

User's Manual

Model: IDY



Thank you for choosing this laser engraving machine product!

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

Foreword

Precautions

Before operating the equipment, please carefully read the following instructions and refer to them as necessary to avoid personal safety and equipment damage due to misoperation.

This manual is applicable to the corresponding model of equipment. For customized and non-standard products, please read the attached instructions carefully.

Unauthorized modification, including adding new functions or connecting external equipment, may affect the normal use of the product. If necessary, please contact our company for technical support.

Location of equipment placement

Do not place this device in any of the following environments:

Direct sunlight, high temperature, only open flames or heat sources, sudden temperature changes;

Near water sources (including condensation water that may be generated by air conditioners, refrigerators, and fans), in humid environments;

The environment near dust, corrosive gases, or chemicals;

Soft fabric surfaces such as tablecloths or carpets;

Preventive measures against laser hazards

To ensure safe use, please take preventive measures

- 1 This device's laser belongs to Class IV laser products.
2. During laser processing, other toxic and harmful gases or dust may be generated due to different processing objects. Please take precautions.
3. Avoid prolonged direct eye contact with the laser. Optional goggles can be worn when operating the machine to prevent eye injuries.
4. In the application of lasers, please paste laser warning signs to remind safety protection.

Important Note

1. Before using the machine, please make sure to remove the laser field lens protective cover and ensure that the laser output port is unobstructed.

2. When the device emits light, it is forbidden to keep the eyes at the same level as the laser output port, and it is absolutely forbidden to expose the body to the laser transmission path.

3. The equipment should be kept away from electrical equipment that is sensitive to electromagnetic interference, as it may cause electromagnetic interference.

4. Our company shall not be held responsible for any machine damage or other incidental losses caused by failure to operate the machine according to the manual.

5. The device does not have any parts that users can repair on their own. Do not attempt to disassemble or repair this equipment by yourself. Equipment damage caused by disassembling or repairing this equipment by yourself is not covered by the warranty.

6. Due to software or hardware upgrades causing inconsistencies in the content of this manual, please refer to the latest version. Specific updates will not be notified. If necessary, please contact our company for updates.

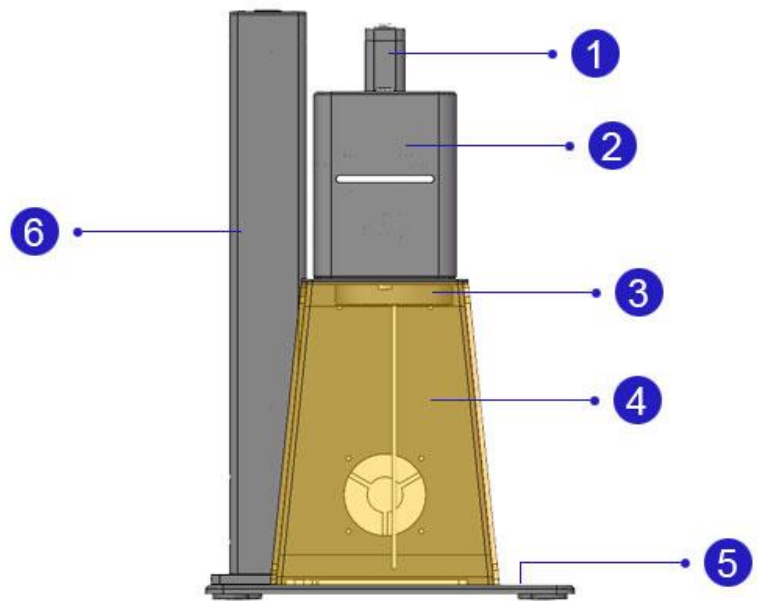
Catalog

Summary	03
Packing List	04
Parameter	05
Machine Installation	06
Software Installation	07
Get Software	07
Driver Installation	08
Software Installation(Computer)	08
APP Installation(Mobile)	09
Calibrate Parameters	10
Computer	10
APP	11
Software Introduction (Computer)	13
Software Interface	13
System Settings	13
Draw Shapes	14
Draw Text	15
Draw Pictures	16
Draw Vector File	17
Draw Barcode	17
Rotating Axis Mark	18
Variable Text	19
Software Introduction (Mobile)	20
APP Connection	20
APP Interface	20
Draw Text	21
Draw Vector File	22
Hand Drawn	22
Draw Basic Graphics	22
Draw Pictures	23
Rotation Axis Marking	24
Filling	25
Computer	25
App	26
Focus	27
Preview	28
Marking parameter	29
Marking	30
Parameter Example	31
FAQ	32

Summary

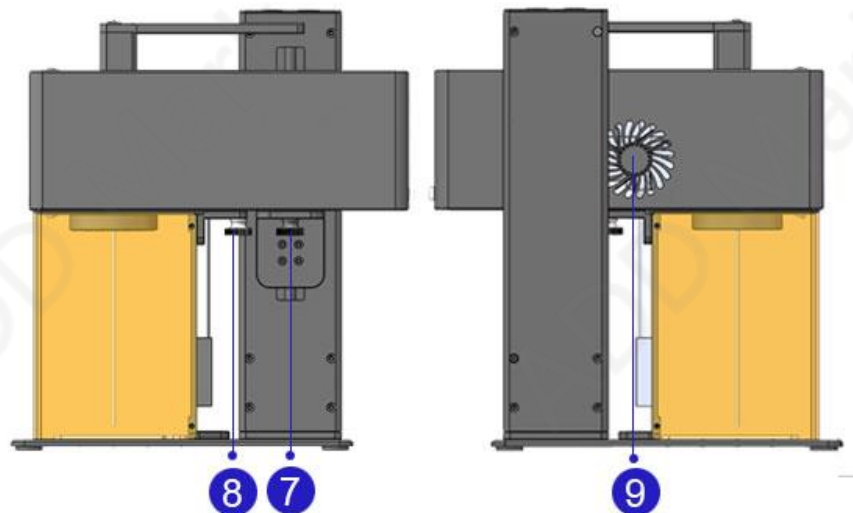
Front view of equipment

- 1- Laser head handle
- 2- Laser head
- 3- Field Mirror
- 4- Protective cover (with exhaust fan)
- 5- Workbench (with M6 threaded hole)
- 6- Column



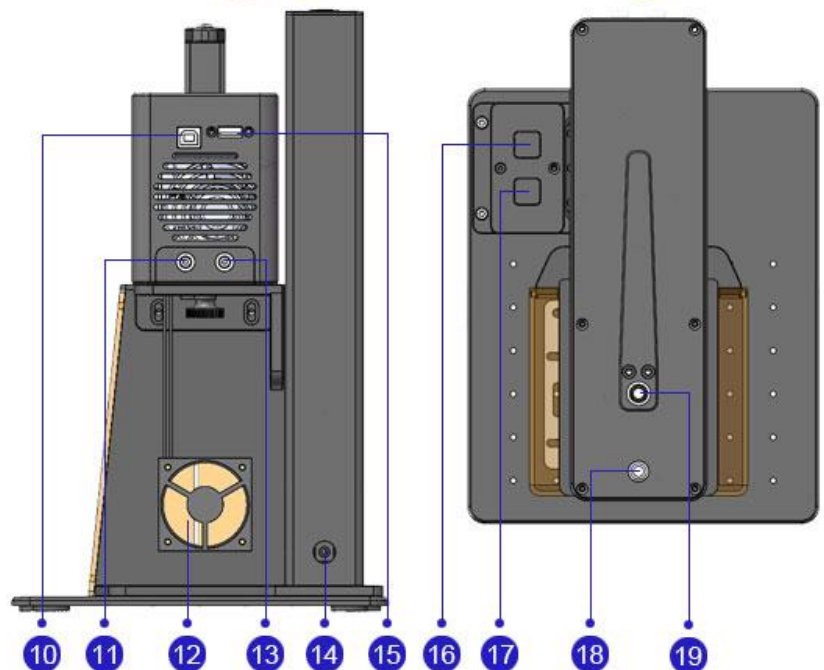
Side view of equipment

- 7- Laser head fixing screw
- 8- Protective cover fixing screws
- 9- Left heat dissipation hole



Rear view of equipment

- 10- USB data interface
- 11- Power input/output port 1
- 12- Protective cover exhaust fan
- 13- Power input/output port 2
- 14- Column power input port
- 15- Rotation axis interface



Top view of equipment

- 16- Column "up" button
- 17- Column "descent" button
- 18- Machine power switch
- 19- Marking button

Packing list

Accessory



Focusing sheet



Calibrate paper



U Disk



Safety glasses



Hex wrench



Positioning strip



Straightedge

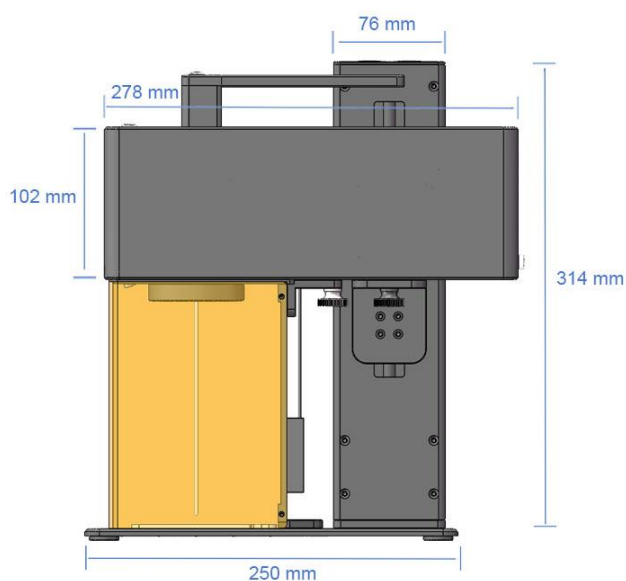
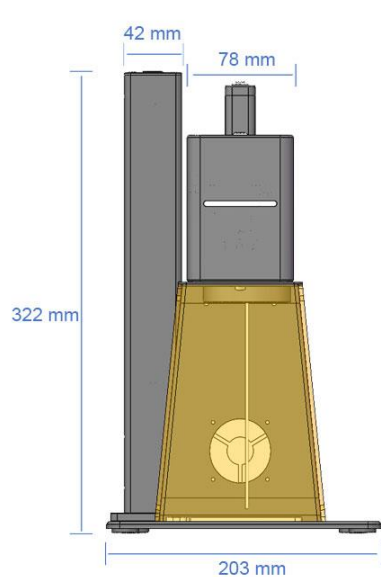


