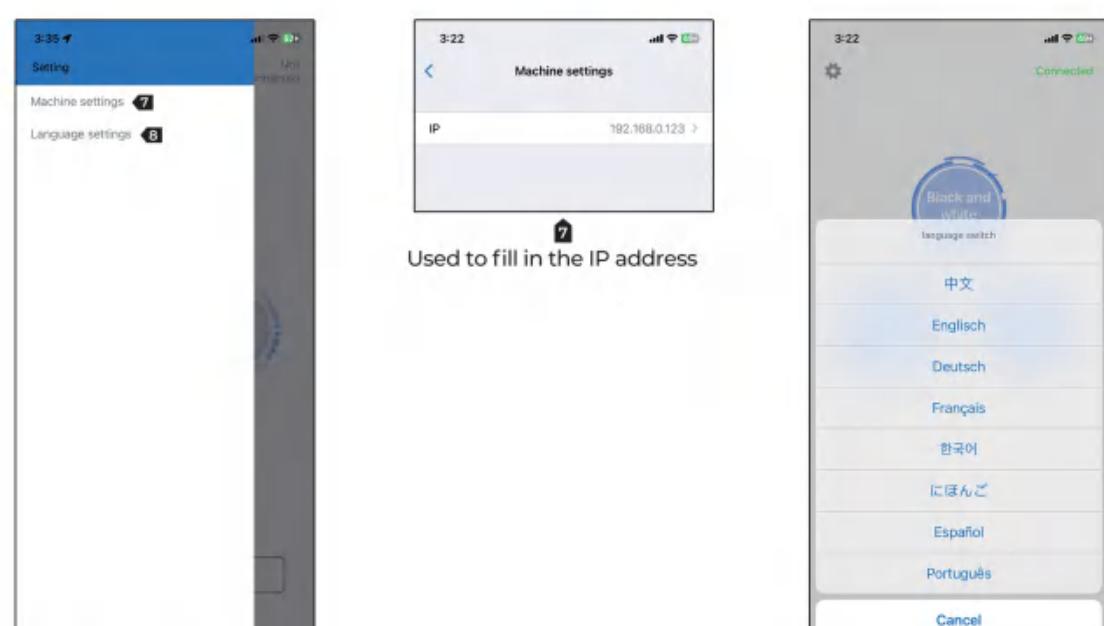
Enter the IP address. Return to the homepage, "Connected" is displayed in the middle to indicate successful connection.

## APPLE TERMINAL SOFTWARE INTRODUCTION

## 1. Introduction to main interface functions



## 2. Introduction to the settings page



Used to set language

## APPLE TERMINAL SOFTWARE INTRODUCTION

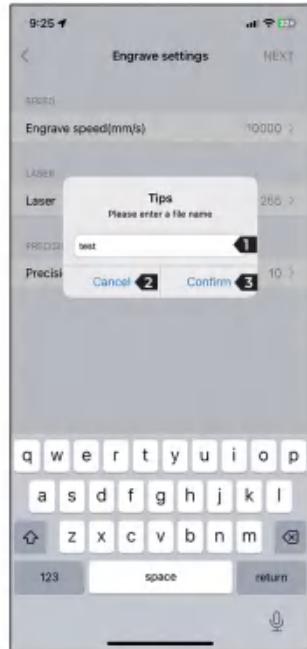
## 3. Introduction to function buttons



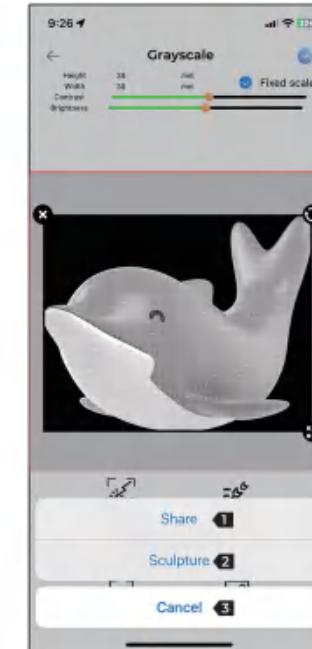
- 1 Next step
- 2 Height adjustment
- 3 Width adjustment
- 4 Fixed scaling
- 5 Adjust image contrast
- 6 Adjust image brightness
- 7 Delete picture
- 8 Rotate picture
- 9 Zoom picture
- 10 Automatically adjust laser height  
(Some models have this function)
- 11 Return to default center point
- 12 Preview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

