

# User manual



Model : IDX

Thank you for purchasing this laser marking machine product!

Product appearance is subject to the material object (there are differences in appearance and configuration).

To protect your vital rights and interests, please read the user manual carefully.

For more product information and technical support, please contact our company.

## Foreword

This manual is applicable to the corresponding models. Please read the attached explanatory materials carefully for customized and non-standard products.

This manual describes the basic functions, installation methods, operation and use, interface definition, packaging accessories and other contents of the product. If there are any omissions, please contact our company for more information.

If you are using this type of machine for the first time, please read this information carefully before installation and use to avoid personal safety and equipment damage due to operational errors.

Any unauthorized modification, including adding new functions or connecting other equipment, may affect the normal use of the product. Please contact our company for technical support if necessary.

# Laser hazard prevention measures

Please take precautions to ensure the safety of use.

- 1、 The laser of this equipment belongs to Class IV laser products.
- 2、 Long-term direct laser irradiation will cause human injury. It is forbidden to pile flammable and explosive materials around the workbench and equipment, and it is necessary to keep good ventilation.
- 3、 During laser processing, dust, toxic and harmful gases may be produced due to different processing objects.
- 4、 Please try to wear goggles to operate the machine when conditions permit, and avoid looking directly at the laser for a long time to prevent eye injuries.
- 5、 Please stick laser warning signs on the occasion of laser application to remind safety protection.

## Important tips

- 1、 Before using the machine, please ensure that the protective cover of the laser field mirror is removed and the position of the laser output port is unobstructed.
- 2、 Please ensure that the circuit is normal, the voltage is stable, and there are grounding lines in the use environment of the equipment.
- 3、 When the equipment is working, it is forbidden to keep the eyes at the same level as the laser light outlet, and it is absolutely forbidden to expose the body to the laser transmission light path.
- 4、 Equipment should be far away from electrical equipment sensitive to electromagnetic interference, which may cause electromagnetic interference. .
- 5、 If the machine is not operated and used according to the manual, our company will not bear any responsibility for the machine loss or other incidental losses.
- 6、 The equipment has no parts that users can repair by themselves. Don't try to disassemble or repair this equipment by yourself. The equipment damage caused by disassembling or repairing this equipment by yourself is not covered by the warranty.
- 7、 Equipment environment should be dry, free from pollution, vibration, strong electricity, strong magnetism and other interference and influence. The working environment temperature is 10-40°C, and the working environment humidity is 5-95% (without condensed water).
- 8、 The contents of this manual are inconsistent due to software or hardware upgrades. Please take the latest version as the standard, and the specific updates will not be notified separately. If necessary, please contact our company for updates.

# Catalogue

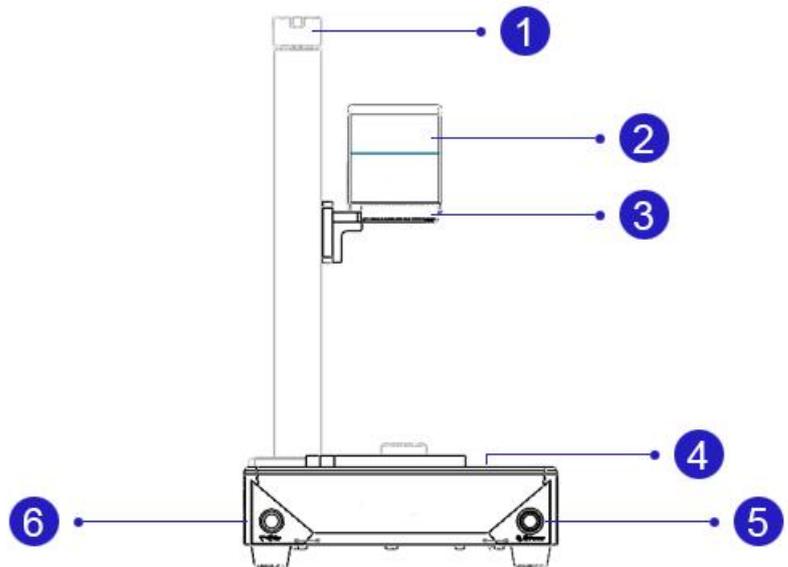
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	Focus adjustment	-----		
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-	-	-	2	0
	Laser parameters	-----		
-	-	-	2	1
	Marking	-----		
-	-	-	2	1
	FAQ	-----		
-	-	-	2	2

# Summary

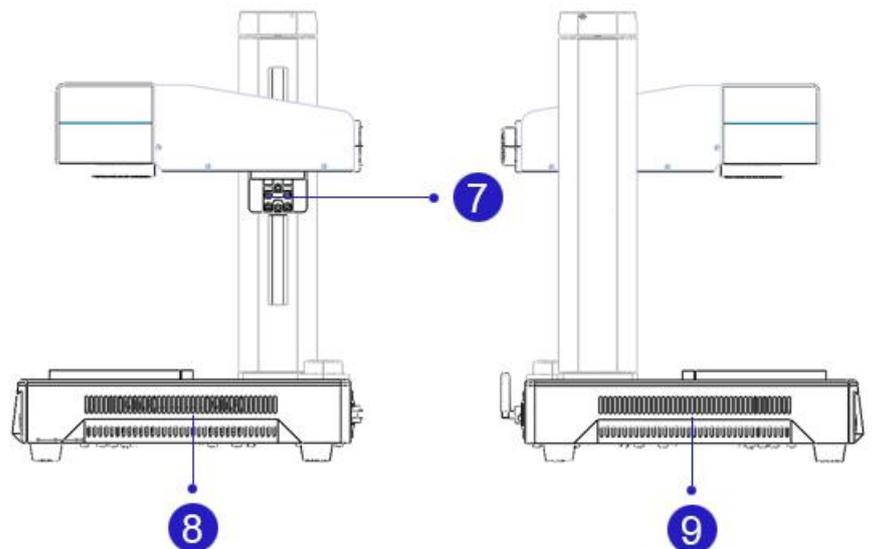
## Front view of equip

- 1 - Lifting handle
- 2 - galvanometer
- 3 - field mirror
- 4 - Work area ( M6 threaded hole)
- 5 - Power switch
- 6 - Marking switch



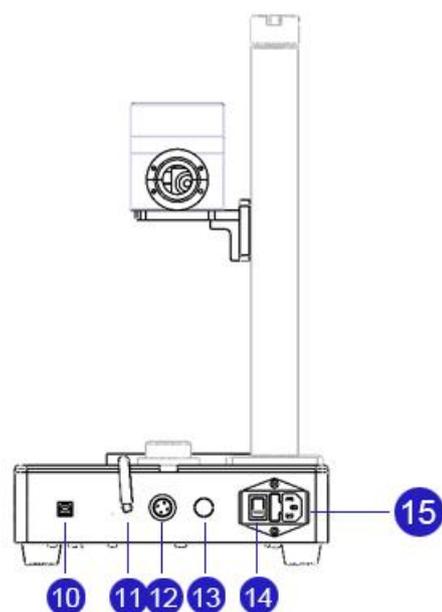
## Side view of equipment

- 7 - Auxiliary focus red light
- 8 - Right Vent
- 9 - Left Vent



## Rear view of equipment

- 10 - USB interface
- 11 - WiFi antenna
- 12 - Rotating interface
- 13 - Reserved expansion interface
- 14 - Power switch
- 15 - Power interface



# Package

## Standard fittings



Focusing sheet (aluminum sheet)



Correct paper



USB drive



Wifi antenna



Hexagon wrench



Positioning aluminum strip



Steel rule

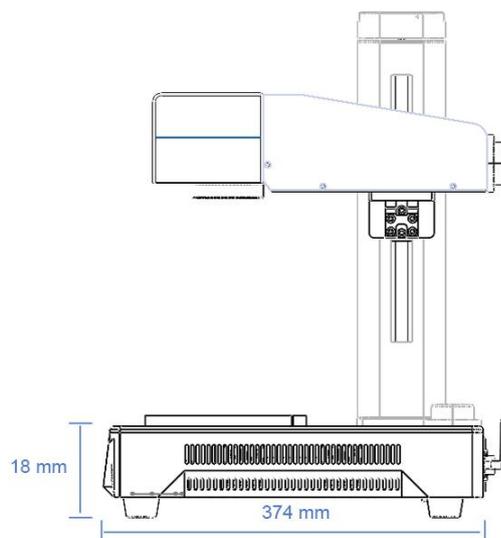
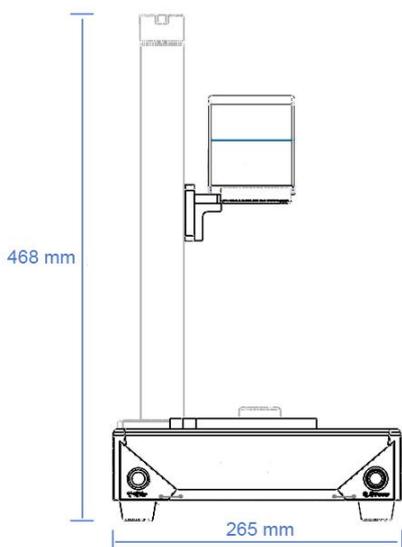


Data line



Power cord

## Size & weight



**Packing:** carton+anti-collision cotton

**Product size:** 374\*265\*280 mm

**Product weight:** 10.2Kg

**Packing size:** 470\*360\*280mm

**Packing weight:** 12Kg

# Parameter

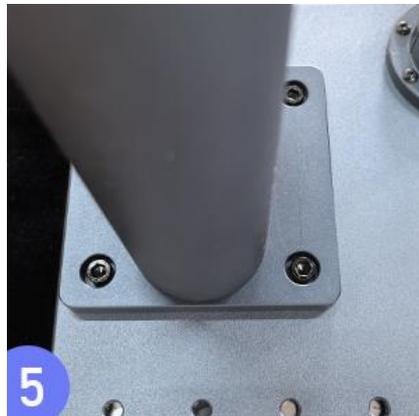
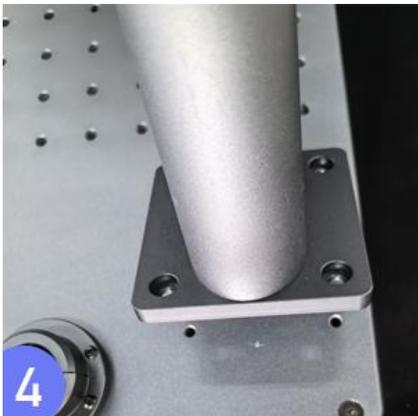
Laser parameters	Laser power	20W / 30W
	Laser type	Fiber Laser
	Laser wavelength	1064nm
	Repetition frequency	30-60KHz
	Cooling	wind cooling
Marking parameters	Marking range	110*110mm
	Focal distance	163mm
	Marking speed	7000mm/s
	Min line width	0.06mm
	Minimum character	0.2mm
	file layout	PLT/DXF/AI/DST/JPG/GIF/BMP etc.
	Lifting mode	Manual lifting
	focusing mode	Double red light focusing
Configuration	Laser source	Ideeda
	Galvanometer	ZBTK
	Control card	Ideeda
	Filed lens	JGZ
	Power	MW
	Computer	None
	standard configuration	Focusing sheet, calibration paper, U disk, ruler Positioning bar, foot switch, hexagon wrench
	Optional accessories	Rotating fixture, smoke purifier
Electricity	Supply voltage	220V±5% 50Hz±5%
	Power consumption:	≤500W

# Machine Installation

1、Unpack the package and take out the machine and accessories.