Data line



Power line

Size&Weight



Packaging method: cardboard box+anti-collision cotton

Product size: 250 * 203 * 322 mm

Packaging size: 415 * 370 * 265 mm

Product weight: 4.8 Kg

Packaging weight: 7.6 Kg

Parameter

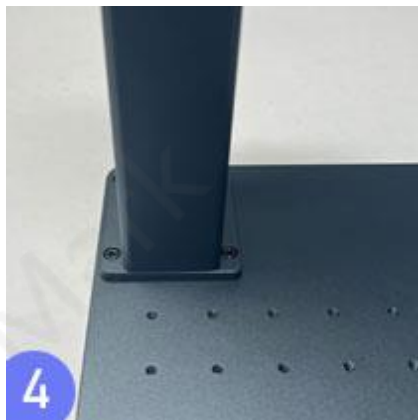
laser Info	laser power	2W	10W
	Laser type	Fiber laser	Blue light laser
	wavelength	1064nm	455nm
	Cool method	Air cooling	
Marking Info	Mark range	100*100mm	
	focal length	170mm	
	Mark speed	7000mm/s	
	Mark depth	0.015-0.5mm (depending on material differences)	
	Min line-width	0.001-0.03mm (depending on the material)	
	Min character	0.2mm (depending on material difference)	
Work Support	Lifting method	Electric lift	
	Focus method	Dual red light focusing	
	Connect method	Computer - USB; Mobile phone - WIFI	
	Software Language	Computer:Chinese/English/German/French/Russian/Arabic/Japanese/Korean	
		Mobile phone :Chinese, English	
	Support file formats	PLT/DXF/AI/SVG JPG/GIF/BMP/PNG, etc	
Config Info	Support system types	Windows / Mac OS Android / IOS、 Compatible with Lightburn	
	laser device	Ideeda	
	galvanometer	ZBTK	
	Control card	ADD Mark	
	field lens	JGZ	
	power supply	MW	
	computer	--	
	standard configuration	Focusing sheet / Calibrate paper / U Disk / goggles /Straightedge/ Hex wrench /Positioning strip/Data line/Power line	
Input Power	Optional	Rotating fixture	
		DC (24V, 5A) AC (100-240V, 50-60Hz)	

Machine Installation

1. Unpack and take out the machine and its accessories.



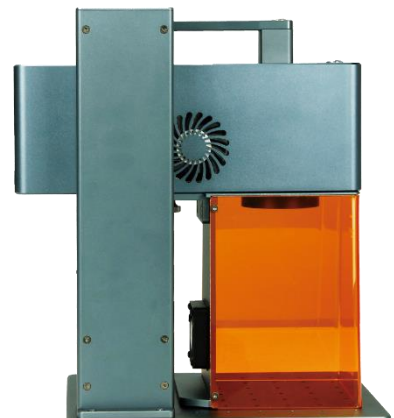
2. Install the column (4) , laser head (5), insert the adapter output ports into the laser head input port and column input port respectively. (6)



3. Install the protective cover (7), insert the power cord of the protective cover into the laser head output port (8), and insert the USB data cable (9).



4. Installation completed. (Detailed installation process can be found in the tutorial video)



Software Installation

6-1 Get Software

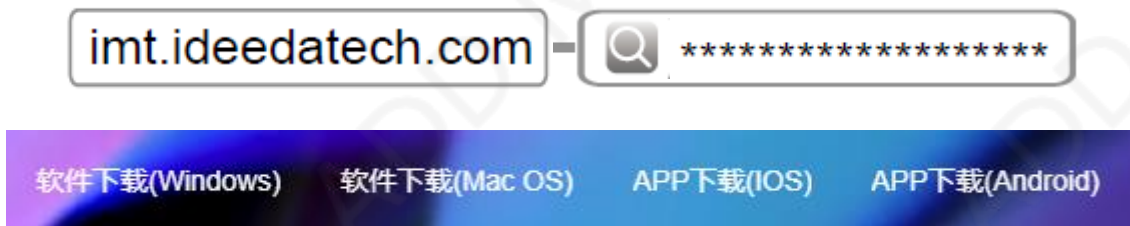
1. The machine software in the USB flash drive, which contains:

1. Software folder - AddMarker
2. Config parameter folder - contains area parameters (mirror calibration), laser parameters, and red light parameters for 1064 (fiber optic) and 455 (blue light)
3. Driver folder
4. Instructions for use (PDF file) - electronic manual, video instructions
5. Backup configuration parameters (webpage link)

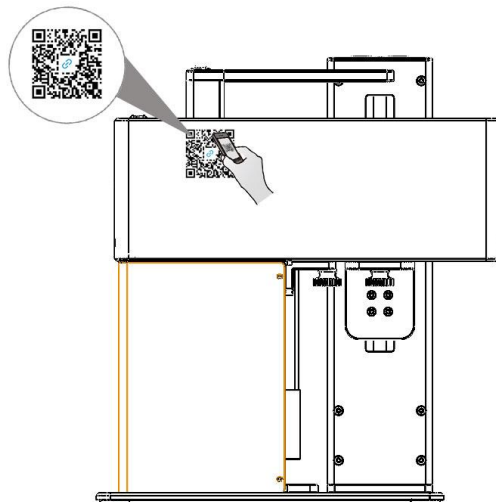
After receiving the device, please copy the contents of the USB flash drive to the computer, and make file backups and keep the USB flash drive safe.



2. Alternatively, open the website in the browser, download the software based on the computer system at the top, search for the machine's serial number, and find the configuration parameter file.



3. Scan the QR code on the machine with your phone, download the APP software at the top according to the phone system, and view the machine configuration parameter file.



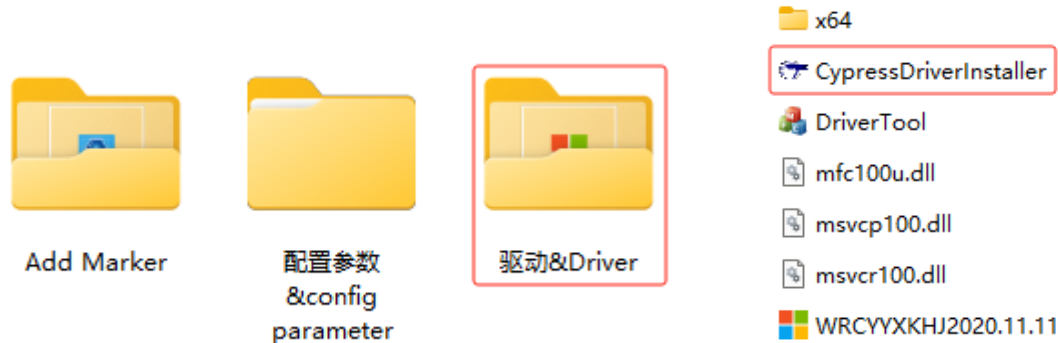
The above methods cannot obtain software information. You can contact our company for support.

6-2 Driver Installation (Computer Windows)

Turn on the machine and connect the data cables to both the machine and the computer.

Open the USB drive, open the folder "Drivers&Drivers", double-click the "Cypress Driver Installer. exe" file to start the installation.

**Downloading the installation board software from the webpage does not require a separate driver installation*



Click "Next", "I Agree", "Install" in sequence, and click "Finish" once the installation is complete.

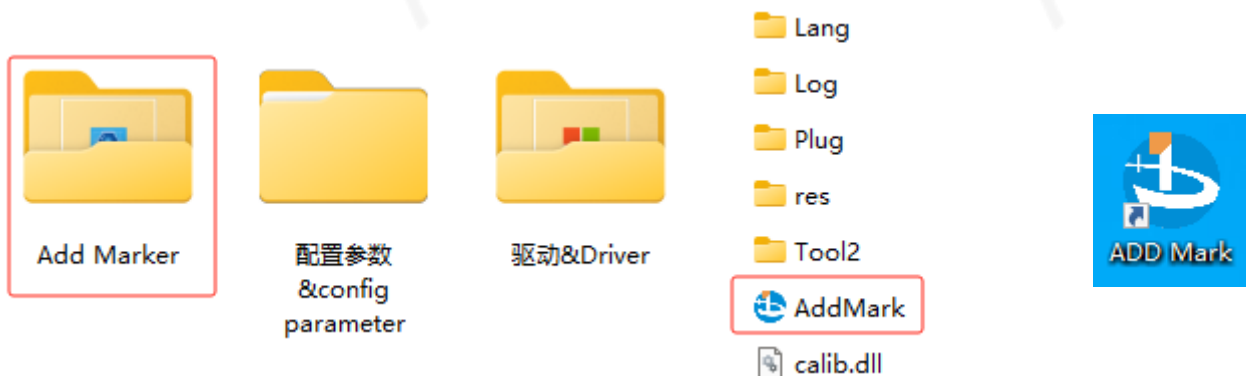
6-3 Software Installation (Computer Windows)

Turn on the machine and connect the data cables to both the machine and the computer.

The software adopts a green installation method, and the "Add Marker" folder can be copied to any directory on the hard drive.

Open the directory, right-click on the 'AddMark' file, select 'Send to', and click on 'Desktop Shortcuts'.

Return to the desktop and double-click the "Add Mark" icon to open the software for use.



6-4 Software Installation (Computer Mac OS)

Open the website "<http://imt.ideedatech.com>" in the browser, click on "Software Download (Mac OS)" at the top of the website to download the software installation package.



After downloading, follow the default steps to complete the installation.