## APPLE TERMINAL SOFTWARE INTRODUCTION

## 5. Modify name

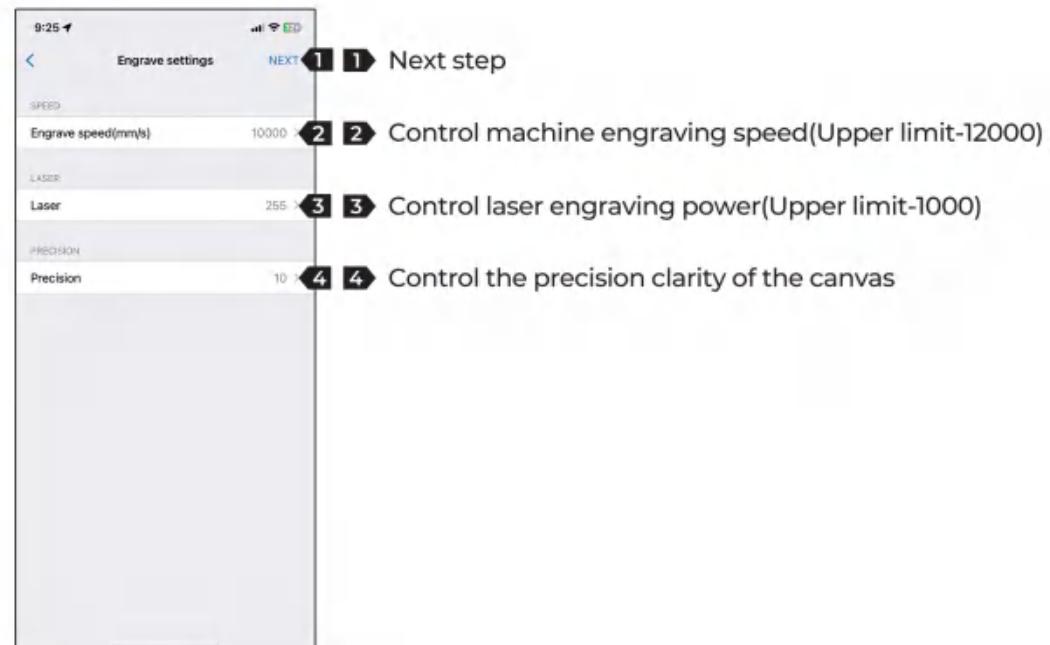


- 1 File name
- 2 Cancel
- 3 Determine the name



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

## 4. Introduction to engraving parameters

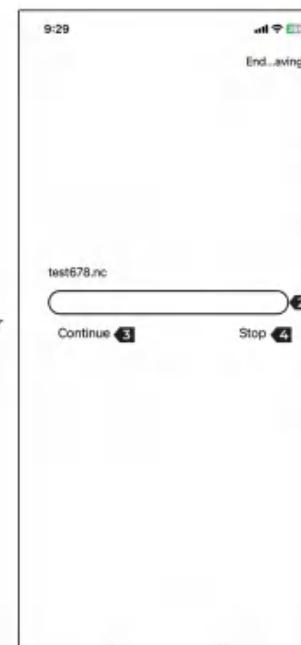


- 1 Next step
- 2 Control machine engraving speed(Upper limit-12000)
- 3 Control laser engraving power(Upper limit-1000)
- 4 Control the precision clarity of the canvas

## 7. Upload interface



- 1 Upload progress bar
- 2 Cancel file upload



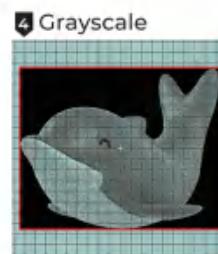
- 1 End engraving and close the interface
- 2 Engraving progress bar
- 3 Pause engraving
- 4 Stop engraving

## ANDROID TERMINAL SOFTWARE INTRODUCTION

## 1. Introduction to main interface functions

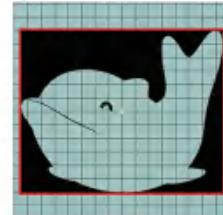


You need to give permission to the software before using it

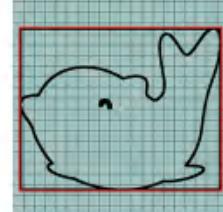


1 Set up  
2 Connection display

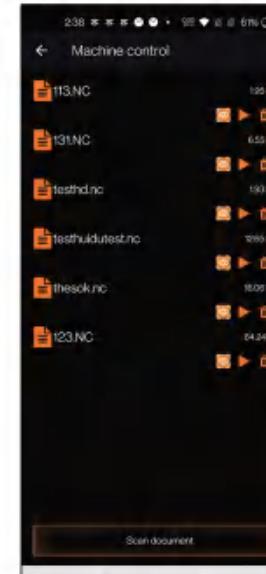
3 Black and white



5 Cutting

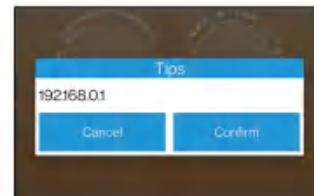


6 Connection display

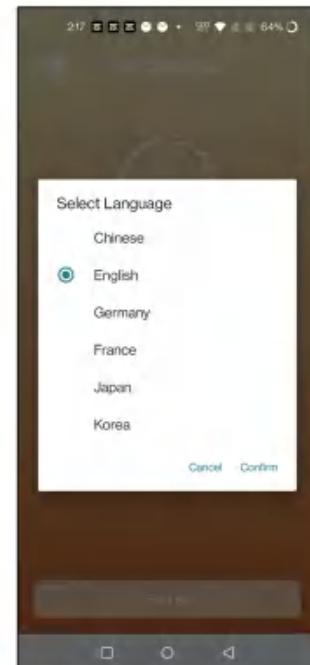


Scan document

## 2. Introduction to the settings page



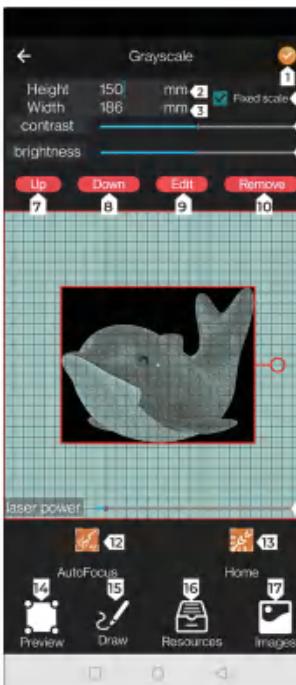
7 Used to fill in the IP address



8 Used to set language

## ANDROID TERMINAL SOFTWARE INTRODUCTION

## 3. Introduction to function buttons

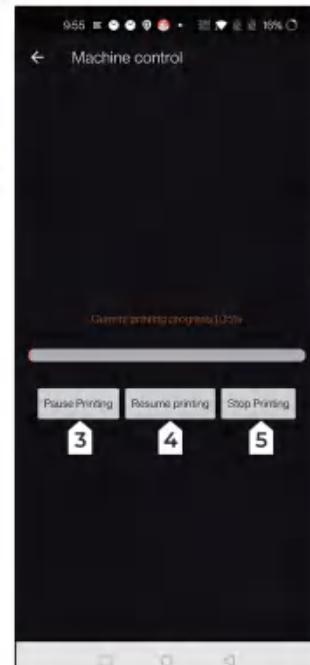


1 Next step  
2 Height adjustment  
3 Width adjustment  
4 Fixed scaling  
5 Adjust image contrast  
6 Adjust image brightness  
7 Picture goes up one level  
8 Picture goes down one level  
9 Edit selected image  
10 Clear canvas  
11 Preview the power of the laser (recommended around 100)  
12 Automatically adjust laser height  
13 Return to default center point  
14 Preview picture  
15 Brush function  
16 Resource library  
17 Select Image