2、Install the upright post and light path, erect the upright post on the machine table, corresponding to the hole position, and fix it with mounting screws.



3、Install the WIFI antenna and connect the power cord and data cable.



4、Installation completed



# Computer software installation

The equipment software is shipped with the machine in the form of a USB flash drive, which contains:

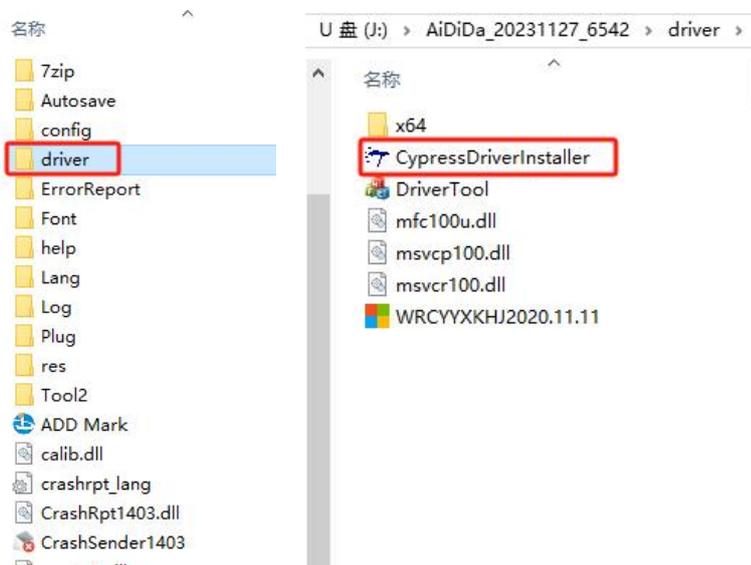
- 1, the computer software
- 2, computer software driver
3. Red light setting data
4. Laser setting data
5. Regional data (galvanometer correction)

After receiving the equipment, please copy the contents of the U disk to the computer, and make a good backup of the files and keep the U disk well. Our company does not provide backup files.

## Drive installation

Open the USB flash drive, open the folder "driver", and double-click the "CypressDriverInstaller.exe" file to start the installation.

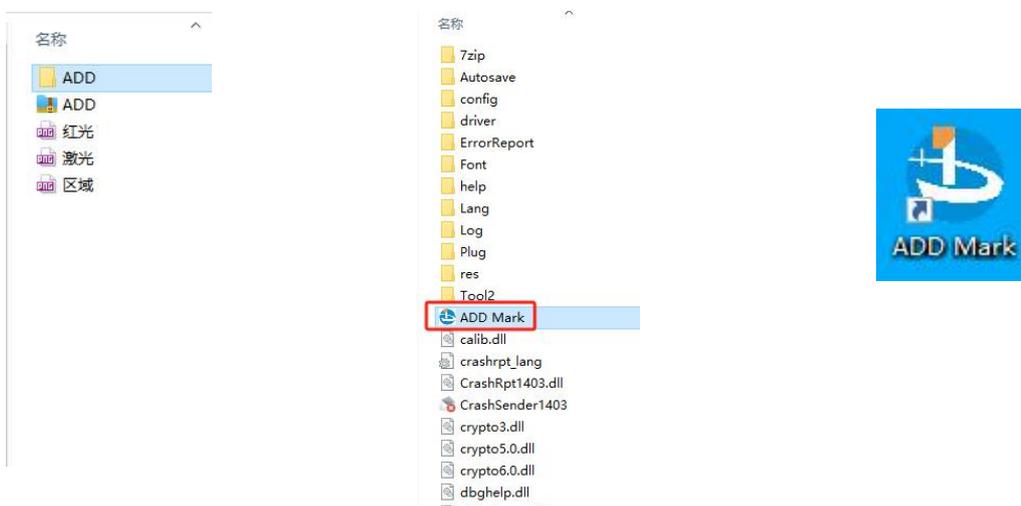
Click "Next", "I Agree" and "Install" in turn, and click "Finish" when the installation is completed.



## Computer software installation

Copy all the folders in the U disk to the local hard disk of the computer and open the "ADD" folder. Right-click the "ADD Mark. exe" file, select "Send to" and click "Desktop Shortcuts".

Go back to the desktop and double-click the "ADD Mark" icon to open the software for use.



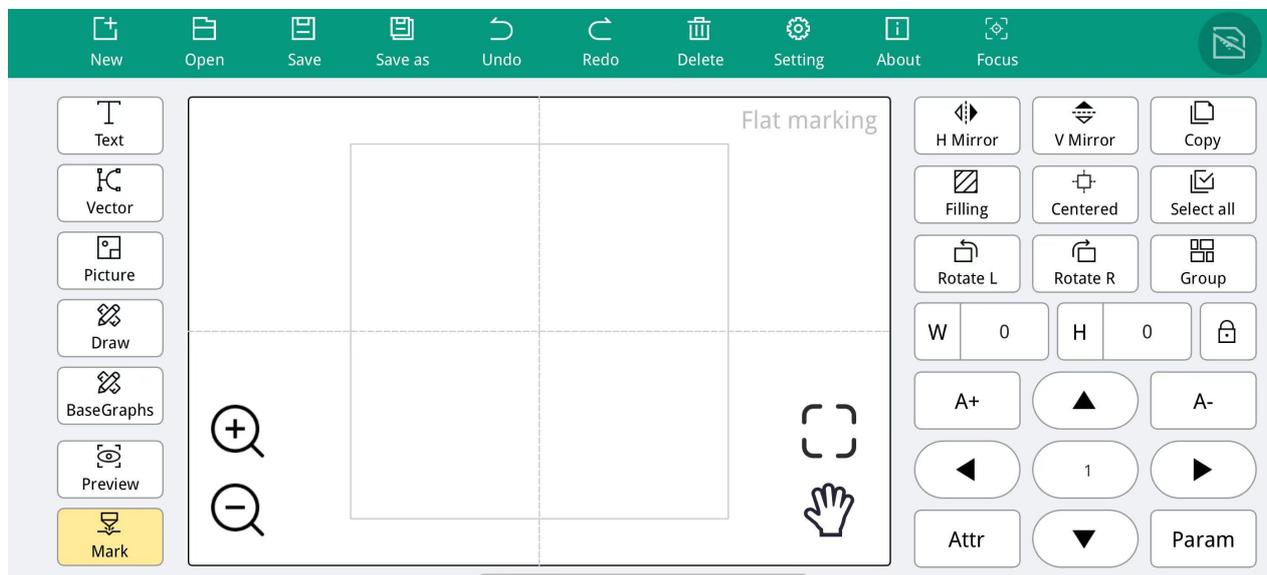
# Mobile App software installation

## 1、Android

① Open [http://www.ideedalaser.com/App\\_download.htm](http://www.ideedalaser.com/App_download.htm) Website or scan QR code to download "ADDApp.apk" for installation.

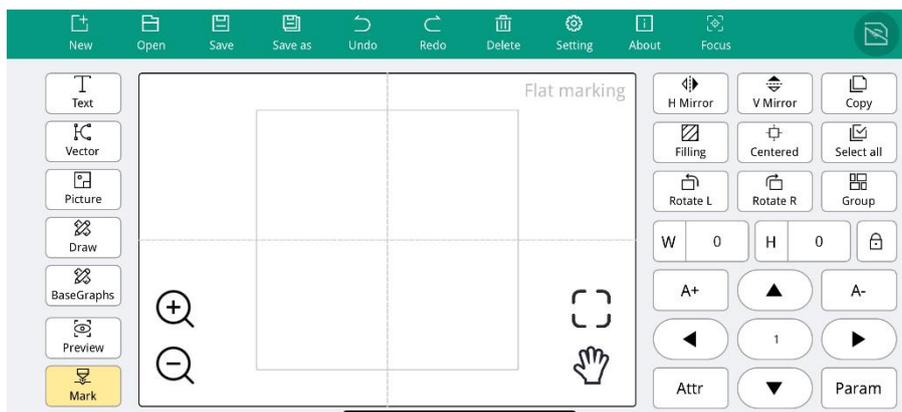


② Search for "ADD Mark" in the app store and download and install it. (\* At present, it is being put on shelves one after another. If you can't find it, please use method ① to install it.)



## 2、IOS

Search for "ADD Mark" in the APP Store and click "Get" installation.