Double click the "Add Mark" icon on the desktop to open the software for use

6-5 APP Installation (Android)

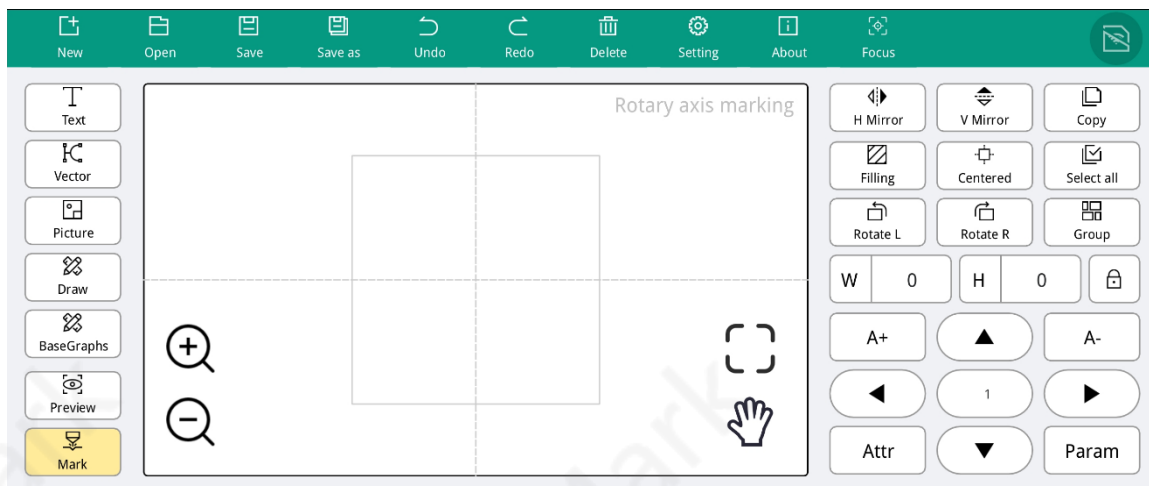
Scan the QR code on your phone and click on "App Download (Android)" at the top



After downloading, click on install.

After installation, agree and accept the privacy policy.

Allow software to use permissions such as "mobile data and wireless network", "local storage", "photo album", etc.

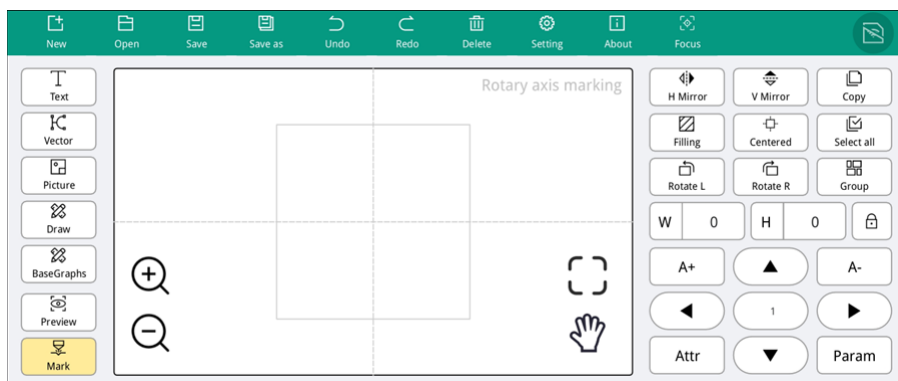
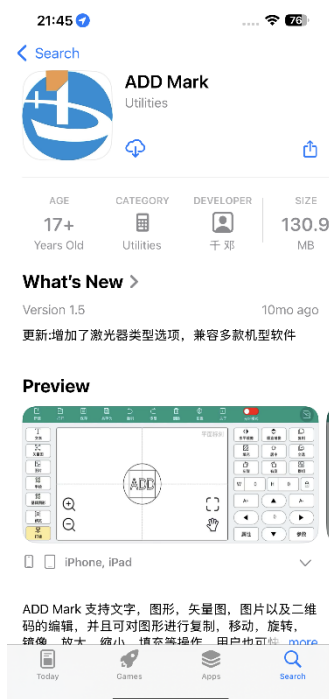


6-6 APP Installation (IOS)

Scan the QR code on the machine with your phone, click on "App Download (IOS)" at the top, or search for "ADD Mark" in the App Store and click to get the installation.

After installation, agree and accept the privacy policy.

Allow software to use permissions such as "mobile data and wireless network", "local storage", "photo album", etc



Calibrate Parameters

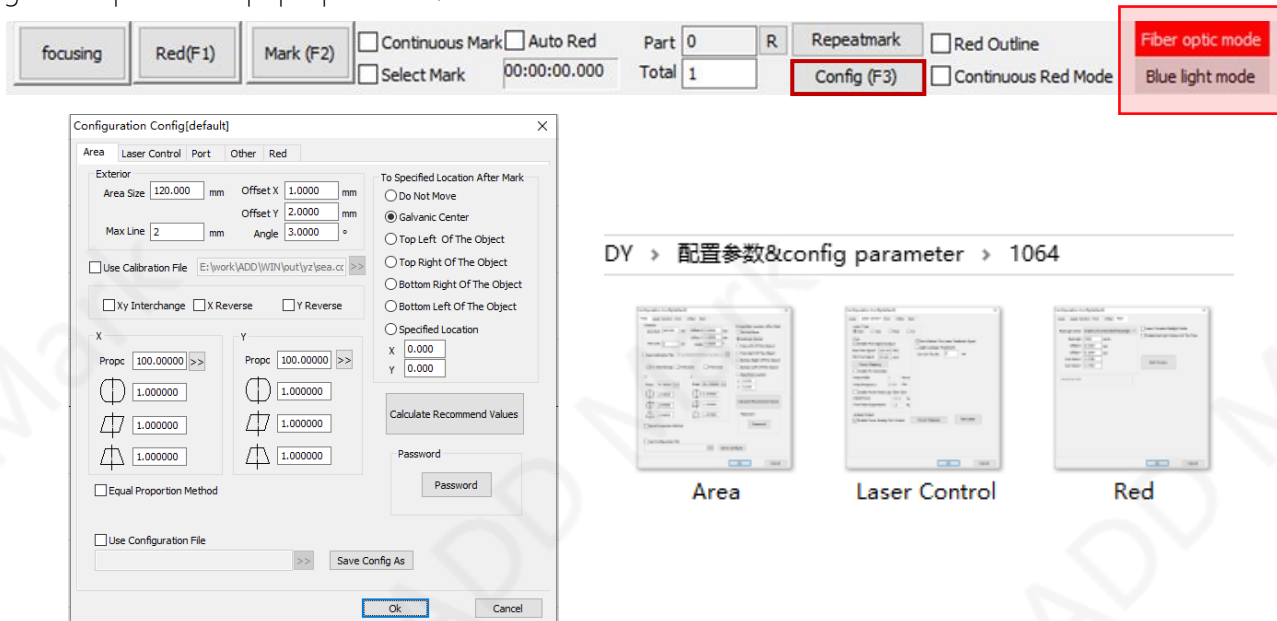
In order to use the machine normally and accurately mark the position and size of the required content, it is necessary to set the calibration parameters of the laser part before using the machine, including the calibration parameters of "area", "laser", and "Red".

Because the machine contains two types of laser sources, red light (1064) and blue light (455), the calibration parameters need to be set separately for the fiber and blue light.

7-1 Computer

① Open the "Add Mark" software, click on "Fiber Mode" on the marking toolbar at the bottom of the software, and set the calibration parameters for the fiber mode.

Click on "Config (F3)" in the bottom marking toolbar of the software or press the keyboard "F3" to open the configuration parameter pop-up window.



Open the copied USB file "Config Parameters" folder, find the "1064" folder, compare the image values of "Region", "Laser Control", and "Red" in the folder, and set the corresponding parameter values in the Add Mark software. After setting up, click OK.

② Click on "Blue ray Mode" in the bottom marking toolbar of the software to set the calibration parameters for Blue ray mode.

Click on "Parameters (F3)" in the bottom marking toolbar of the software or press the keyboard "F3" to open the configuration parameter pop-up window.

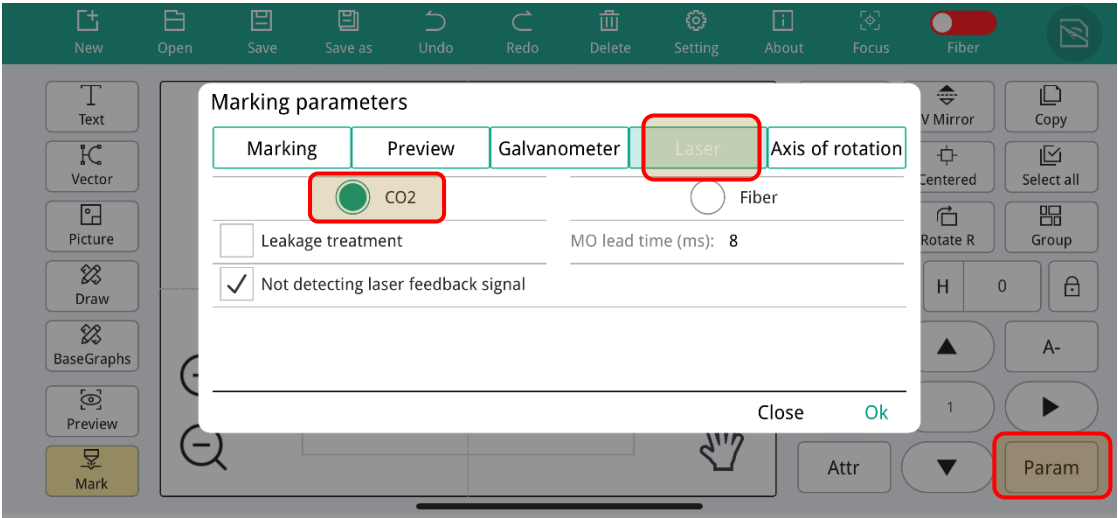
Open the copied USB file "Configuration Parameters" folder, find the "455" folder, compare the values of the "Region", "Laser Control", and "Border (Red Light) Indicator" images in the folder, and set the corresponding parameter values in the Add Mark software. After setting, click "OK".



In this way, all calibration parameters of the computer software have been set.