## 4. Introduction to engraving parameters

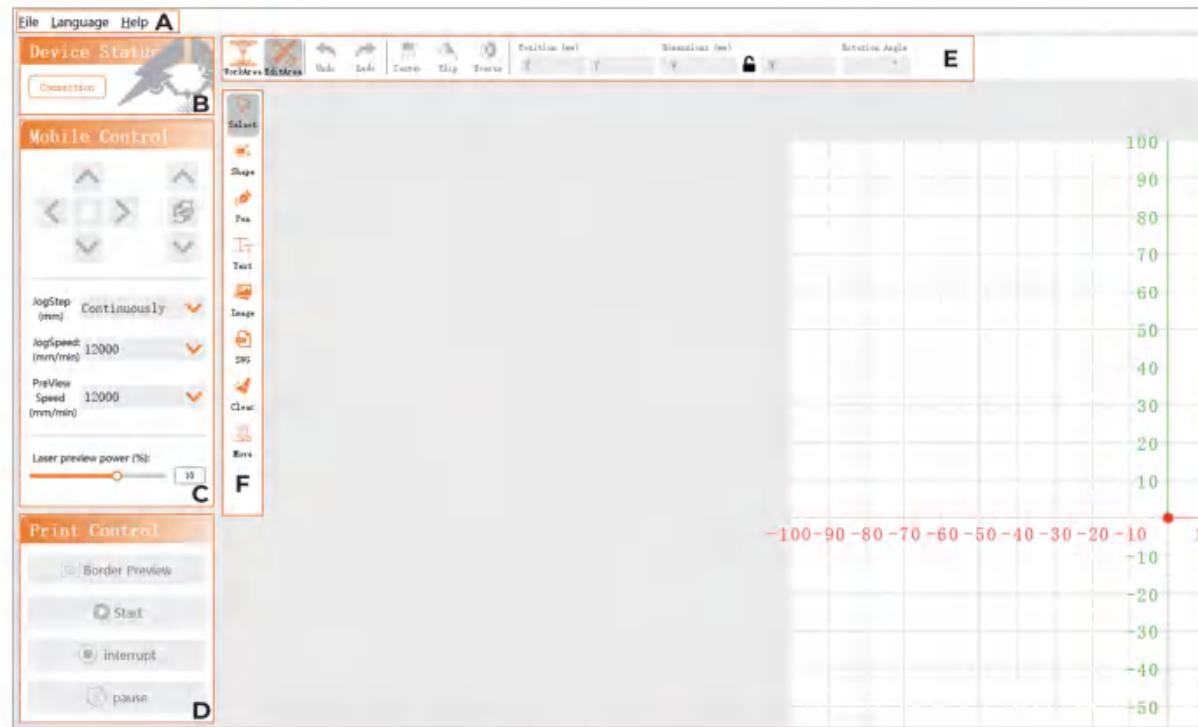


1 Next step  
2 Control machine engraving speed  
3 Control laser engraving power

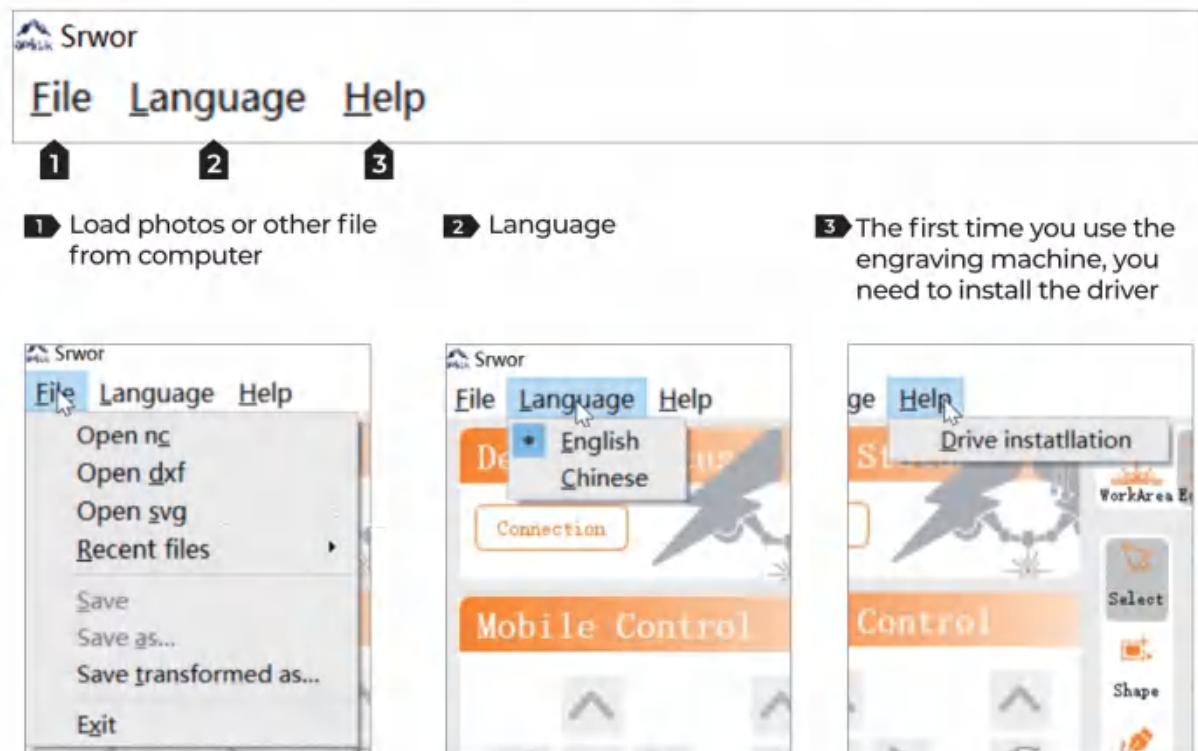


3 Pause Printing  
4 Resume Printing  
5 Stop printing

## SOFTWARE INTERFACE INTRODUCTION



## A: SOFTWARE