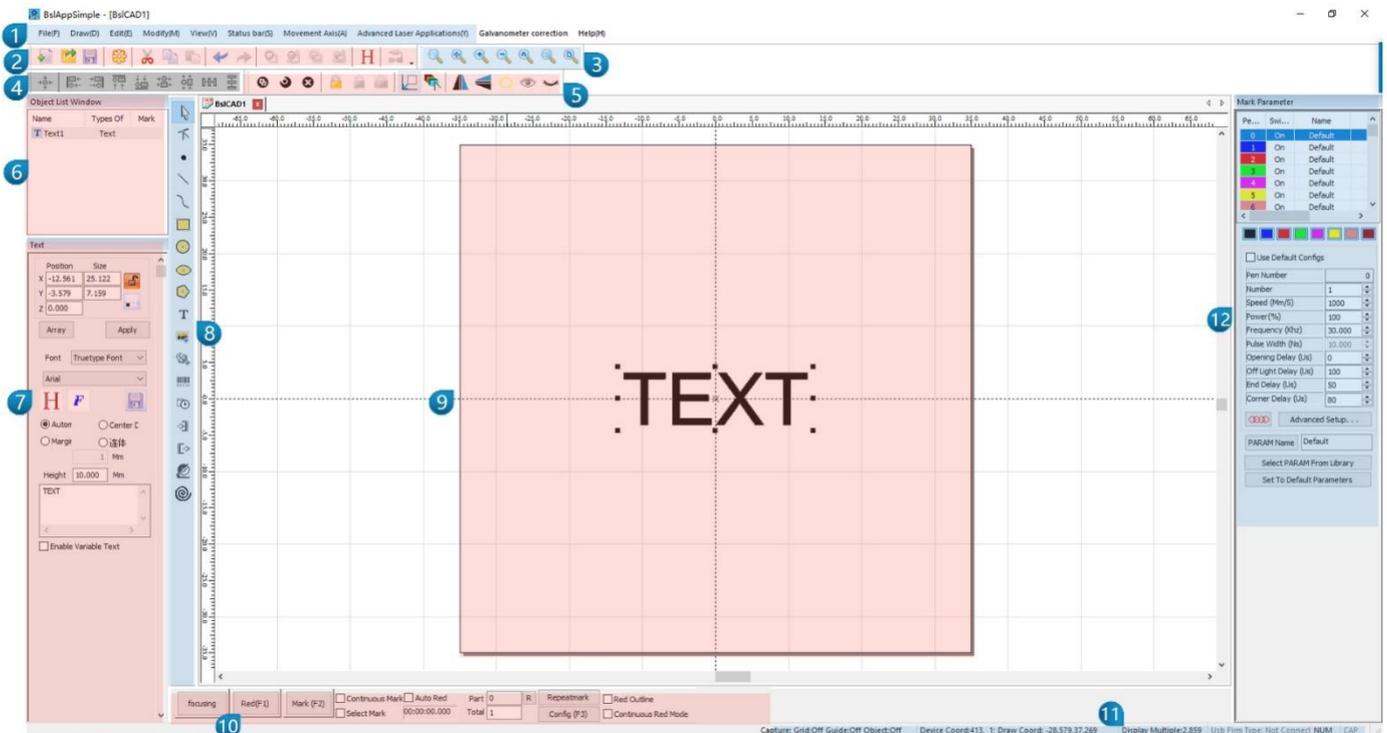


# Introduction of computer-side software

## 1 Introduction of software interface

When the mouse hovers over the function icon, the corresponding instructions will be displayed.

- 1-Menu bar
- 2-System Toolbar
- 3-Zoom Toolbar
- 4-Align Toolbars
- 5-Auxiliary Toolbar
- 6-Object List
- 7-Object Attribute Bar
- 8-Drawing Toolbar
- 9-Content Display Area
- 10-Marking Control Bar
- 11-Software Status Bar
- 12-Marking Parameter Column



## 2 Software setting

Click “File” - “System Config”、Click  in the system toolbar.

**General**—Set software moving distance, interface grid, program start etc.

**Color and Style**—Set the style of the software interface.

**Workspace**—Set the style of the content display area.

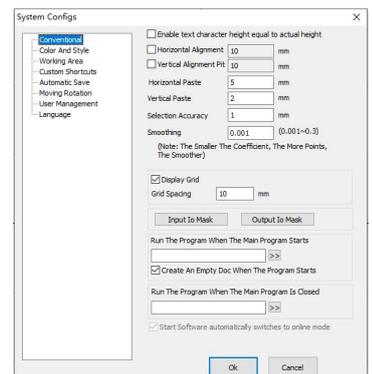
**Custom shortcut key**—set the shortcut key corresponding to the function

**Auto-save**—Set the time to automatically save the document.

**Rotate Move**—Sets the value when rotating the content.

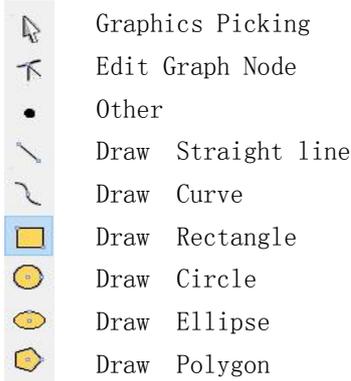
**User management**—Set user rights for software use.

**Language**—Set the software interface language.



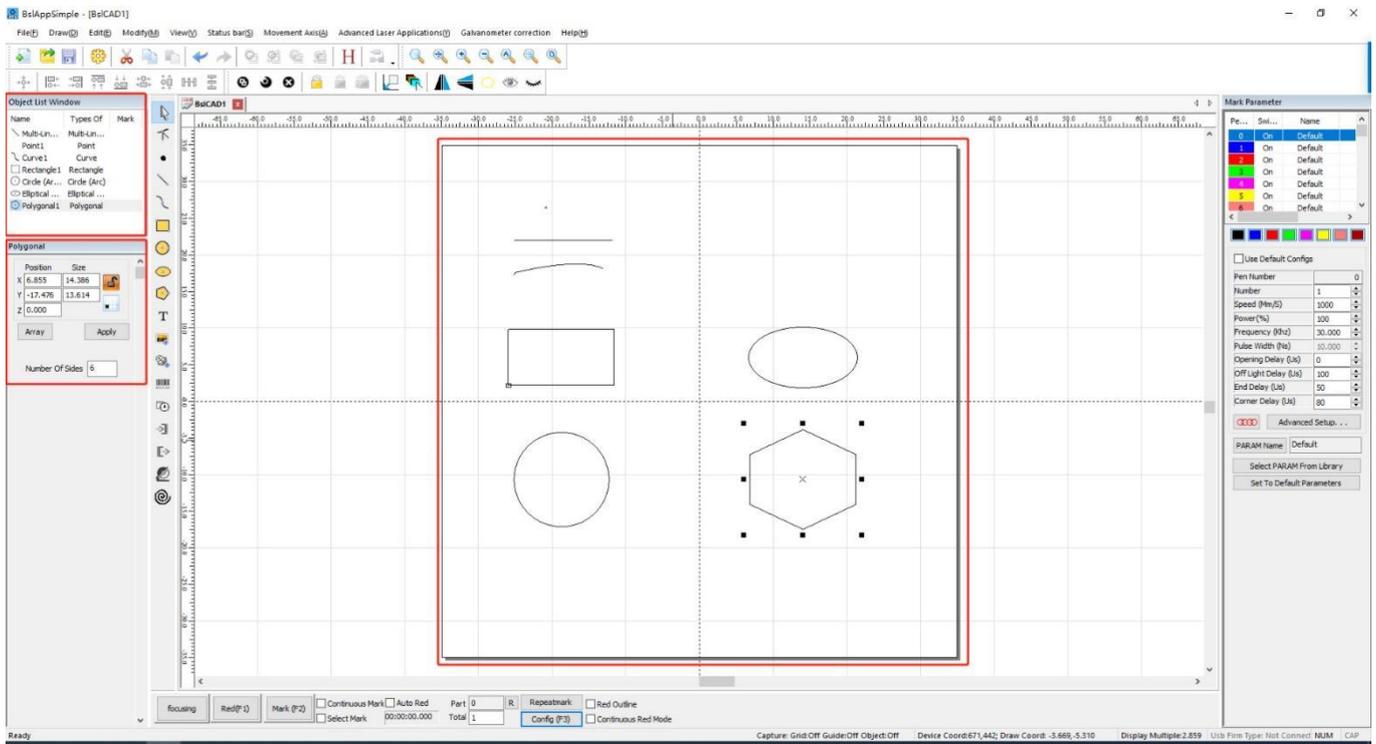
### 3 Draw graph

Click the icon to be drawn with the left mouse button in the "Drawing Toolbar", and click the left mouse button in the content display area and hold down the drag to draw the corresponding graph



After drawing, you can quickly select an object in the "Object List Window" for editing.

After drawing, you can edit the properties of the selected object in the "Polygonal", such as position, size, angle and number of sides etc.

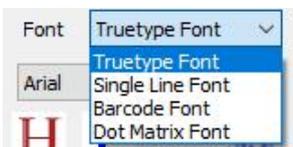


### 4 Draw Text

- ① Click icon with the left mouse button in the drawing toolbar, and then click to enter preloaded text in the content display area
- ② Enter text content in the "Object Attribute Area" content box, and click

After drawing, you can quickly select an object in the "Object List Window" for editing.

After drawing, you can edit the properties of the selected object in the "Polygonal", such as position, size, Font, format, text content etc.

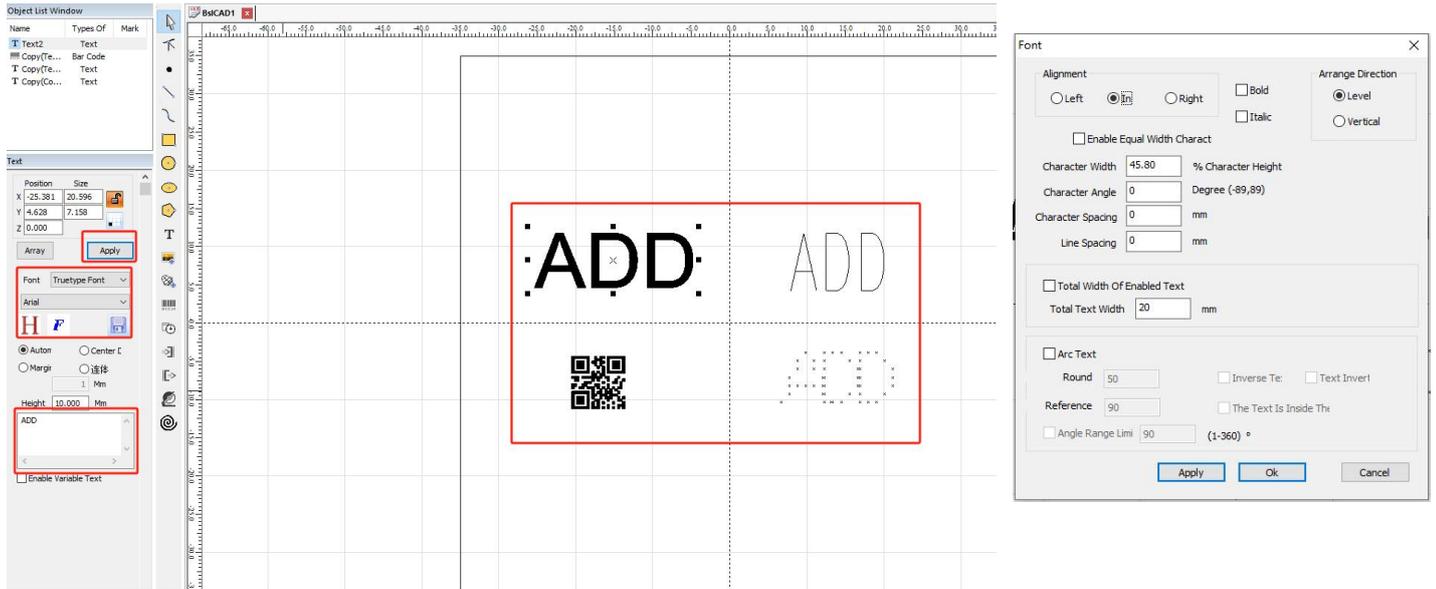


**Font :**

- TrueType Font** —Regular font, fillable type
- Single Line Font** —Single-line font, non-fillable type
- Barcode Font** —Bar code, common bar code, QR code, DM code, etc.