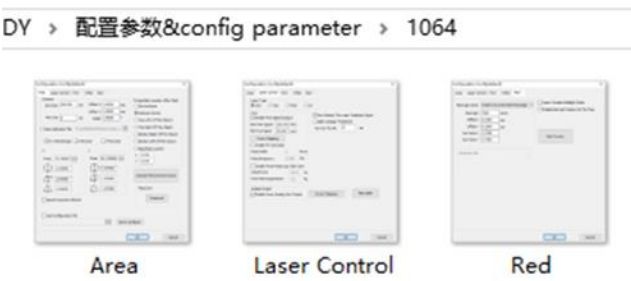
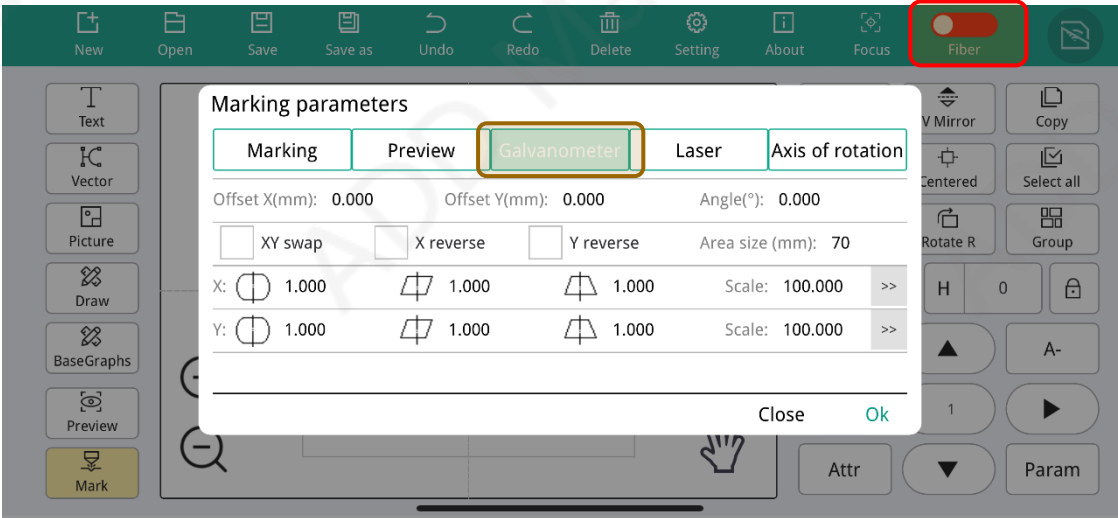
7-2 APP

Open the "Add" app, click on "Param" in the bottom right corner of the app, click on "Laser", select the laser type "CO2", and click OK. Display the laser mode button.

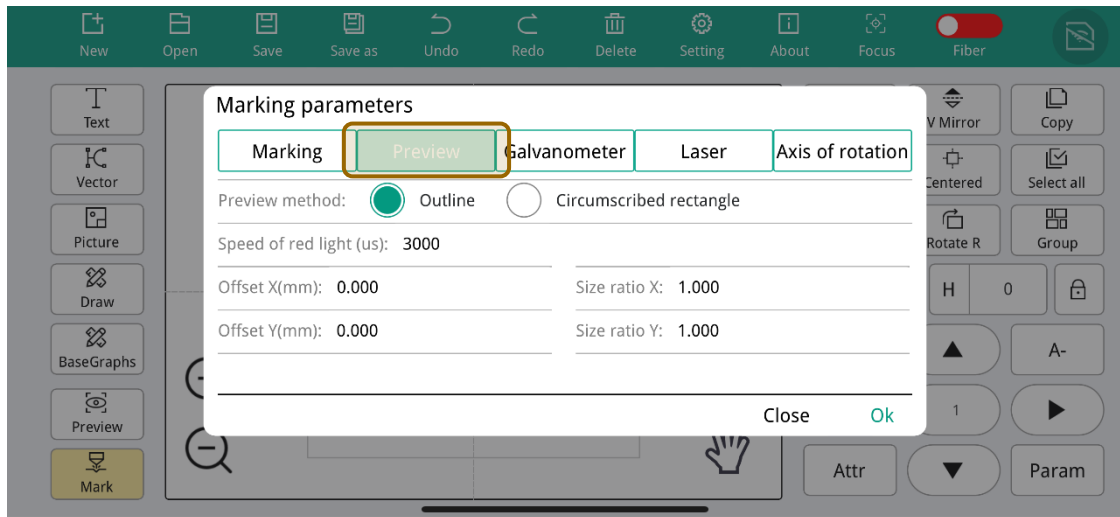


Display the dual light switch button in the upper right corner of the software.

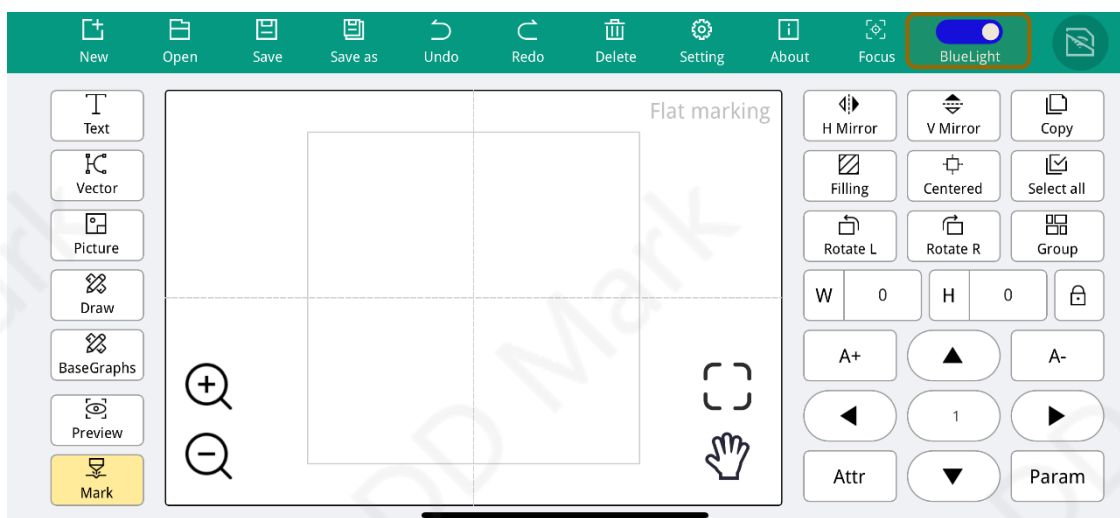
① Select "Fiber Mode", click "Parameters" to set the "Mirror" parameters in the pop-up box, corresponding to the copied USB file "Configuration Parameters" folder - "1064" folder, and the parameter values in the "Region" image.



After setting the "galvanometer" parameter values, click on "Red Light Preview", corresponding to the copied USB file "Configuration Parameters" folder - "1064" folder, the parameters in the "Red Light Indicator" image, and click "OK" after setting.

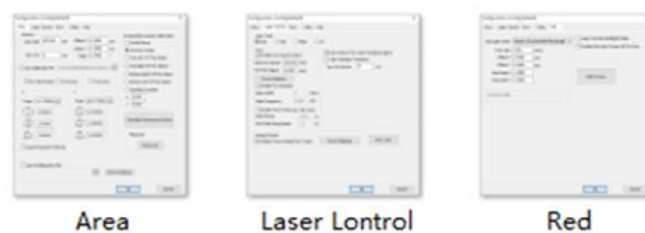


② Click the dual light switch button to switch the laser mode to "blue light mode"



Click on "Parameters" to set the "Mirror" parameters in the pop-up box, corresponding to the copied USB file "Configuration Parameters" folder - "455" folder, and the parameter values in the "Region" image.

IV > 配置参数&config parameter > 455



After setting the "galvanometer" parameter values, click on "red light preview", corresponding to the copied USB file "configuration parameters" folder - "455" folder, and the parameters in the "red light indication" image. After setting, click "OK".

In this way, all calibration parameters of the APP have been set.

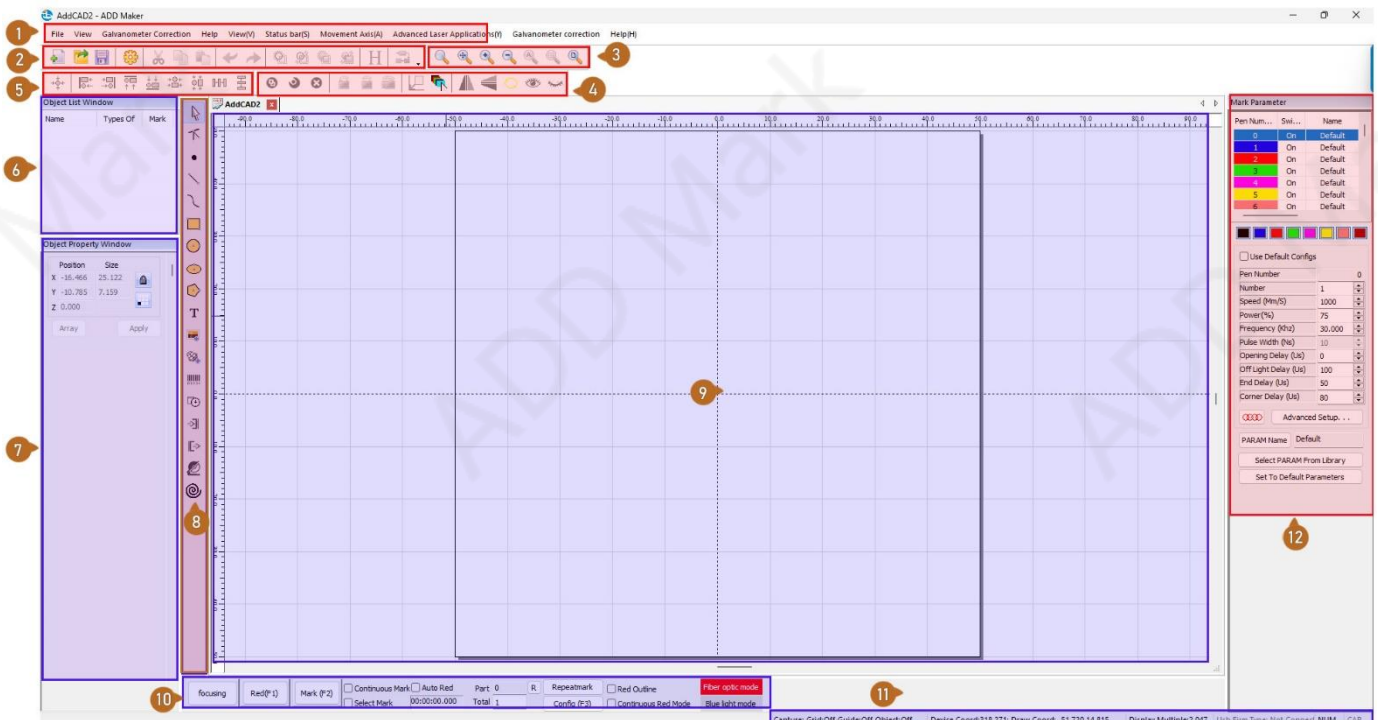
If the "Configuration Parameters" file on the USB drive is lost, you can open "<http://imt.ideedatech.com>" to search for the ID on the machine label, or scan the QR code on the machine label with your phone and open a remote webpage to backup the "Configuration Parameters" for reference settings.