NAVIGATION BAR

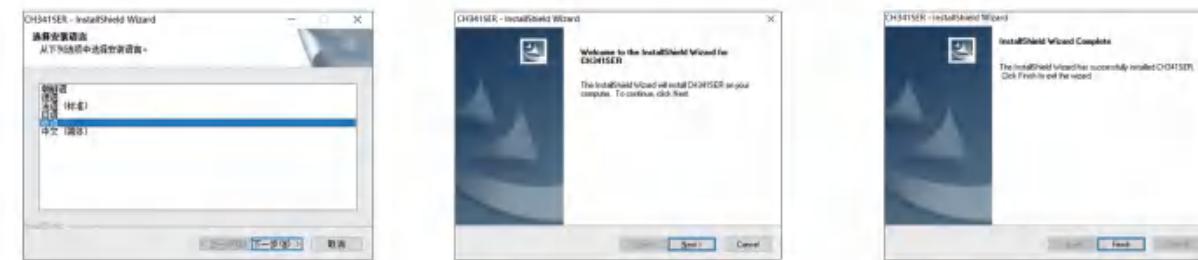


## A: SOFTWARE NAVIGATION BAR

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



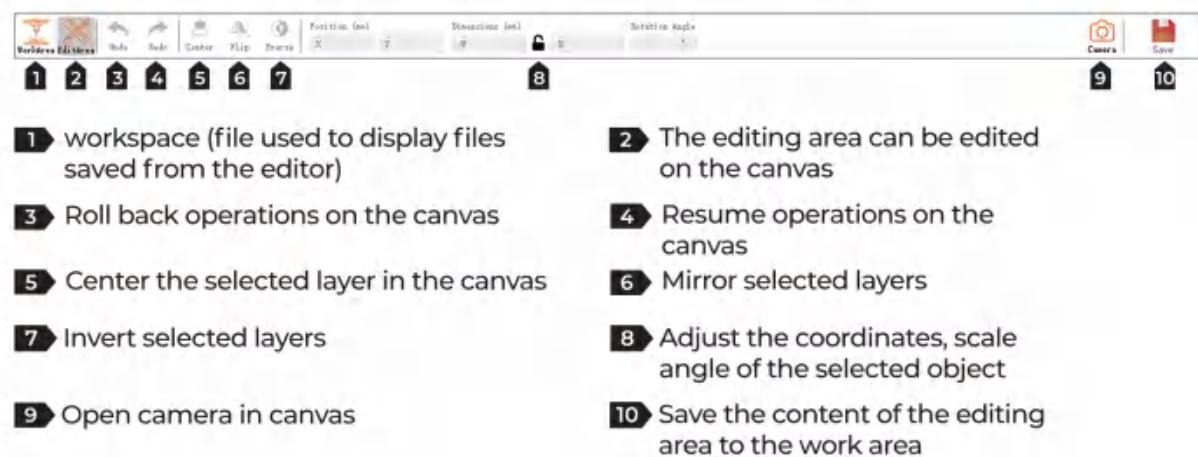
## C: MACHINE CONSOLE



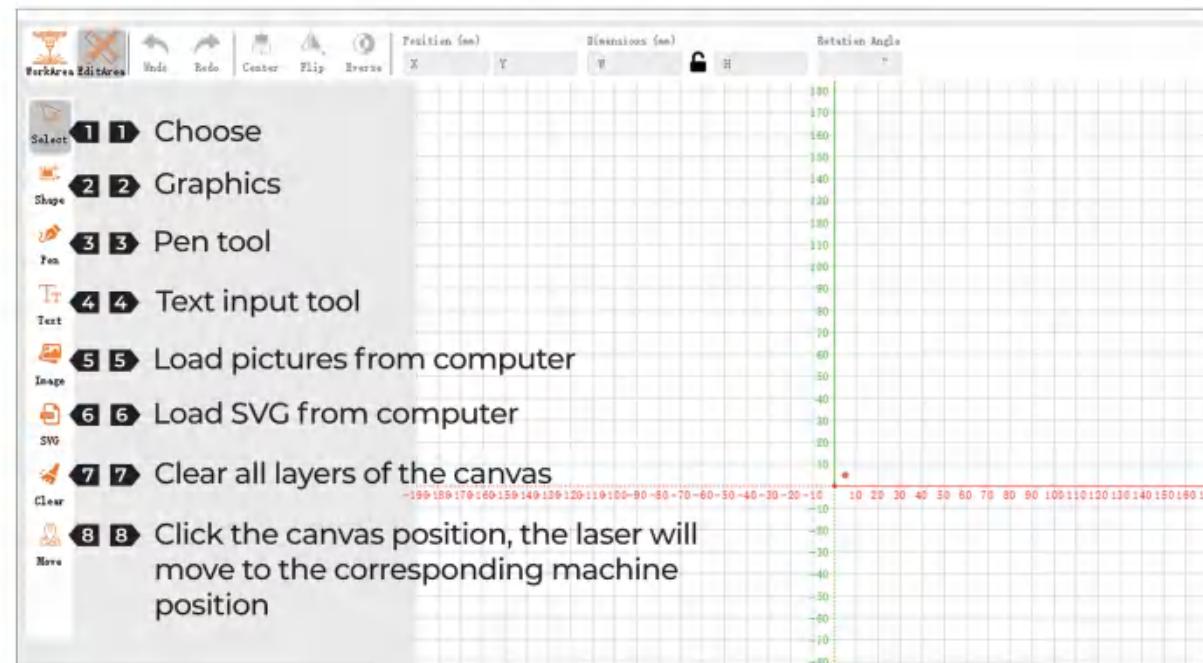
## D: Machine Command Control



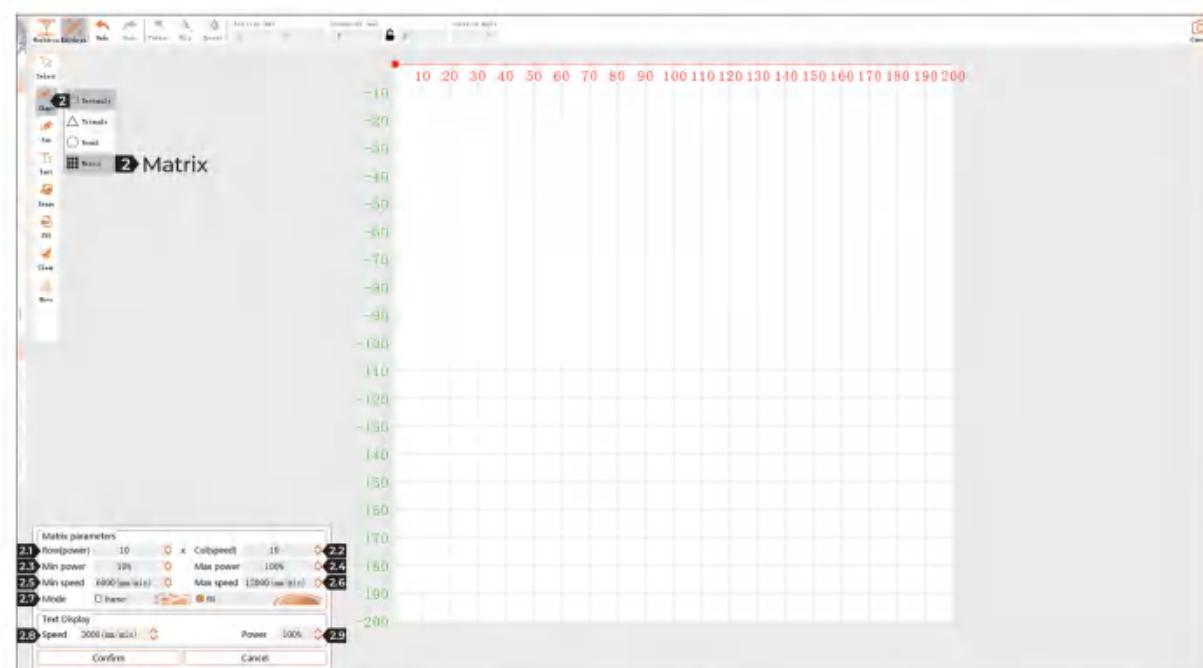