## Dot Matrix Font —Dot matrix font, the outline of a font drawn by dots

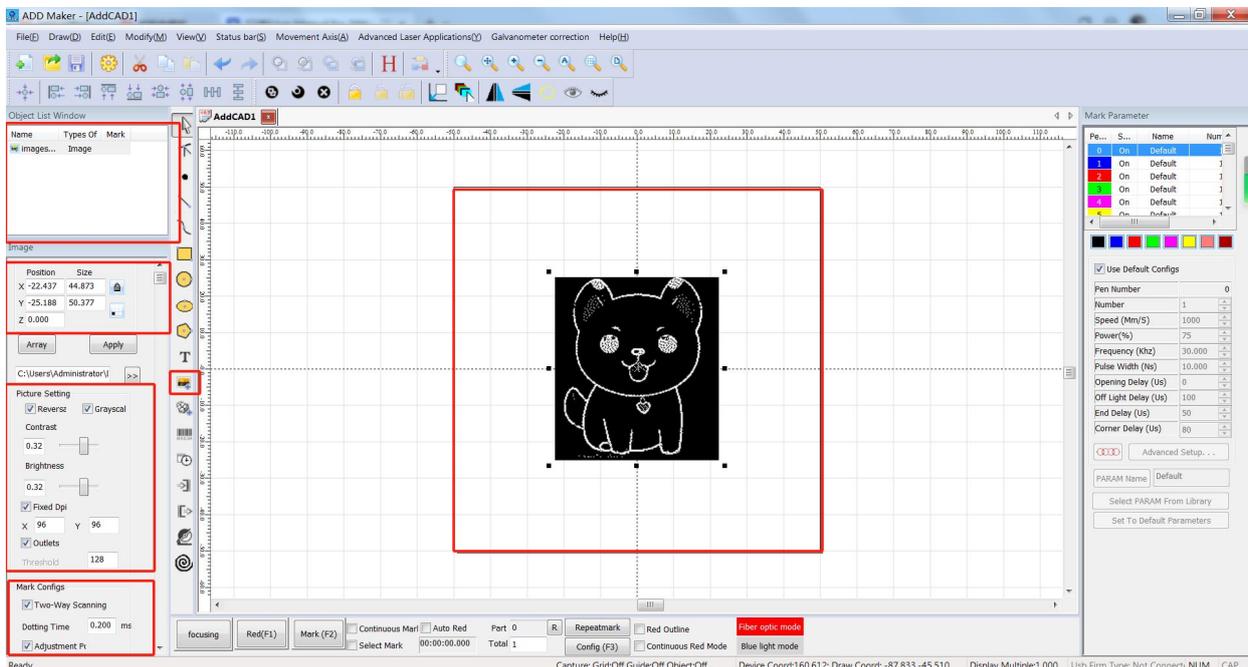
**Font format:** alignment, bold/italic, arrangement direction, character width/spacing, arc text.



## 5 Draw picture file

Left-click the  in the drawing toolbar, select the picture in the pop-up box, and click "Open".

After drawing, you can edit the properties of the selected object in the "Object List Window", such as position, size, picture address, picture settings, etc.



## Setting Reference: :

- Adjust the picture to the appropriate size;
- In the "Picture Settings" window, adjust contrast and brightness, check "Invert", "Grayscale", "Fixed DPI" (fill in parameter 500), and "Screen Dot";
- In the "Marking Parameters" window, check "Bidirectional Scan", fill in 0.4 in "Dotting Time", and click "apply"  to enter the parameters ;
- In the "Parameters" column, set "Speed (mm/s)" to 1000 and "Power (%)" to 85 (the specific laser parameters are subject to the actual effect);

- Note:
- The higher the DPI value, the clearer the engraving effect; the greater the dotting time, the deeper the engraving effect.
- Image labeling does not require padding.

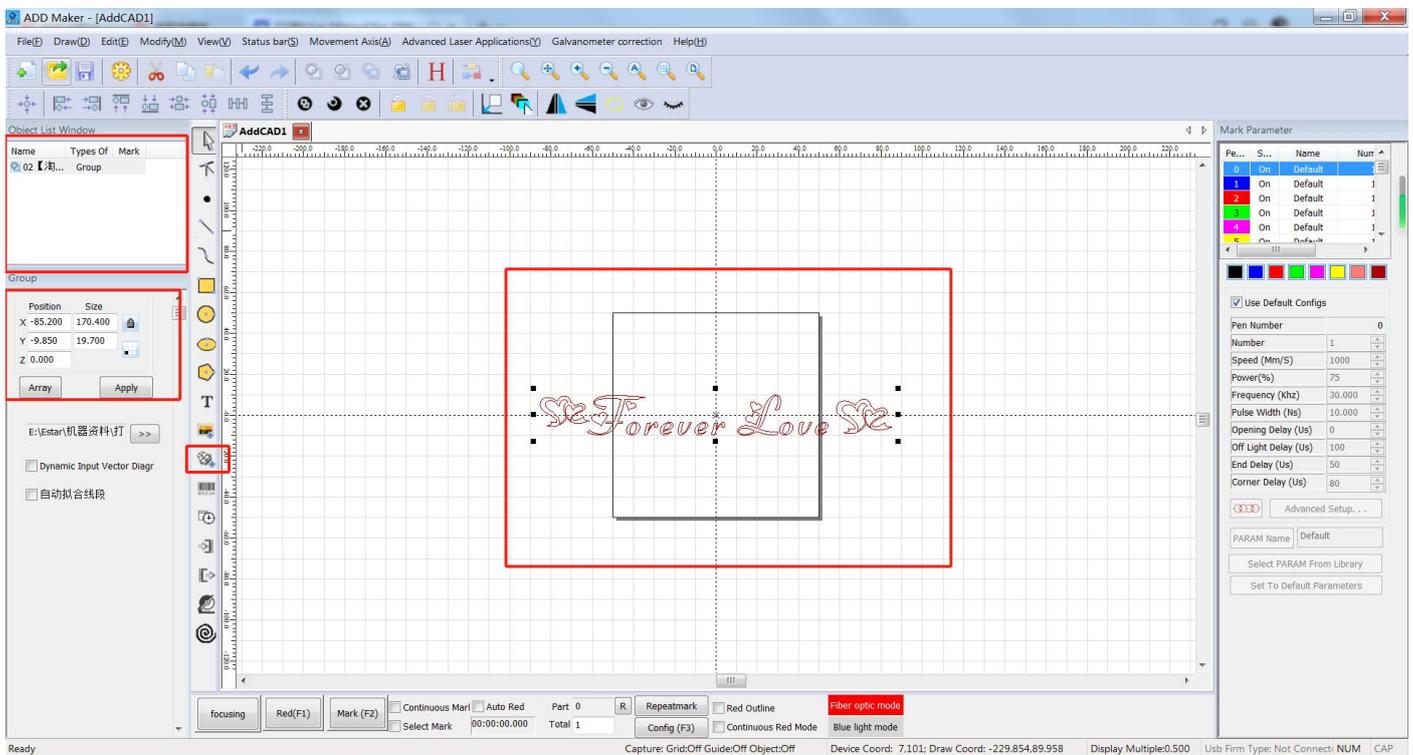
## 6. Draw Vector Graphics

① Click the icon  in the drawing toolbar with the left mouse button, select the vector image in the pop-up box, and click "Open".

\* It is recommended to use CoreDraw or Adobe Illustrator to edit the graphics, save them in plt or dxf format and then import them into the software. Supported formats: plt, dxf, ai, svg, di, gbs, gts, etc.

② After importing the graphic, you can select the object in the "Object List Bar" and then click the Center tool in the "Auxiliary Toolbar" to place the graphic in the center of the content area.