Software Introduction (Computer)

8-1 Software Interface

Hovering the mouse over a function icon will display the corresponding usage instructions for that icon

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



8-2 System Settings

Click on the icon  in the system toolbar, or click on "File" - "System Configs" in the menu bar to enter the system parameter settings interface.

Conventional- Set software interface grid, program start and end actions.

Color and Style - Set Software Interface Style.

Work Area - Set Content Display Area Style.

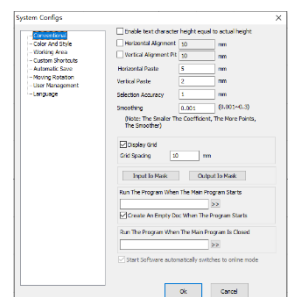
Custom Shortcut - Set software function corresponding shortcut keys.

Automatic Save - Set software file auto save document time.

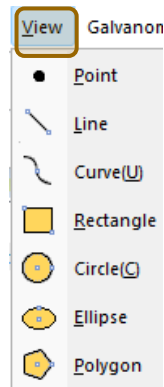
Moving Rotation- set the numerical value when rotating the content.

User Management - Set software usage user permissions.

Language - Set software interface language.



8-3 Draw Shapes



The software supports drawing common shapes such as "Points", "Lines", "Curves", "Rectangles", "Circles", "Ellipses", "Polygon", etc.

Select from the "View" menu or in the "Drawing toolbar", left click on the icon you want to draw, and then click and drag the left mouse button in the content display area to draw the corresponding graphic

Draw Line - Under the Draw Line command, Click the left mouse button, drag the mouse and click again to draw two straight lines.

Draw Curve - Under the Draw Curve command, hold down the left mouse button and drag to draw a free curve. Press the right mouse button to select the auto close function to close the current curve.

Draw Rectangle - Under the Draw Rectangle command, hold down the left mouse button and drag to draw a rectangle. Simultaneously holding down the keyboard CTRL key and dragging can draw a square.

Draw Circle - Under the Draw Circle command, press the left mouse button and drag to draw a circle.

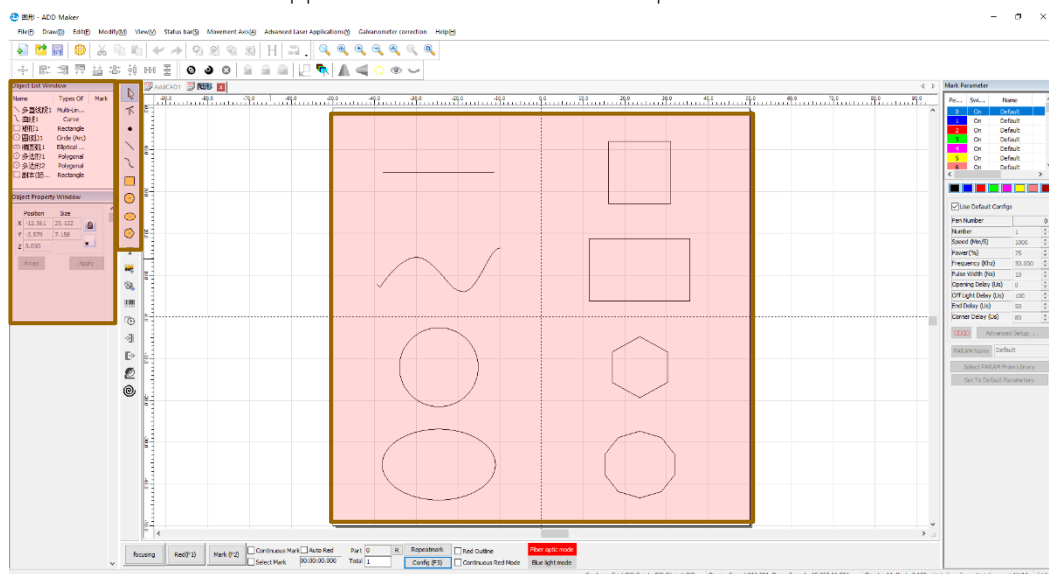
Draw Ellipse - Under the Draw Ellipse command, press the left mouse button and drag to draw an ellipse. Simultaneously hold down the CTRL key on the keyboard and drag to draw a circle.

Draw Polygons - Under the Draw Polygons command, hold down the left mouse button and drag to draw polygons.

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

After the drawing is completed, you can edit the properties of the selected object in the "Object Property Window", such as Position, Size, Angle, Number of Edges, etc.

Attention: After modifying the parameters in the attribute, be sure to click the "Apply" button for the modified parameters to take effect. The same applies below and will not be repeated.



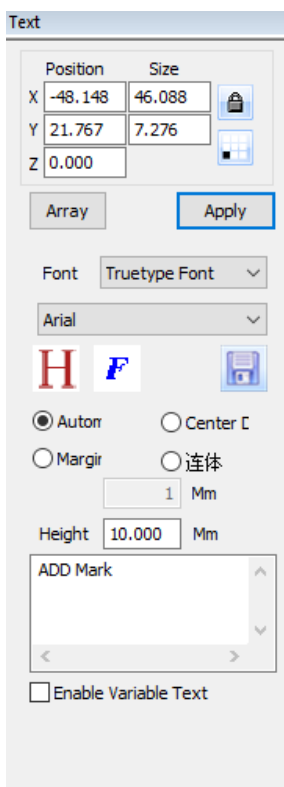
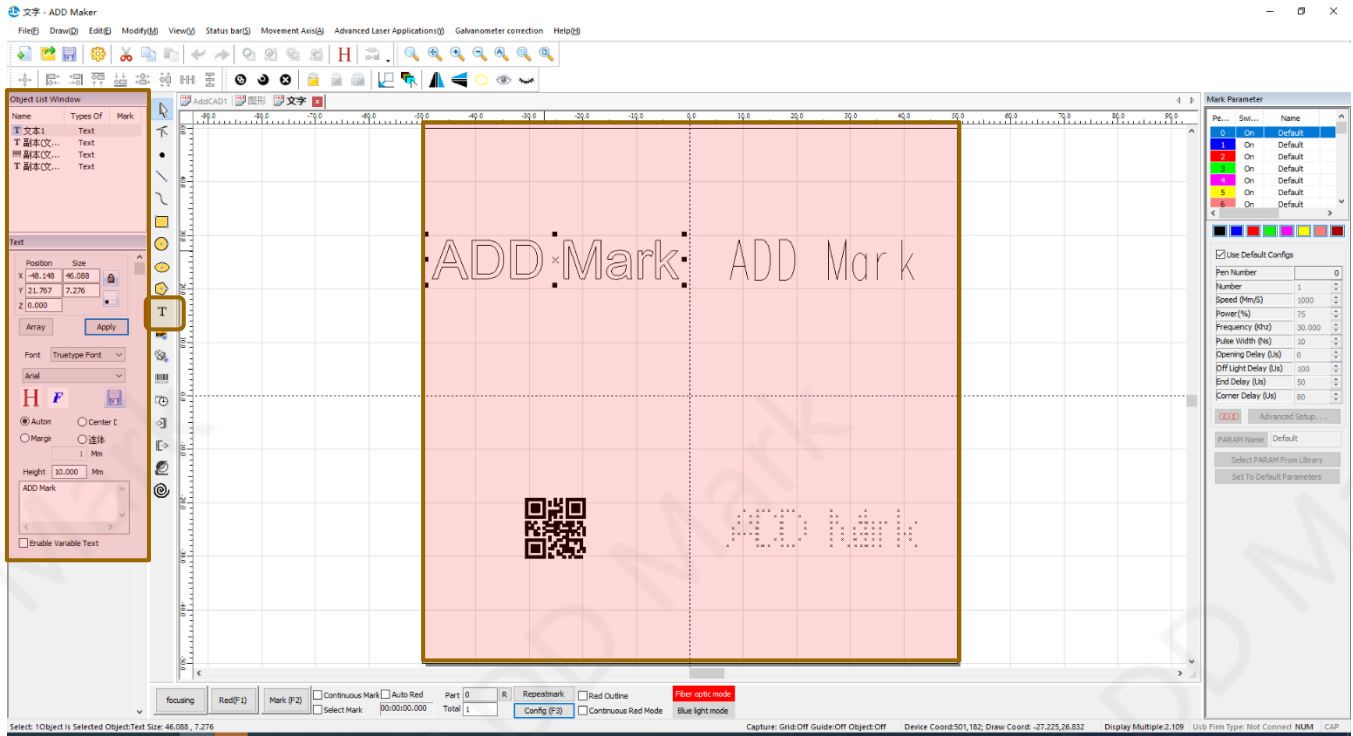
8-4 Drawing Text

Select the "Text" command in the "view" menu or click the icon  and then click the left mouse button in the content display area to enter the preload text .

Enter the text content in the "Object Attribute Window " content box  , and after entering, click "Apply".

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

After the drawing is completed, you can edit the properties of the selected object in the "Object Property Window ", such as Position, Size, Angle, Number of Edges, etc.

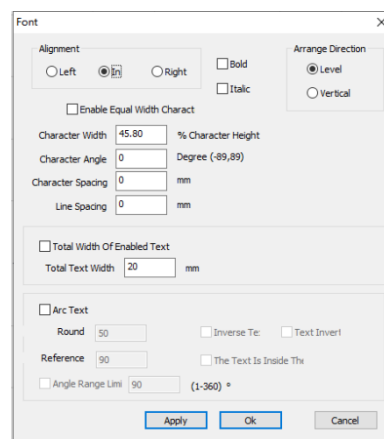


Font type:

TrueType font
Single line font,
Barcode font
Dot matrix font

regular hollow font, fillable type.
single line font, non fillable type.
barcode, QR codes, DM codes, etc.
font outline depicted by dots.