## E: SOFTWARE EDITING MODULE



## F: LAYER EDITING MODULE



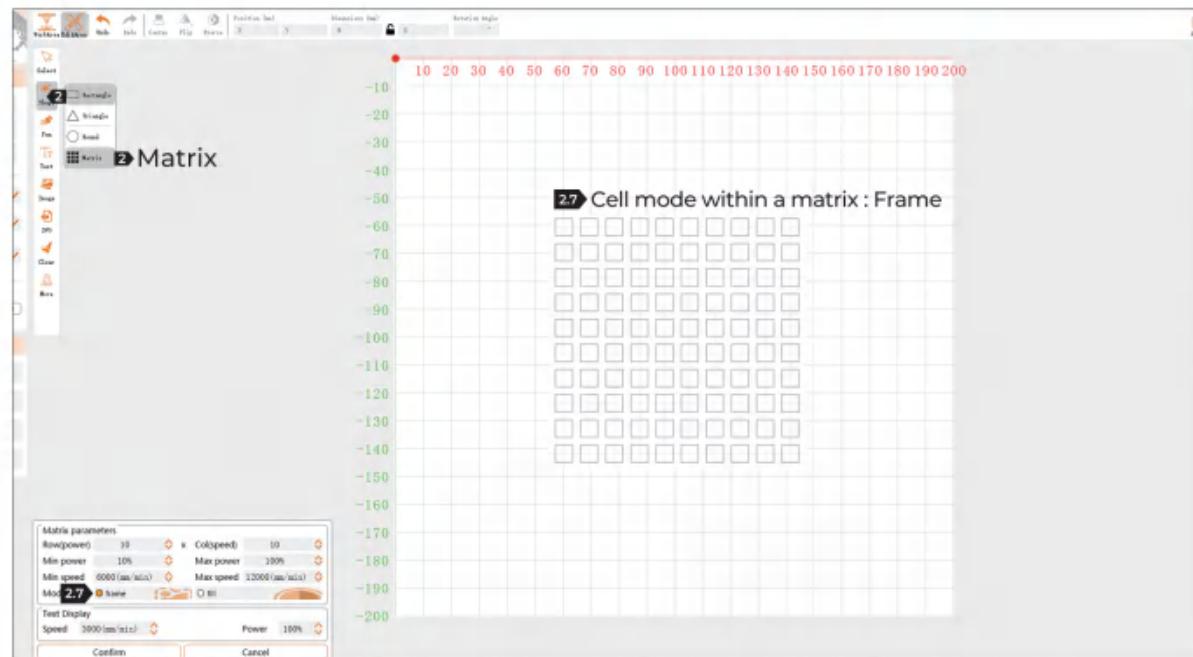
## 2 Graphics - Matrix



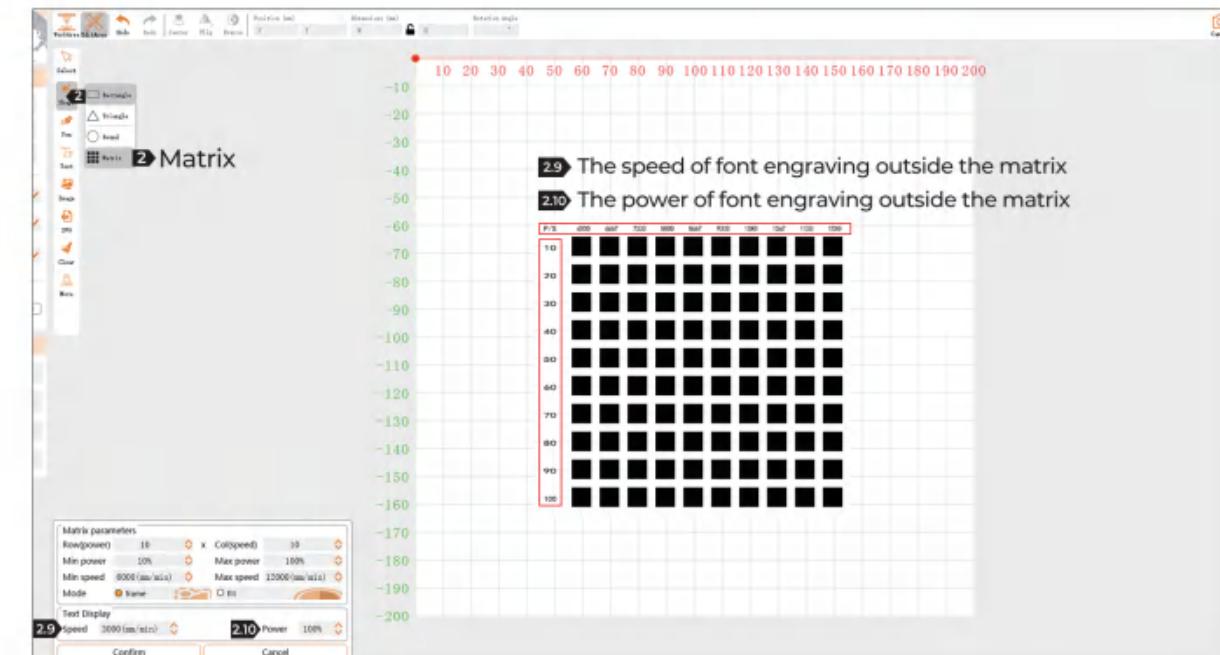
2.1 The number of columns of the matrix, used to represent the laser power will be arranged in order according to the values of 2.5 and 2.6