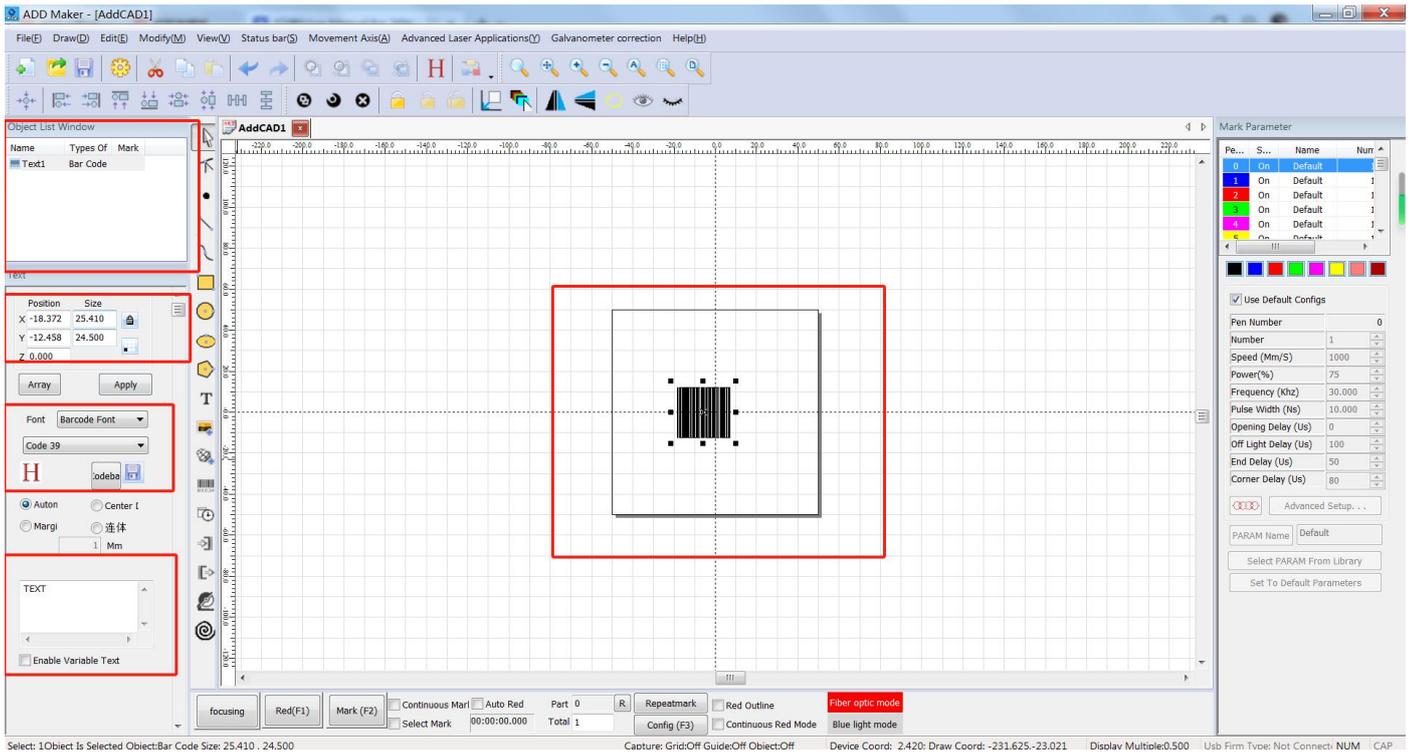
③ After drawing is completed, you can edit the properties of the selected object in the "Object Properties Area", such as position and size.



## 7 Draw Barcode

- 1 Click the icon  on the drawing toolbar, then click the preloaded barcode in the content display area.
- 2 In the "Object Attribute Area" content box  enter the barcode content and click 

After drawing is completed, you can edit the properties of the selected object in the "Object Properties Area", such as: position, size, barcode type.



# 8 Rotary marking

- ① Input the content to be marked (text or graphics), and set the filling parameters and marking parameters.
- ②
- ③ Click "Motion Axis" in the "Menu" and select the corresponding rotation marking method. Commonly used rotation marking methods are:
  - ④ **Split marking:** usually used to mark larger graphics.
  - Rotated text marking:** usually used to mark input text content.
  - Ring finger engraving:** usually used for marking ring products.

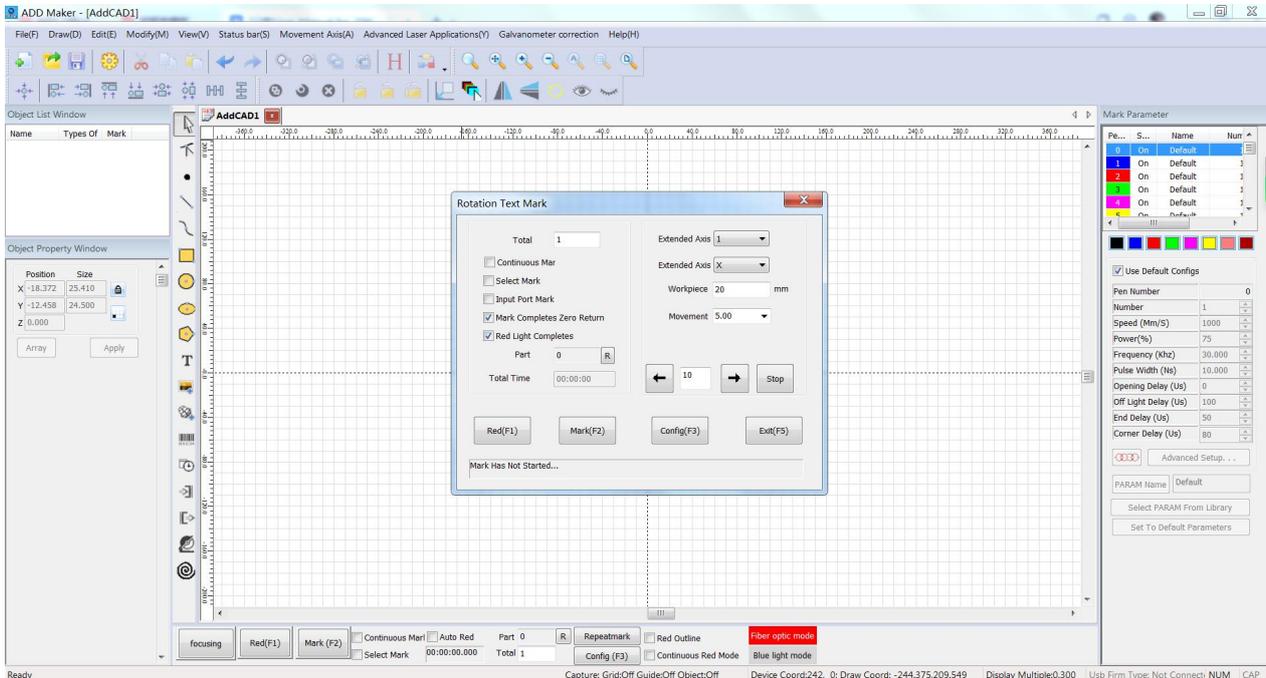
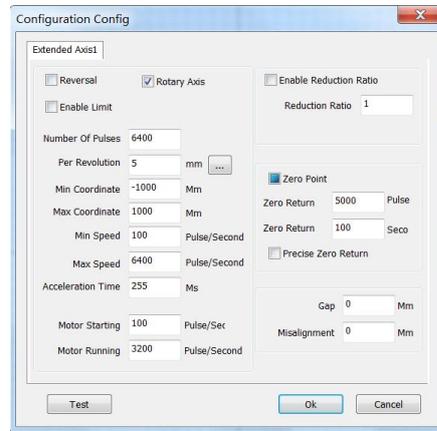
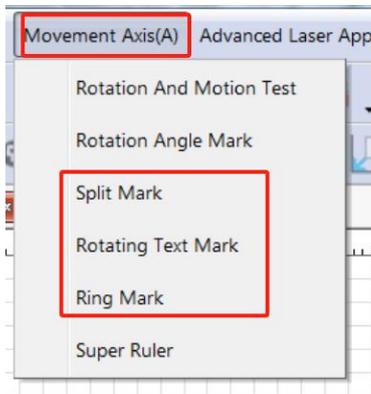
## ③ Set rotation parameters

Workpiece diameter: Set the diameter of the processed product in mm.

Number of pulses per revolution: Set the number of pulses according to the specifications of the rotary fixture, and the default setting is 6400.

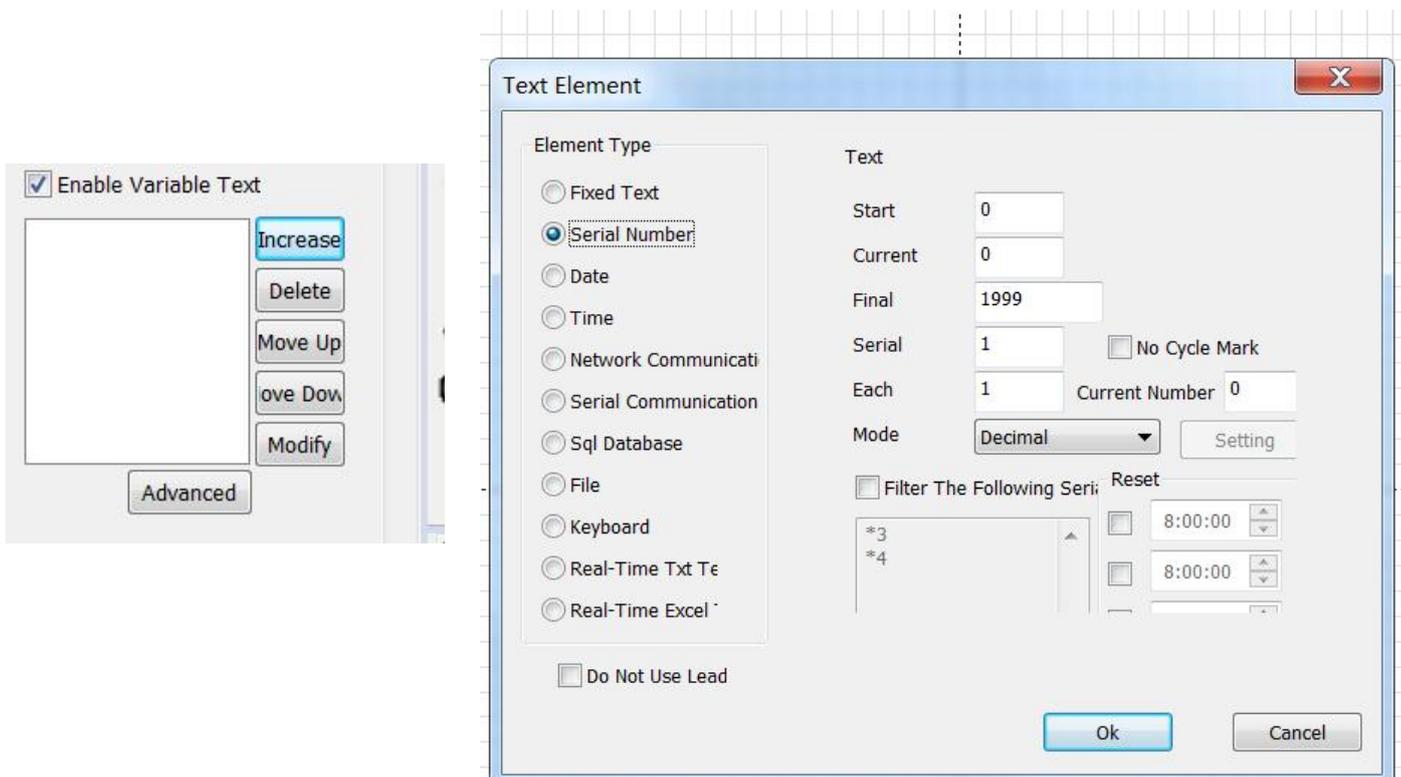
Reduction ratio: Set the rotary click reduction ratio according to the specifications of the rotary fixture, and the default setting is 1.