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

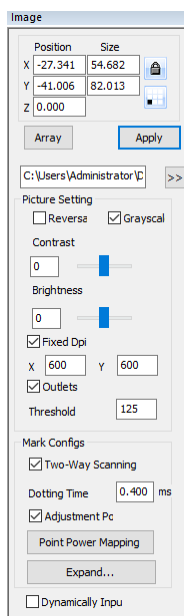
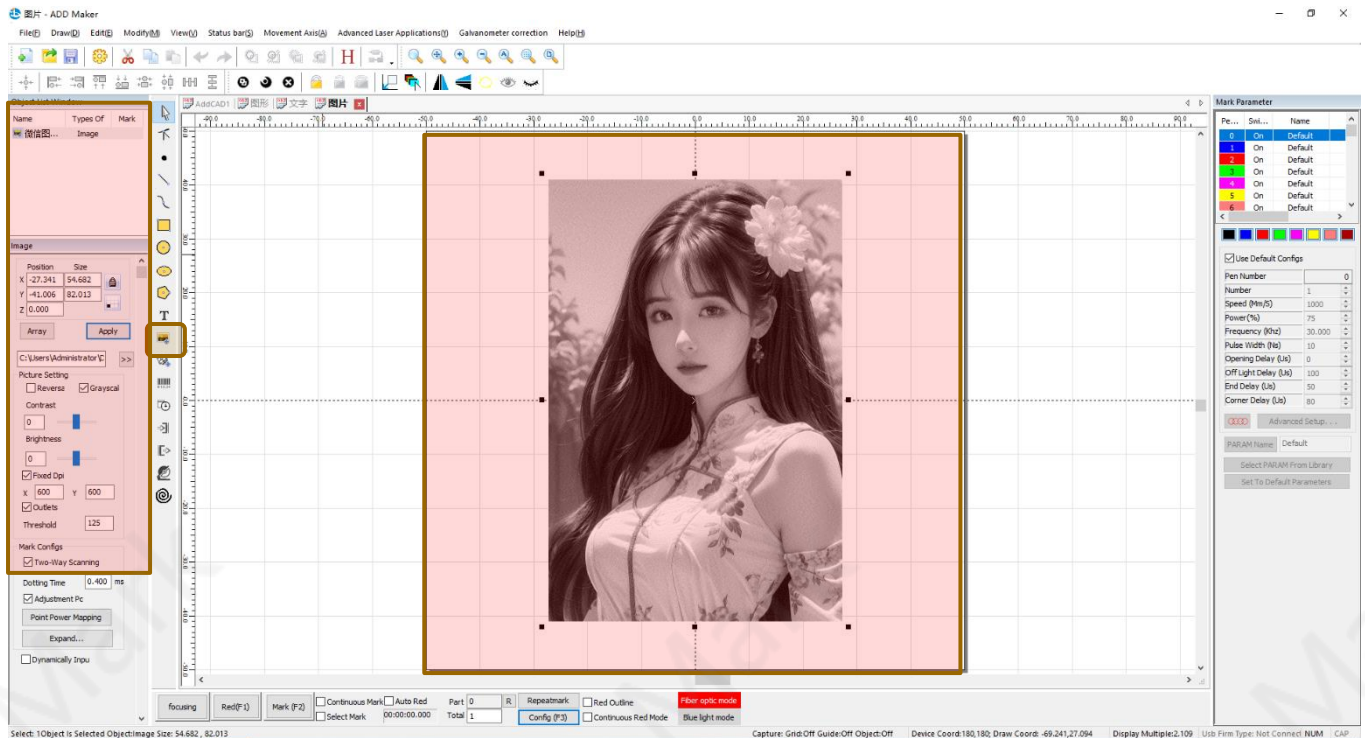


8-5 Draw Picture

Select the "image file" command in the "View" menu or click on the  icon and select the image in the pop-up box.

The supported bitmap formats are jpt,gif,bmp,png,jpeg.

After the drawing is completed, you can edit the properties of the selected object in the "Object Properties Window", such as Position, Size, Image address,Image settings, etc.



Reverse - the color value of each point in the current image is reversed.

Grayscale - Convert a color image into a 256 level grayscale image.

Contrast - the degree of light and dark contrast between parts of the image.

Fixed DPI- Higher the DPI value, clearer the marking, and longer the processing time, conversely, the fuzzier the marking, the shorter the processing time.

Outlets - Adjust the density of black and white dots to simulate different gray effects.

Two way scanning - When marking, the laser works in both directions.

Dotting time - the time it takes for the laser to dot each pixel.

Setting reference:

Adjust the image to the appropriate size;

In the "Picture Settings" window, adjust the contrast and brightness, check "Reverse", "Grayscale", "Fixed DPI" (recommended to fill in parameter 500), and "Outlets";

In the "Mark Configs" window, check "Two-way Scanning" and fill in 0.4 in "Dotting Time". Click  to enter the parameters;

In the "Mark Parameter", set the "Speed (mm/s)" to 1000 and the "Power (%)" to 85 (specific laser parameters are subject to actual effects);

*Explanation: Image labeling does not require filling.

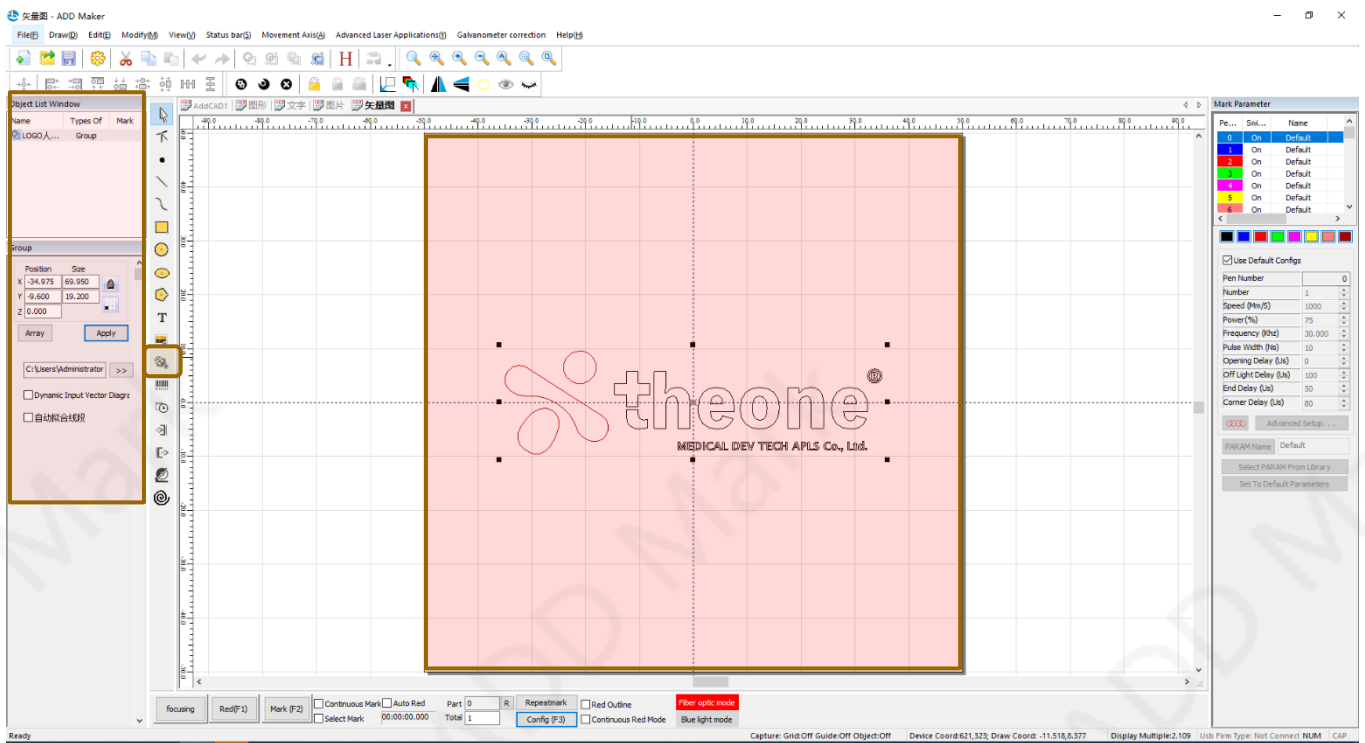
8-6 Draw Vector File

Select the "Vector File" command in the "View" menu or click the icon  in the drawing toolbar, select the vector image in the pop-up box, and click "Open" to complete the process.

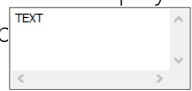
* Recommended to use CorelDraw 、 Adobe Illustrator software to edit and process graphics, save them in "plt" or "dxf" format, and then import them into the software for use. Supported formats: plt, dxf, ai, svg, di, gbs, gts, etc.

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

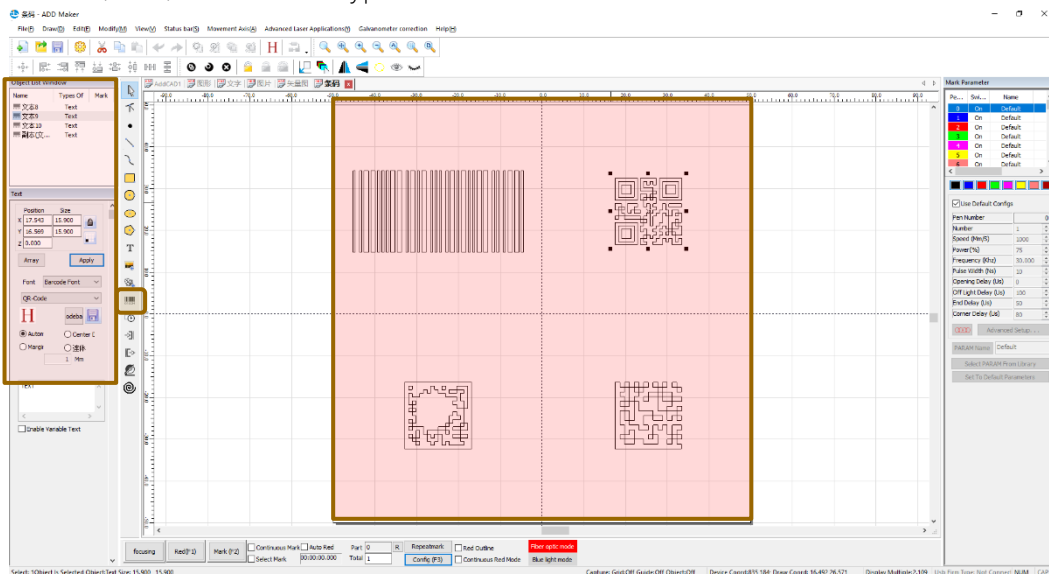
After the drawing is completed, you can edit the properties of the selected object in the "Object Properties Window", such as Position and Size.