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

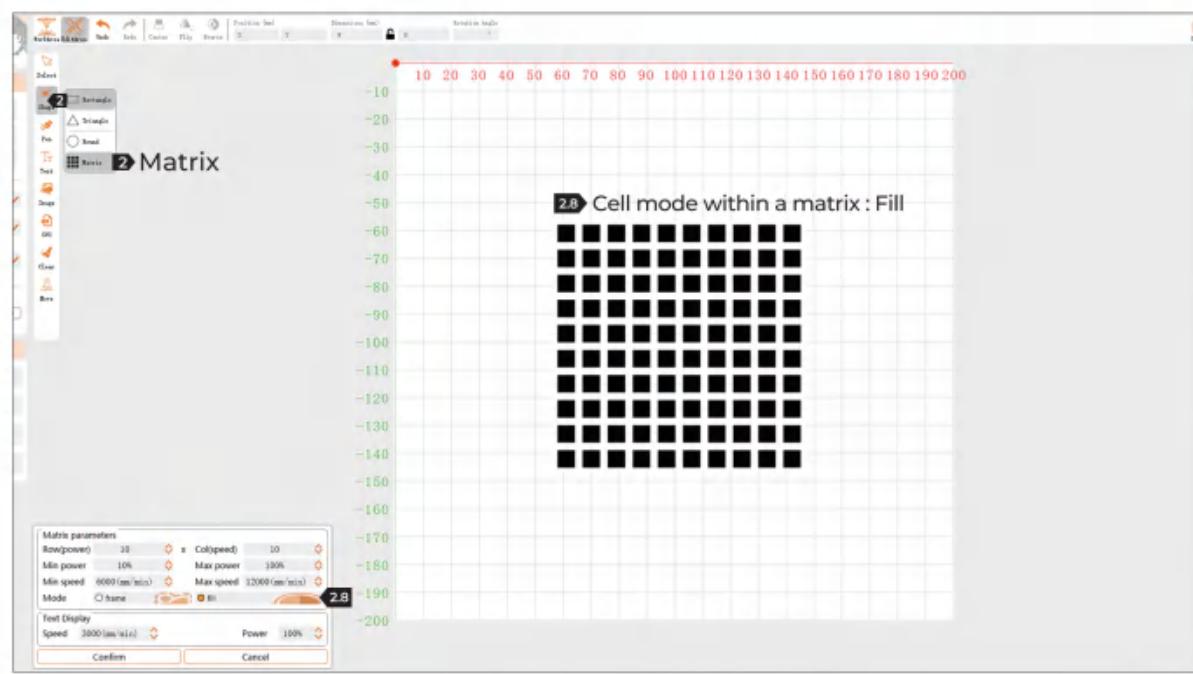
## 2 Graphics - Matrix



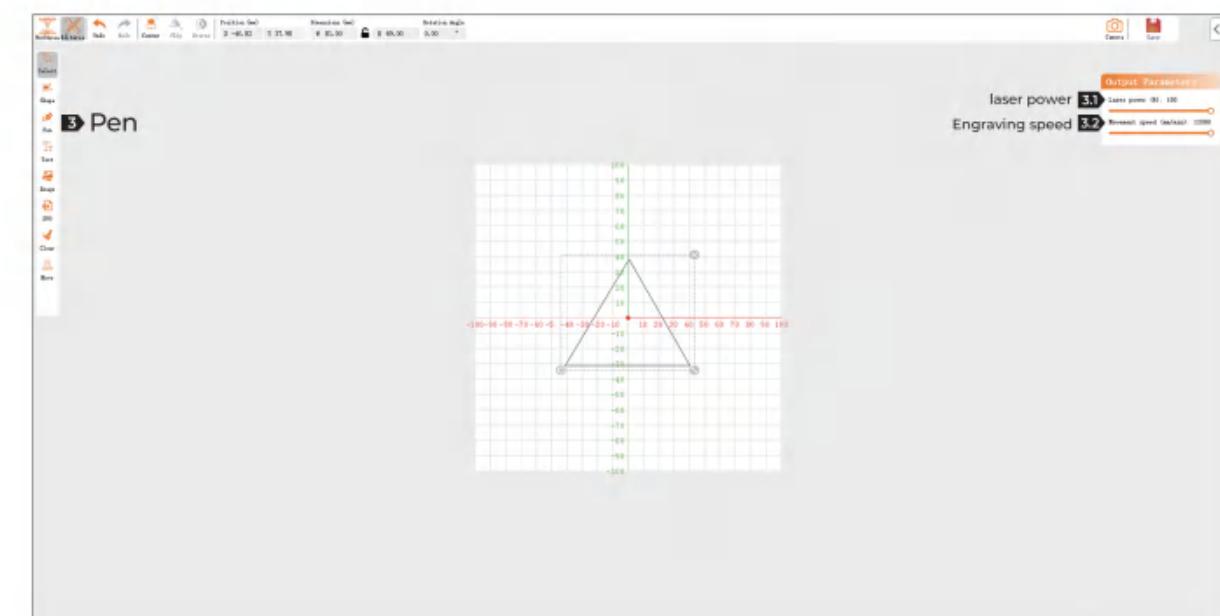
## 2 Graphics - Matrix



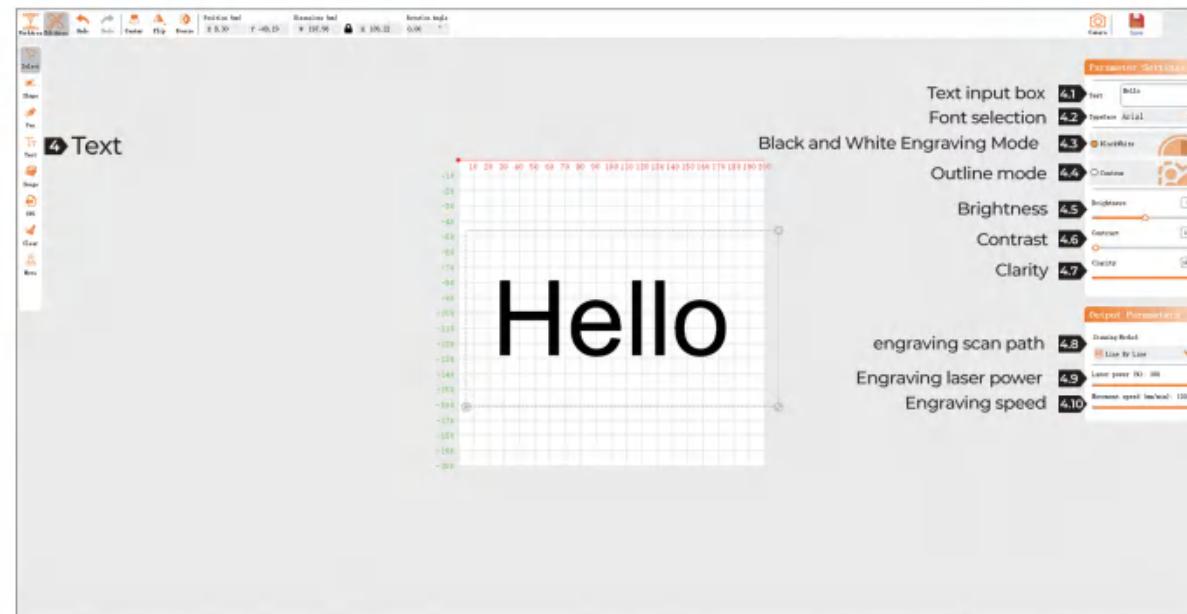
## 2 Graphics - Matrix



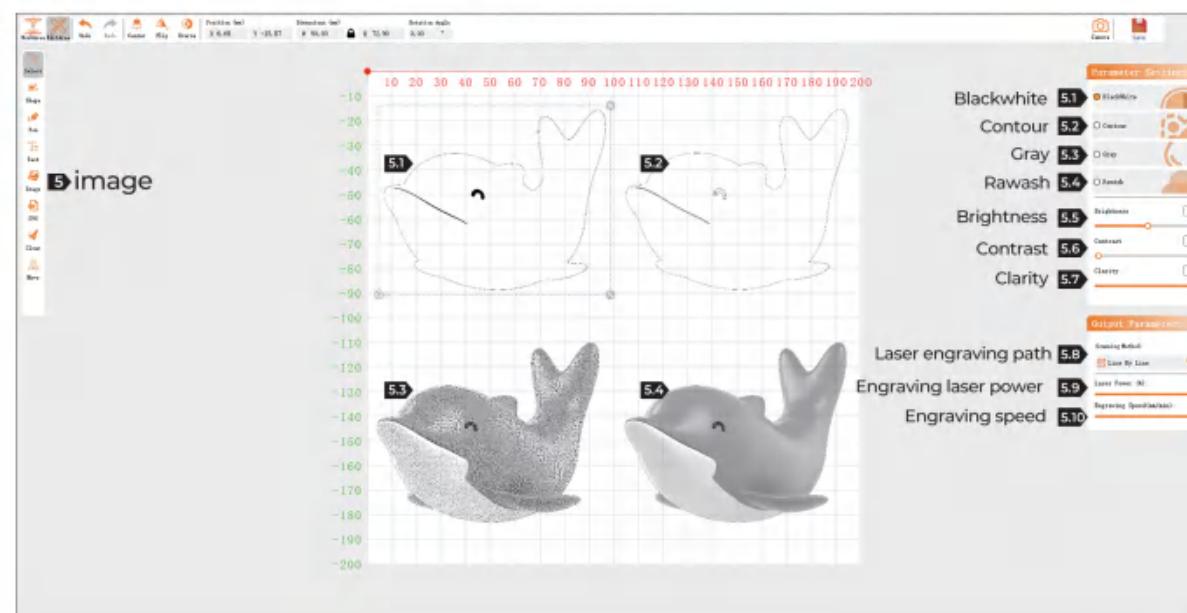
## 3 Pen tool



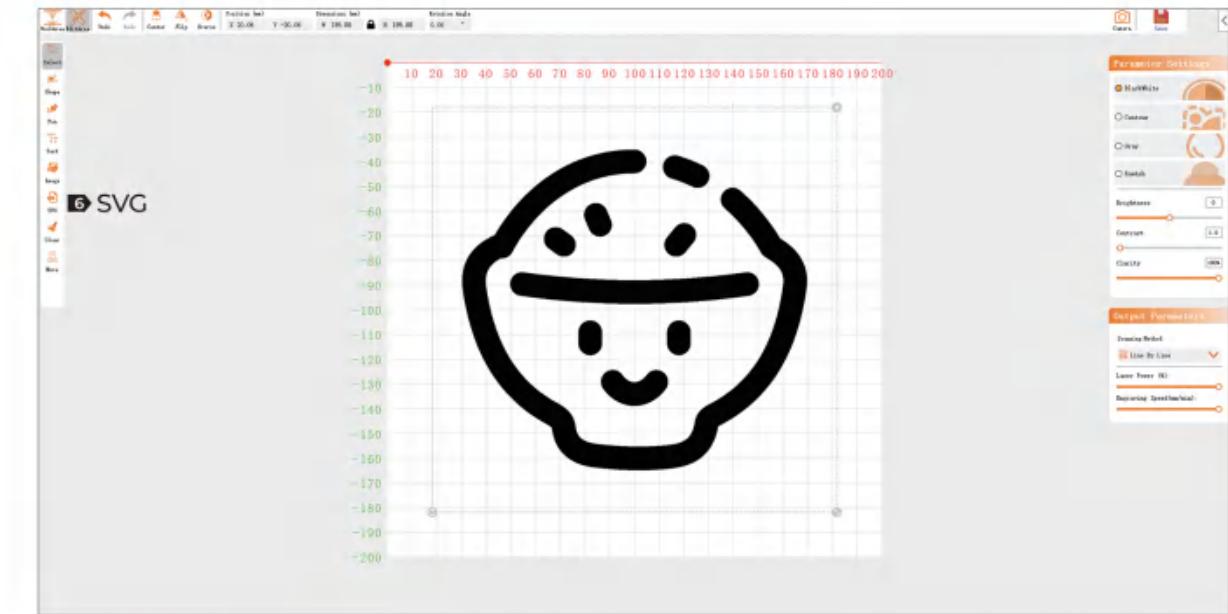
## 4 Text input tool



## 5 Load pictures from computer



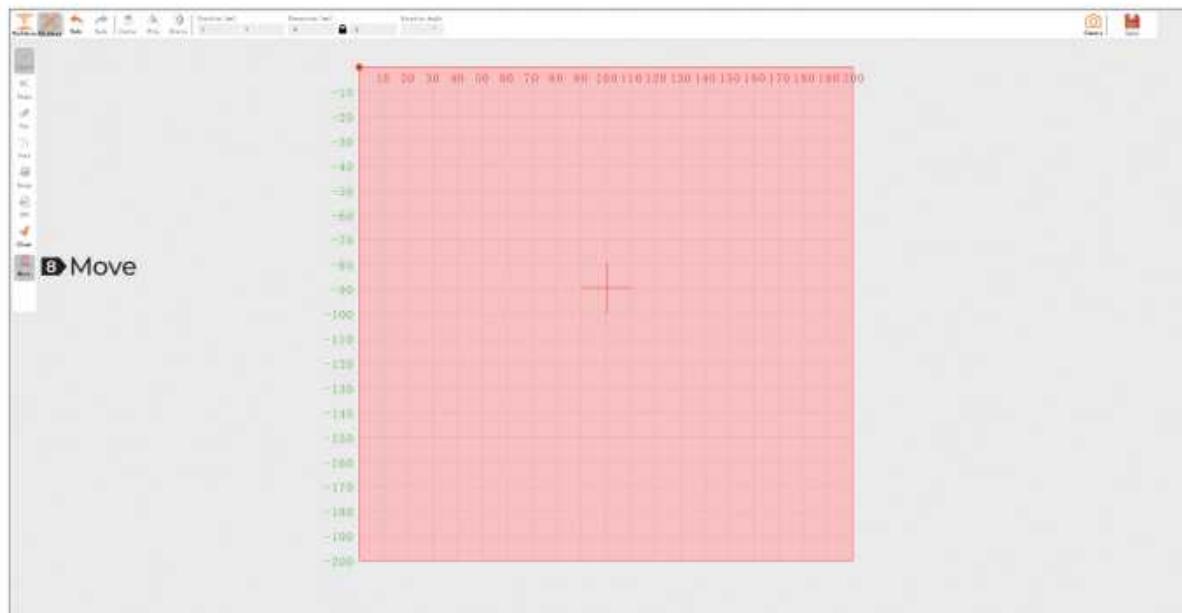