Other parameters are used by default first, and specific adjustments are made according to the actual product, rotation and marking requirements. Please contact us for more help.



## 9 Variable text

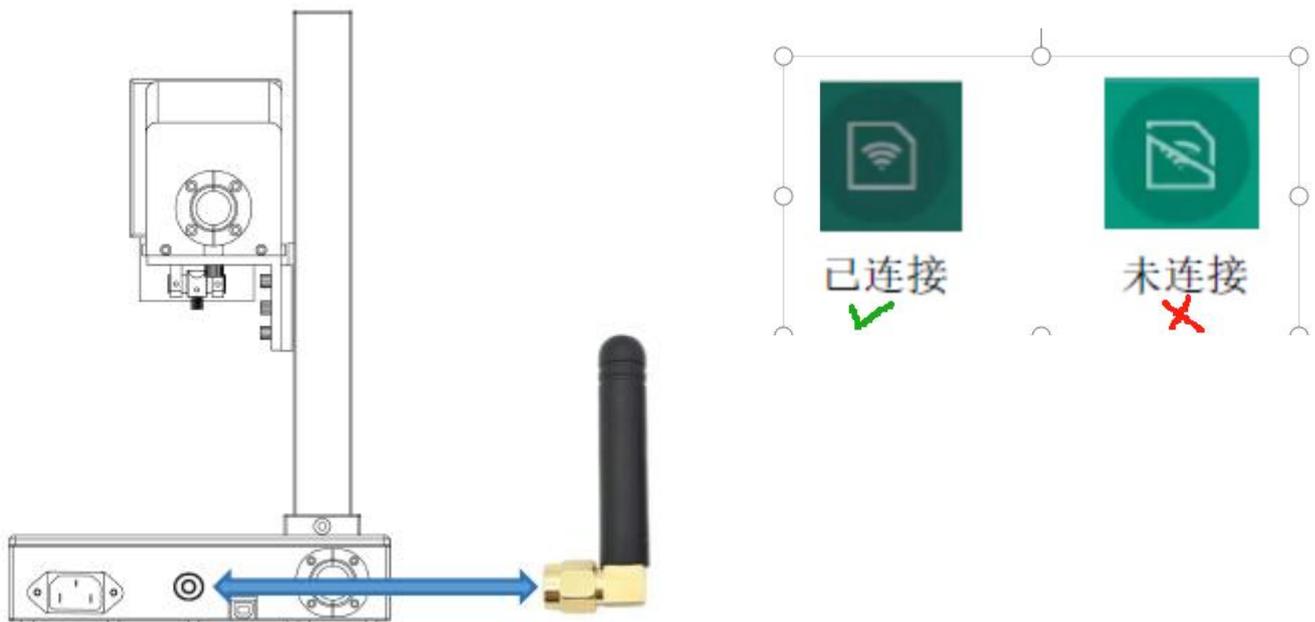
- ① Enter the text content to be marked, and set the text format and fill parameters.  
Check "Use variable text" below the text content box in the "Object Property Bar", click "Add", and select the corresponding element type  
**Fixed text:** Enter fixed text content.  
**Serial number:** Set the serial number to automatically mark changes in order according to the increasing or decreasing rules.  
**Date:** Enter the current date and time, including year/month/day/day/week.  
**Time:** Enter the current time, including hours/minutes/seconds/time period.  
**Network communication:** Link external programs through network communication to automatically obtain marking content.  
**Serial communication:** Link external programs through serial communication to automatically obtain marking content.  
**SQL database:** Automatically obtain marking content by linking to remote databases.  
**File:** Automatically obtain marking content by calling local files, and the available file formats are TXT/EXCEL.  
**Keyboard:** Automatically obtain marking content through external input devices of the computer, such as keyboards, barcode scanners, etc.  
**Real-time TXT file:** Directly select part or all of the content in the TXT file for marking.  
**Real-time Excel file:** Directly select part or all of the content in the EXCEL file for marking.
- ② Set the corresponding content and rules according to the corresponding element type rules. After the settings are completed, click "OK".



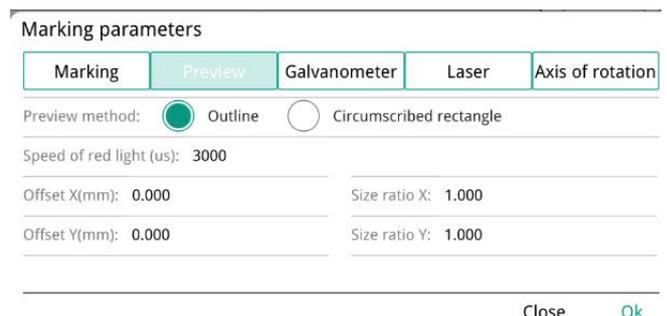
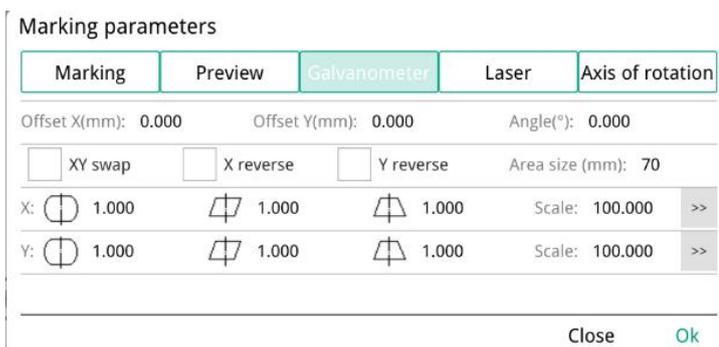
# Mobile APP Introduction

## 1 APP Connection

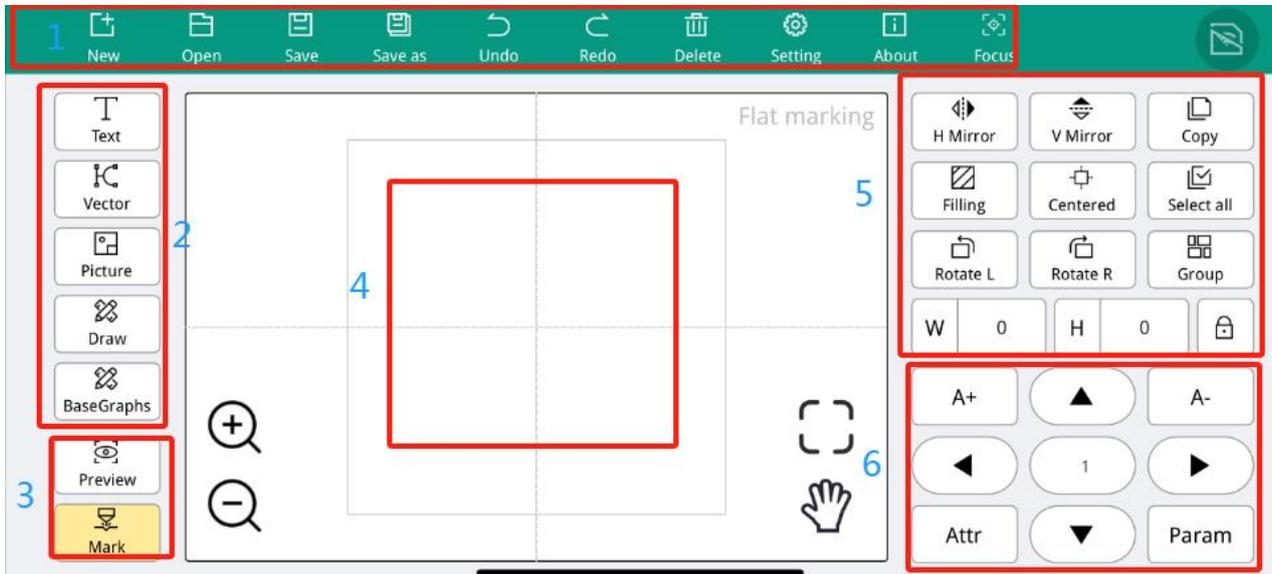
- ① Plug in the phone to connect the receiver, plug in the power of the machine, and press the power button on the front.
- ② Open the WiFi on your phone and search for "ADD", password: 12345678, then connect.
- ③ After connecting, the phone will prompt "The current WLAN is not accessible, do you want to continue using this WiFi?" Please select "Use".
- ④ Check whether the connection is successful on the APP interface:



- ⑤ After connecting to the App, please find the QR code on the back of the machine, scan it to obtain the machine calibration parameters, and refer to the corresponding parameters in the App.
- ⑥ Click "Parameters" in the lower right corner of the App → the position indicated below "Galvanometer" App
- ⑦ In the lower right corner, click "Parameters" → "Red Light Preview" and click the indicated position

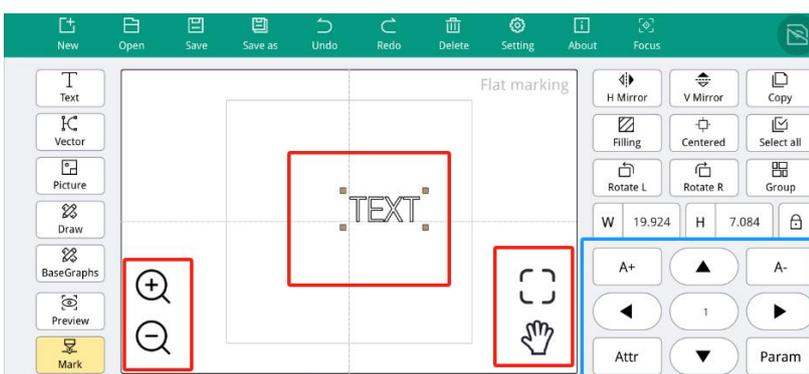
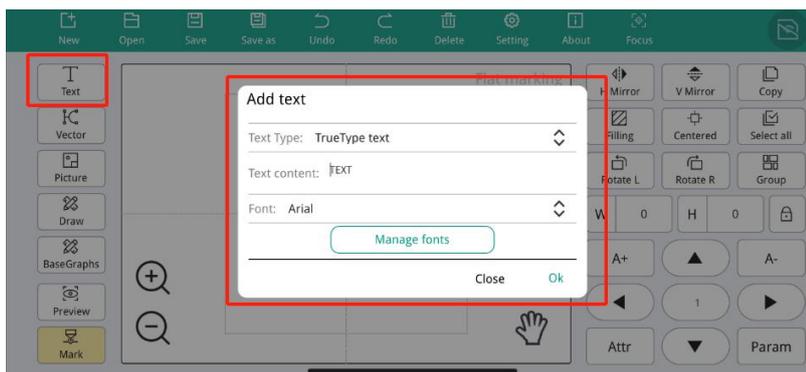