8-7 Draw Barcode

Click the icon  and then click the left mouse button in the content display area to enter the preload text. Enter the barcode content in the "Object Attribute Window" content box  and click "Apply".

After the drawing is completed, you can edit the properties of the selected object in the "Object Properties Area", such as Position, Size, and Barcode type.



8-8 Rotating Axis Mark

Input the content to be marked (text or graphics) and set the filling and marking parameters.

Click on "Movement Axis" in the "Menu Bar" and select the corresponding rotation marking method. Common rotation marking methods include:

Split marking: usually used to mark larger shapes by dividing the graphic content into.

Rotating Text Marking: Typically used to mark the input text content.

Ring marking: usually used for marking ring products.

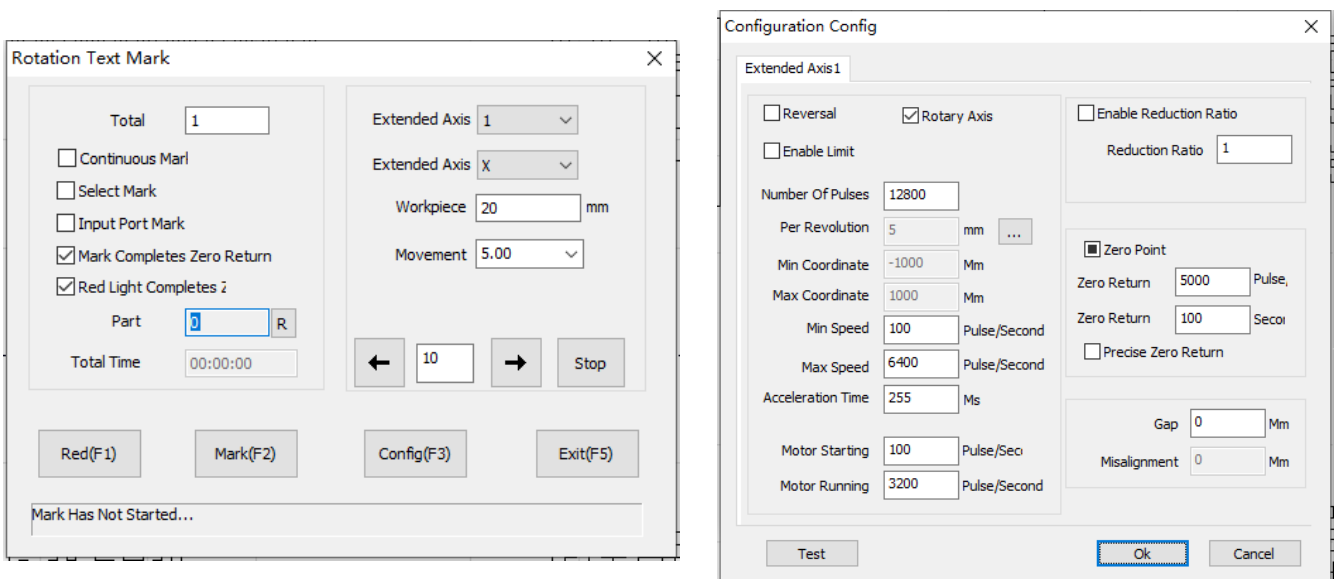
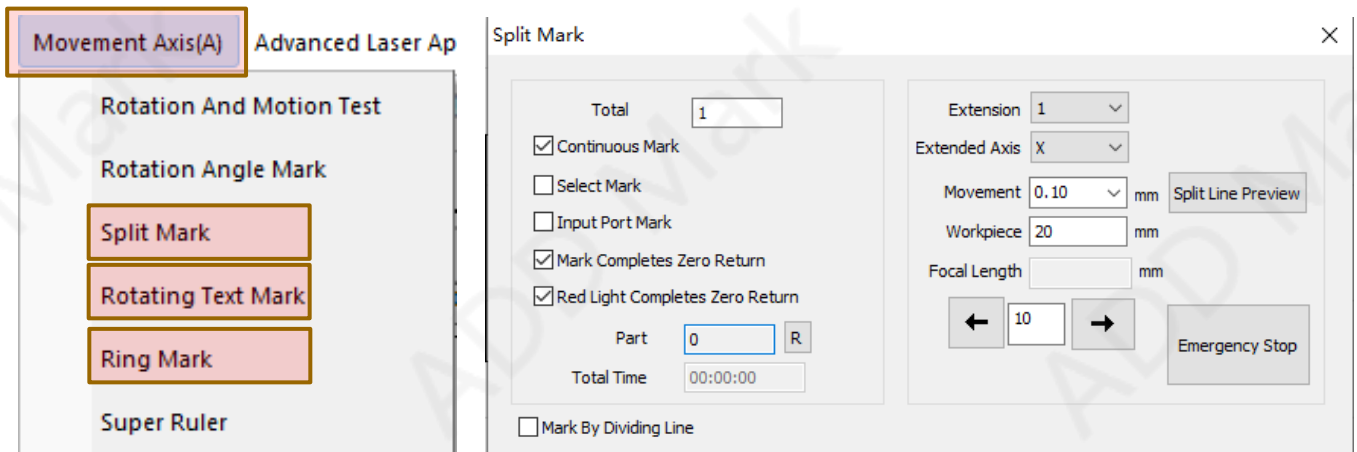
Set rotation parameters: The rotation axis parameters can be set separately on the corresponding rotation marking interface. Click "Parameter F3" in the rotation marking pop-up window to set them.

Workpiece: Set the diameter of the processed product in millimeters (such as rings, bracelets, water bottles, etc.).

Number of pulses: Set the number of pulses according to the specifications of the rotating fixture, with a default setting of 12800.

Reduction Ratio: Set the rotation click reduction ratio according to the specifications of the rotating fixture, with a default setting of 1.

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



8-9 Variable Text

Variable text refers to the text that can be dynamically changed according to the rules defined by users in the marking process.

Check the box below the "Object Attribute Windows" text content box ☒ Enable Variable Text, click " increase ", and select the corresponding element type

Fixed Text: Enter fixed text content.

Serial number: Set the serial number to automatically mark changes in an orderly manner according to the rules of increasing or decreasing.

Date: Automatically retrieve date information from the computer, including year/month/day/day/week/week.

Time: Automatically retrieve time information from the computer, including hours/minutes/seconds/time periods.

Network communication: Reading the elements of the text to be processed through the network.

Serial communication: Reading the elements of the text to be processed through a serial port.

SQL database: During the processing, the system automatically reads the elements of the text to be processed from the docked database.

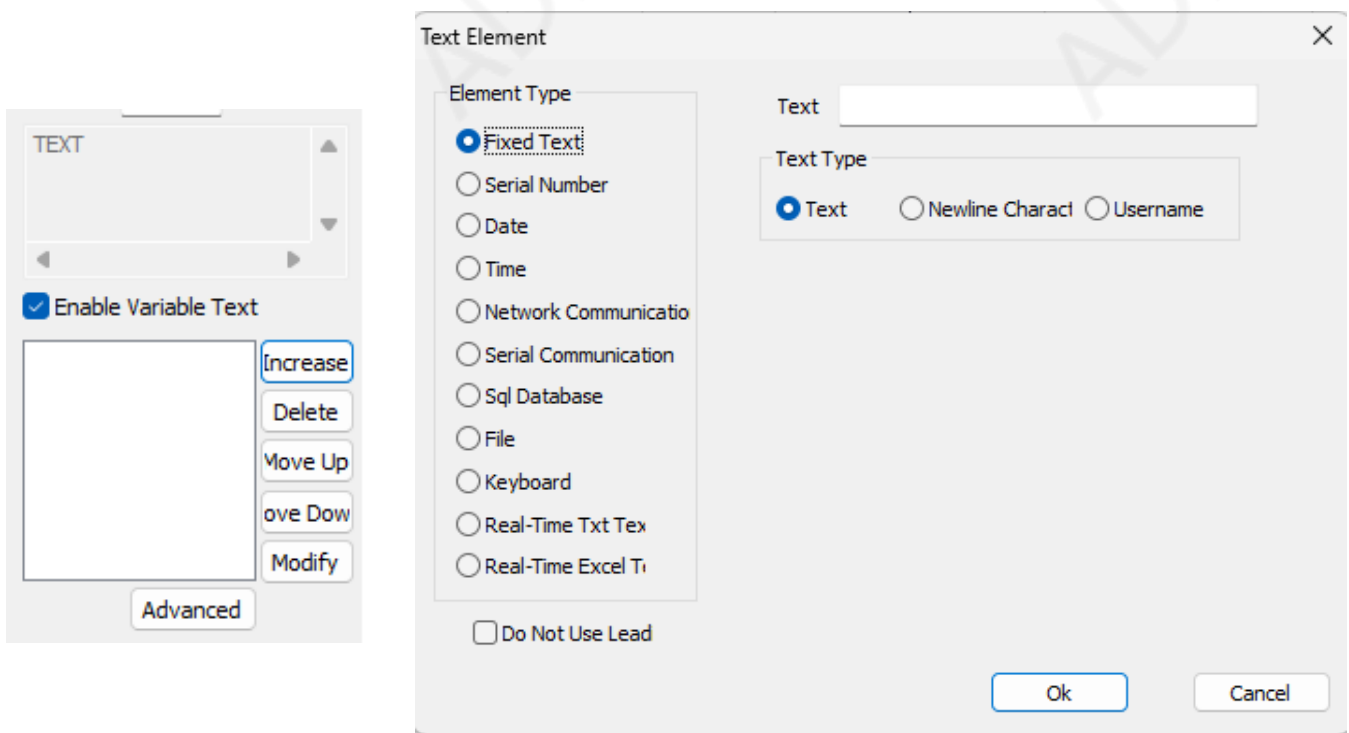
File: By calling a local file, the marking content can be automatically obtained in the file format of TXT/EXCEL.

Keyboard: Automatically obtain engraved content through external input devices on the computer, such as keyboards, barcode scanners, etc.