## 6 Load SVG from computer



## 7 Clear all layers of the canvas

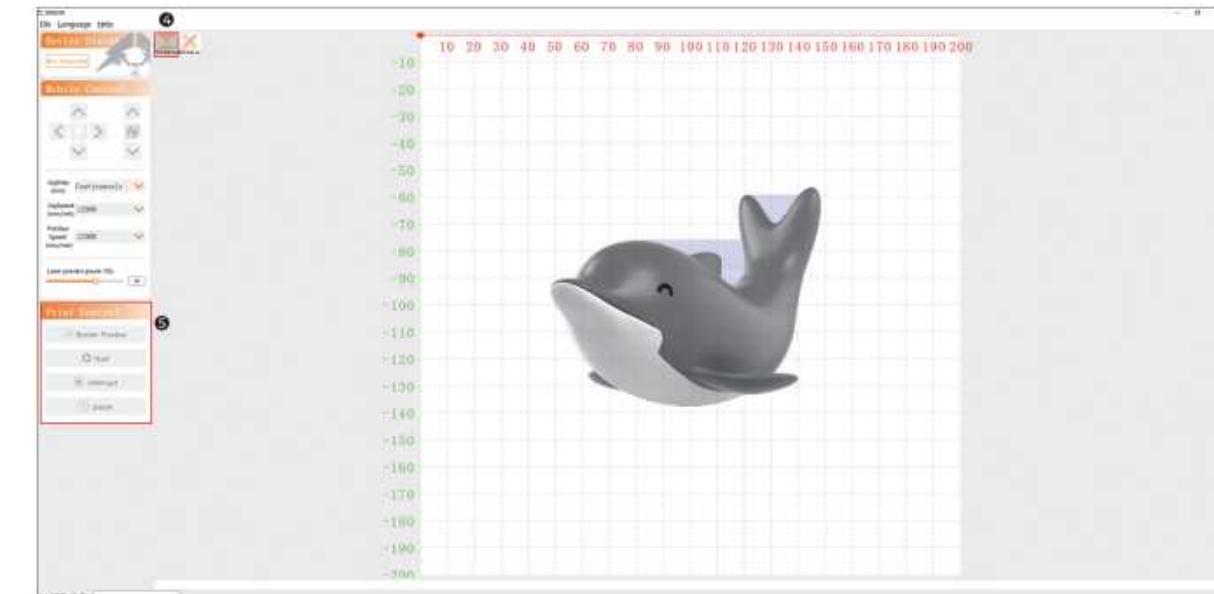


## 8 CLICK THE CANVAS POSITION, THE LASER WILL MOVE TO THE CORRESPONDING POSITION



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

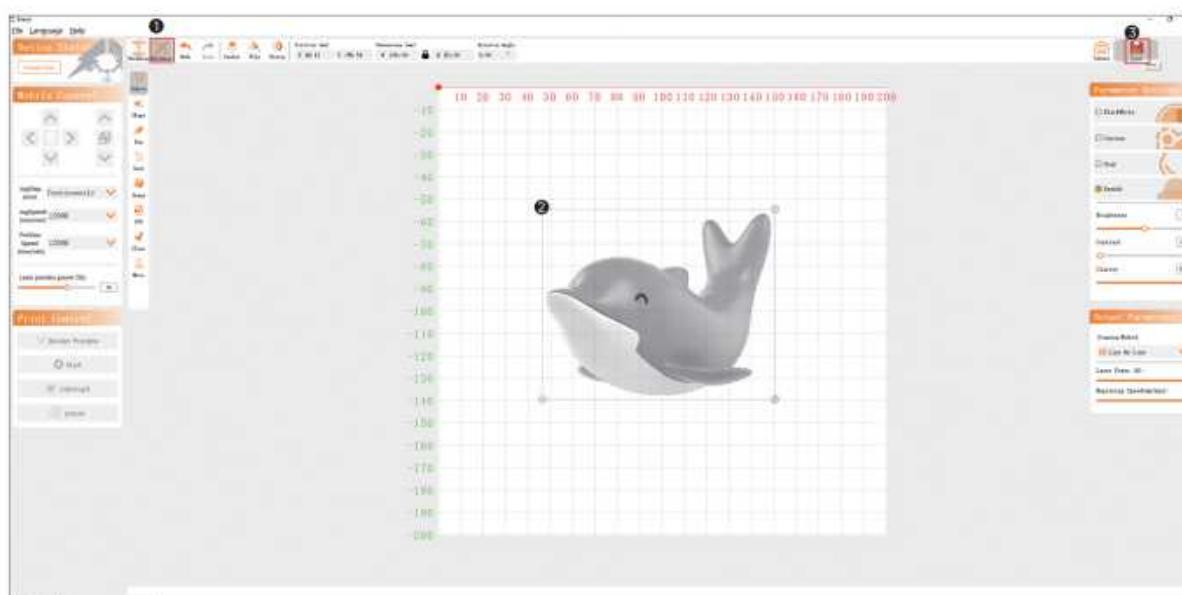
## Engraving process



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"

## 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 can adjust the height  
Use fixed focus film to fix focus



5. Connect the other end to the machine and turn on the roller button

## 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

## FCC Warning

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.

NOTE 1: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## RF Exposure Statement

To maintain compliance with FCC'S RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm between the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.