## 2 App Interface Overview

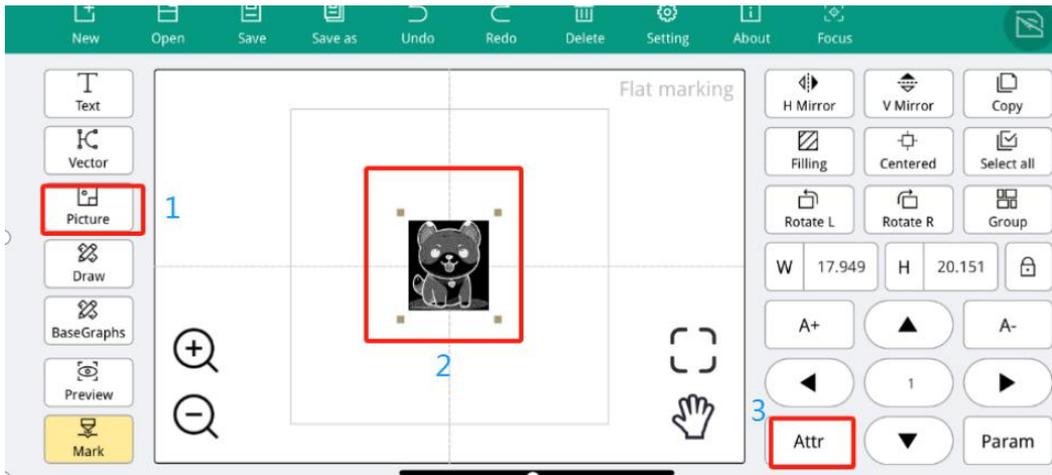


- 1 - Menu bar
- 2 - Drawing toolbar
- 3 - Marking control bar
- 4 - Content display area
- 5 - Auxiliary toolbar
- 6 - Object properties bar

## 3 Drawing Text



## 4 Draw pictures (photos of people/color pictures)



### Advanced settings



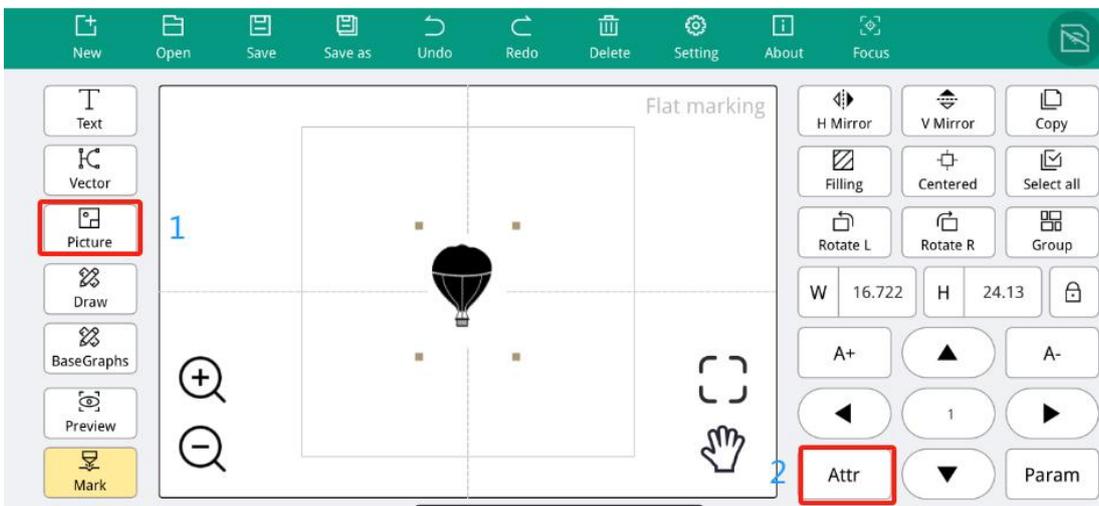
Close Ok

### Element Properties



Hide Close Ok

## 5 Image processing (normal bitmap)



### Advanced settings



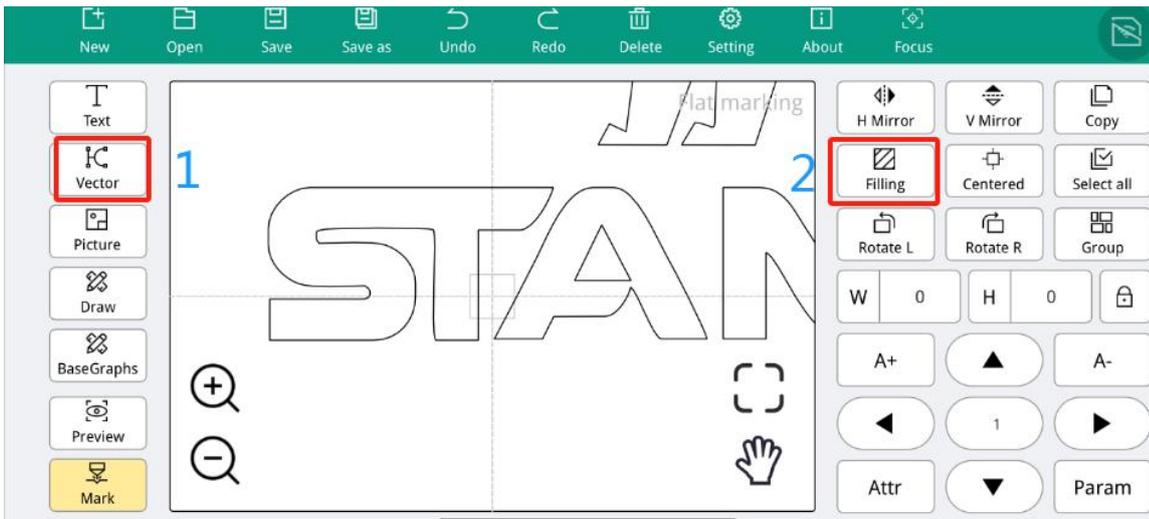
Close Ok

### Element Properties



Display Close Ok

## 6 Draw a vector

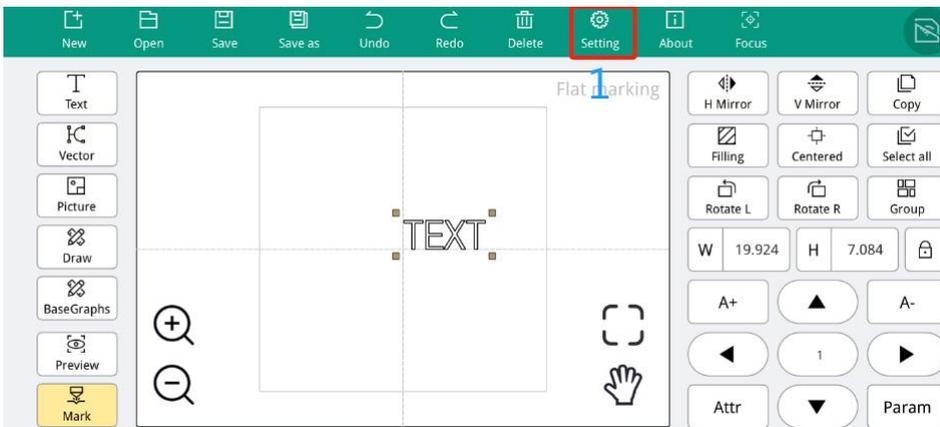


### Fill parameters

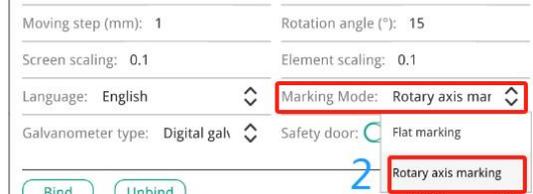


No other parameters need to be adjusted, the default line spacing is 0.03mm

## 7 Rotary marking



### System settings

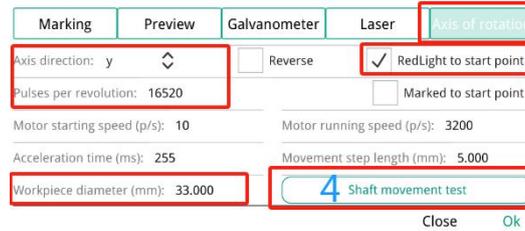


### Shaft movement test



Close

### Marking parameters

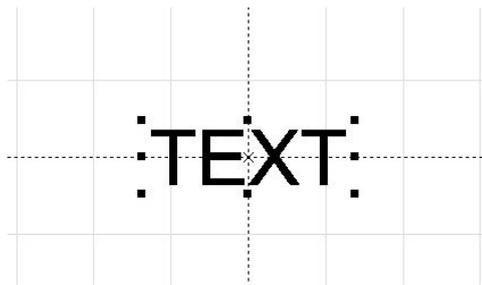
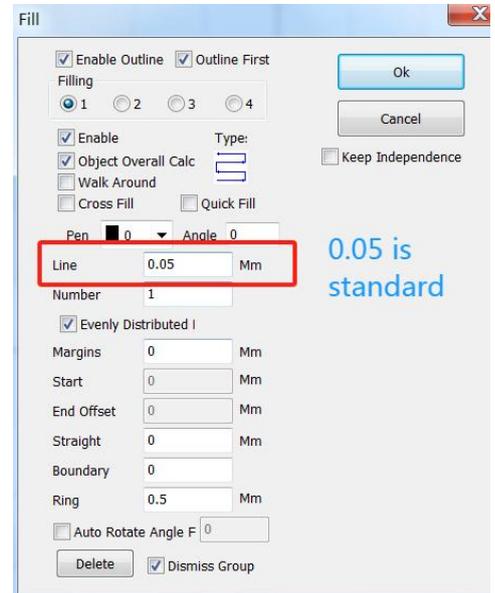
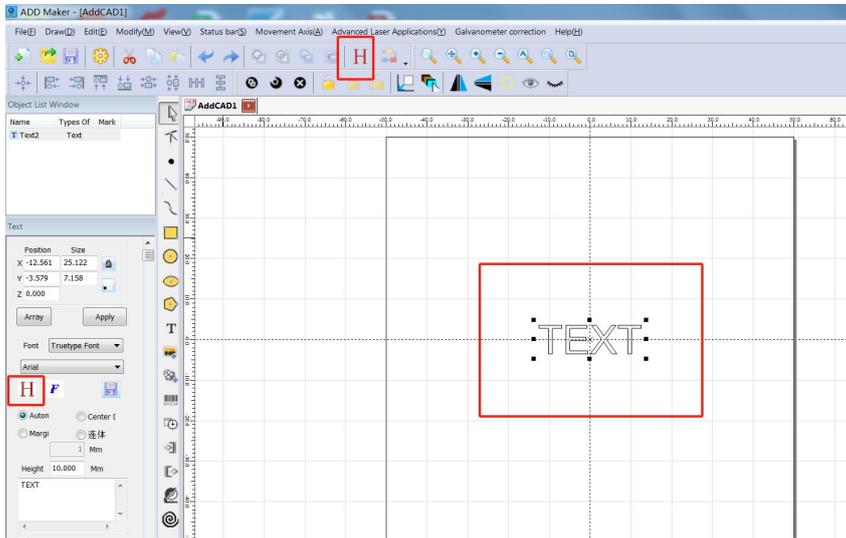


Close Ok

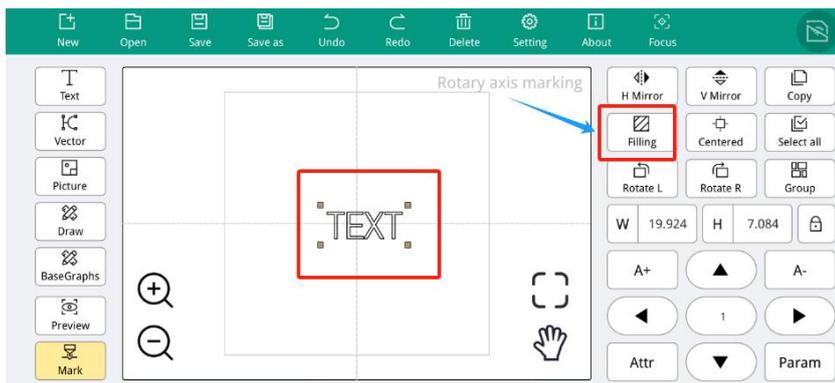


# Filling

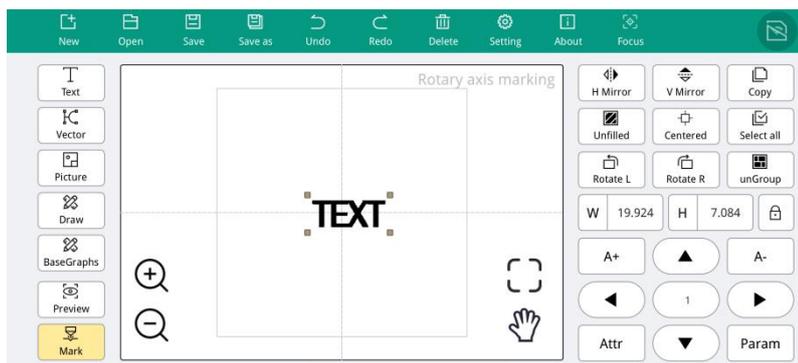
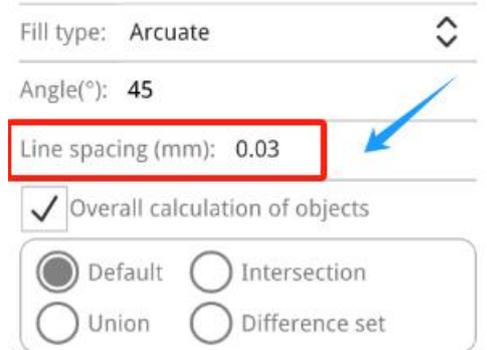
## 1 Computer software filling



## 2 Mobile App Software Filling



### Fill parameters



# Focus Adjustment

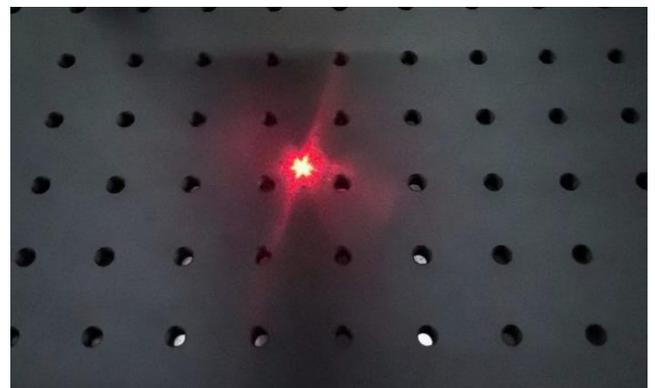
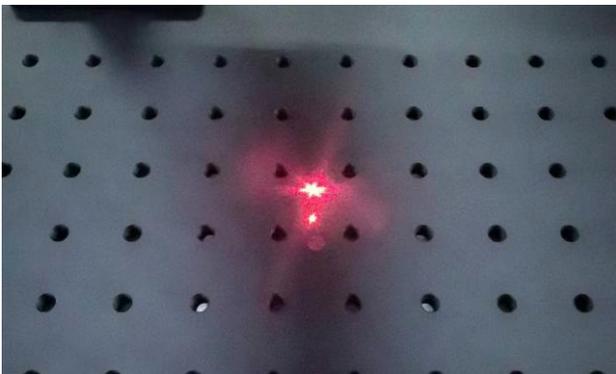
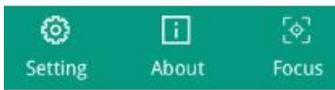
## 1 Computer Software

- ① Click "Focus" in the software, and "Focusing..." will appear. At this time, two red spots will appear on the machine.
- ② Two red spots will appear on the machine work surface
- ③ Rotate the column handle to adjust the light path height until the two red spots overlap.
- ④ Focus adjustment is completed



## 2 Mobile App Software

- ① Click "Focus" on the APP, and "Focusing..." will appear. At this time, two red spots will appear on the machine.
- ② Two red spots will appear on the machine's work surface
- ③ Rotate the column handle to adjust the light path height until the two red spots overlap.
- ④ Focus adjustment is completed



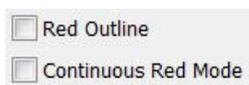
# Red Light

Check the actual position of the marking content.

Input the content, adjust the size, click the red light, preview the marking position, adjust the product position or the content position on the software.

Red light shows the outline / outline: Display the detailed outline of the marking content.

Continuous red light mode / circumscribed rectangle: Display the overall outer frame outline of the marking.



# 激光参数

<input type="checkbox"/> Use Default Configs	
Pen Number	0
Number	1
Speed (Mm/S)	1000
Power(%)	75
Frequency (Khz)	30.000
Pulse Width (Ns)	10.000
Opening Delay (Us)	0
Off Light Delay (Us)	100
End Delay (Us)	50
Corner Delay (Us)	80

## Marking parameters

Marking	Preview	Galvanometer	Laser	Axis of rotation
Turn-on delay (us): 300			Light off delay (us): 100	
Power(%): 80			Frequency(khz): 30	
Speed(mm/s): 300			Mark method:	Select process <input checked="" type="checkbox"/>
(Invalid marking in image node mode)			<input type="checkbox"/> Save as default	
Marking times: 1				

Close    Ok

## Common parameter settings

- ① Number of processing/number of markings: Set the number of times the content is marked, the default is 1, only mark once.
- ② Speed: Laser scanning speed, the default parameter value range is 50-7000, usually set the speed to 1500.
- ③ The larger the speed value, the faster the laser scanning speed, the smaller the laser force at the same time, and the shallower the marking effect.
- ④ The smaller the speed value, the slower the laser scanning speed, the greater the laser force at the same time, and the deeper the marking effect.
- ⑤ Power: Laser power value, the default parameter value range is 10-100, the larger the value, the stronger the laser energy, set according to the effect requirements.
- ⑥ Frequency: The default parameter value is 30.
- ⑦

# Marking

Mark the marking content.

Input the content, set the laser parameters, calibrate the marking position, click Mark, and the laser starts marking.

Continuous processing: After checking, the machine will repeatedly mark the content until it is manually stopped.

Rotary processing: After checking, when there are multiple contents in the content display area, only the selected content object will be marked. If it is not checked, all content objects will be marked.

<input type="checkbox"/> Red Outline
<input type="checkbox"/> Continuous Red Mode

Mark method:	Select process <input checked="" type="checkbox"/>
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# FAQ

## I. The machine does not respond when powered on

1. No power: Check the socket, switch, power socket on the machine body, etc.

Make sure the power is connected and the power cord is correctly inserted.

Check the Power button on the panel to make sure that the button is pressed and the light on the key body is on.

## II. Unable to connect to the computer

1. The USB cable is not connected: Check the USB data cable computer end and the machine interface to confirm whether the connection is tight.

2. The USB interface on the front panel of some desktop computers is invalid and needs to be connected to the socket on the back of the machine.

3. The driver is not installed normally: Follow the operating instructions to complete the driver installation. After the installation is completed, the computer recognizes the device as a serial port, which means that the hardware connection is normal.

4. Other special cases: Unplug the USB data cable and power supply, and reconnect the device after it is completely powered off for 5S.

## III. The engraving effect is very shallow or there is no trace

1. Focal length error: Read the focus section of the user manual for accurate focus.

2. Engraving speed: Too fast, the burning time is too short, read the engraving parameter section of the user manual to readjust the parameters.

3. The image is too light: The imported image should be clear. Too thin lines and too light colors will directly affect the engraving effect.

4. Placement of engraving objects: The object to be engraved is placed at an angle. The focal length of the laser is fixed, so the object to be engraved should be placed flat and parallel to the machine body. Otherwise, the focal length will be inaccurate, resulting in abnormal engraving effect

5. Whether the field lens protective cover is removed.