Real time TXT file: directly select some or all of the content in the TXT file for marking.

Real time Excel file: directly select some or all of the content in the Excel file for marking.

According to the corresponding element type rules, set the corresponding content and rules. After setting, click "OK".



The above are commonly used functions of the software. For more functions, please refer to the software manual.

APP Introduction (Mobile)

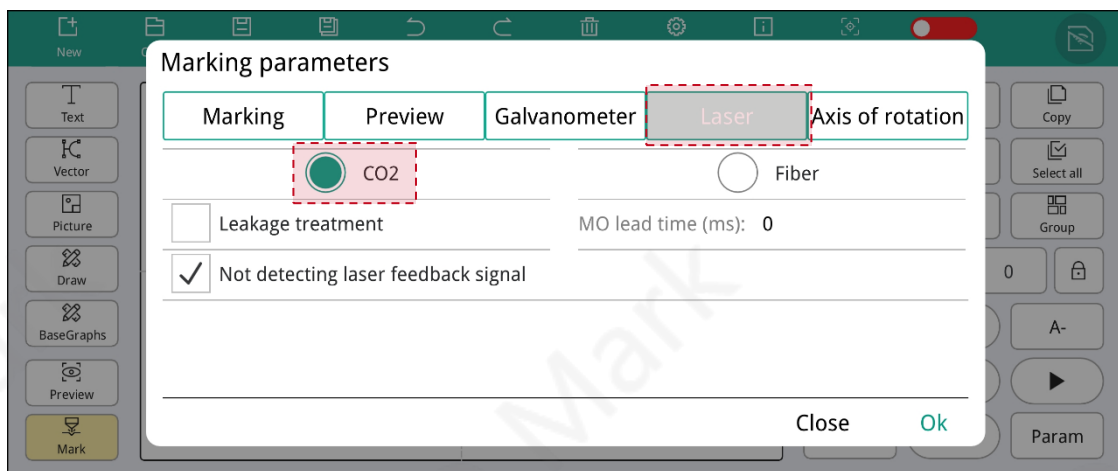
9-1 APP Connection

Open the mobile app and you can see the software connection status icon in the menu bar of the software interface.

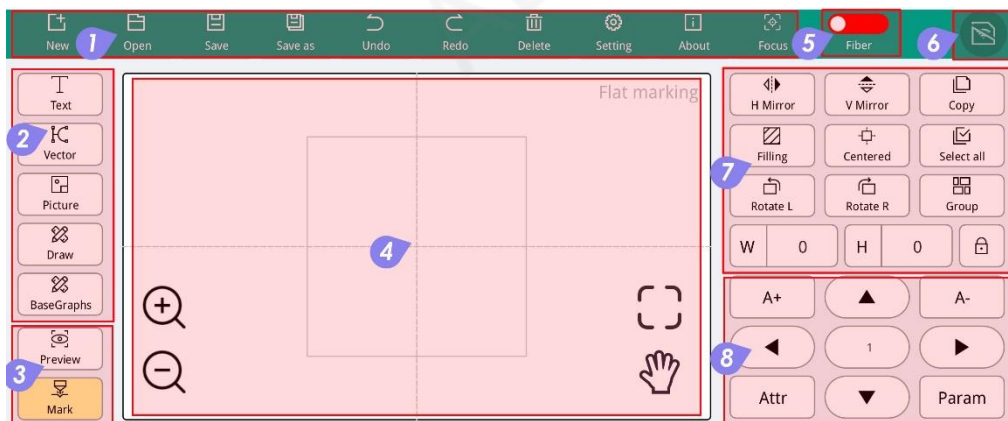


Open WiFi settings, find the ID name WiFi (IDY - *****) with the same name as the machine tag, click connect, and enter the password: 12345678.

Click on "Param" in the bottom right corner of the software, select "Laser", choose the laser type "CO2", and click OK. Display the laser mode switch button.



9-2 App Interface



- 1 Menu bar
- 2 Drawing toolbar
- 3 Marking Control Bar
- 4 Content Display Area
- 5 Laser Mode Switching
- 6 Connection status icon
- 7 Auxiliary toolbar
- 8 Object Attribute Bar

⊕ Amplify workspace

⊖ Shrink workspace

⌂ Display work area;

✎ Drag the workspace;

W Width, unit: mm;

H Height, unit: mm;

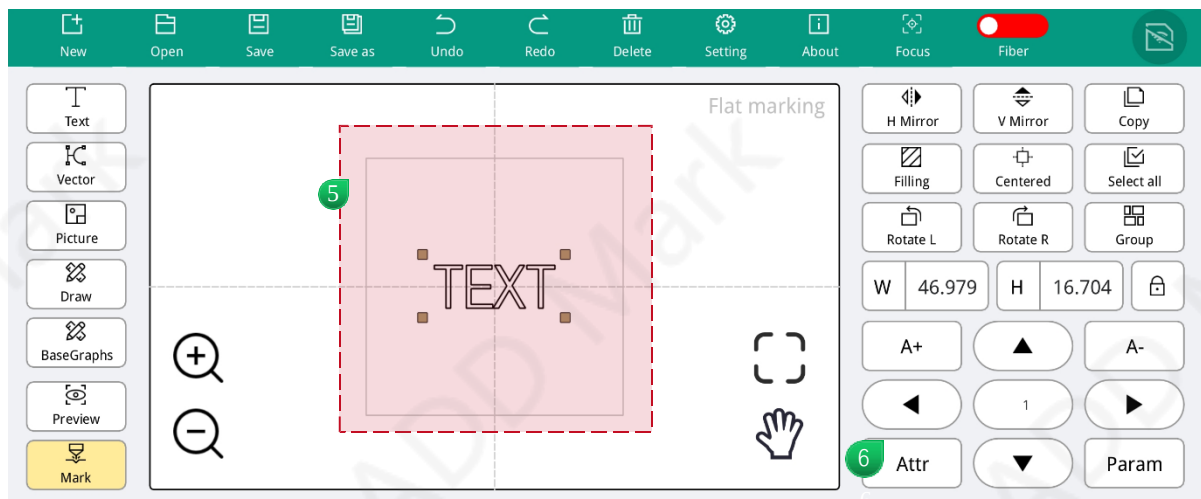
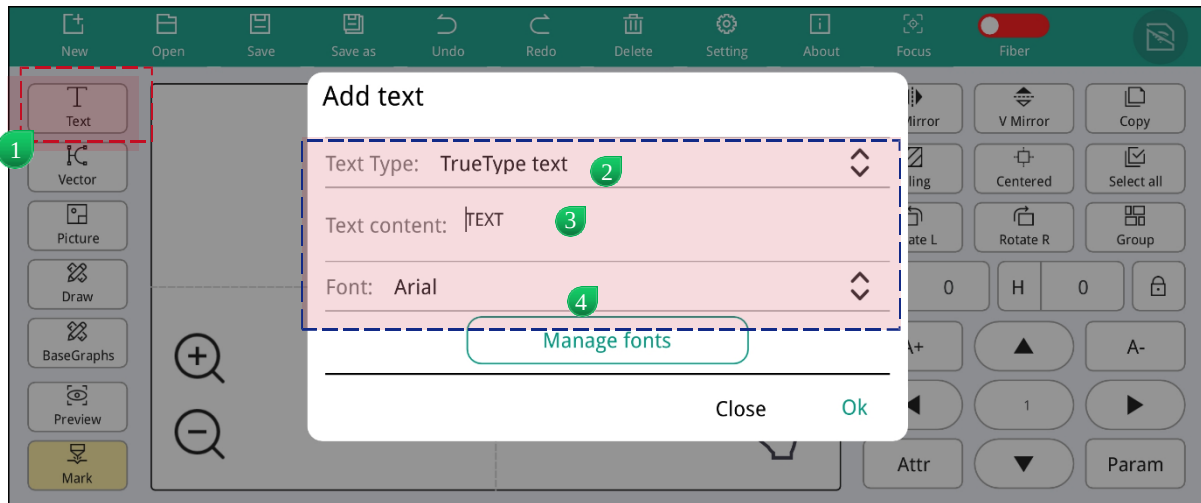
🔒 Lock the aspect ratio;

A- The content size has increased;

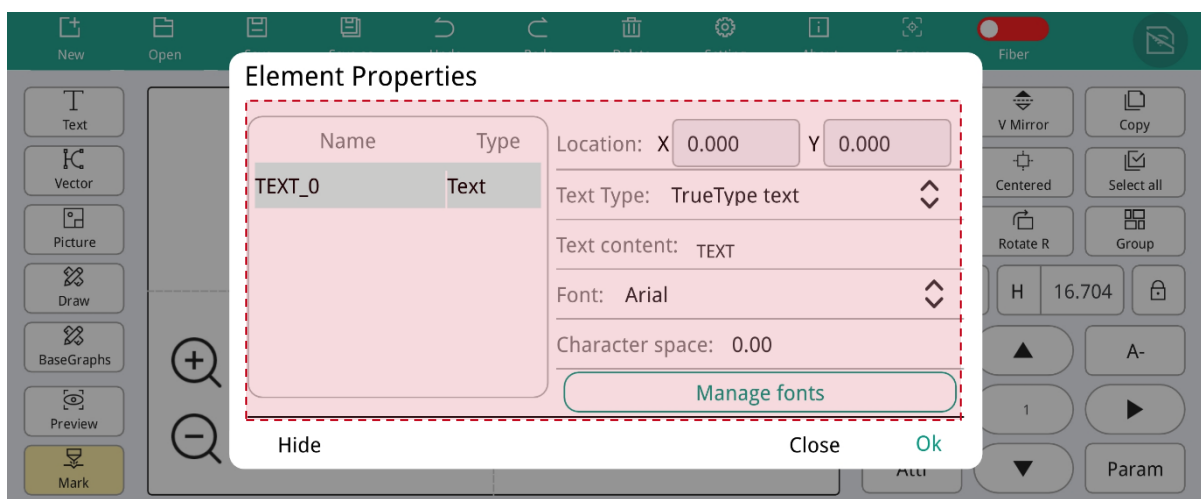
A+ The content size becomes smaller;

⬅️ ⬆️ ⬇️ ➡️ Adjust the position up, down, left, and right, with the distance in the middle, measured in millimeters;

9-3 Draw Text

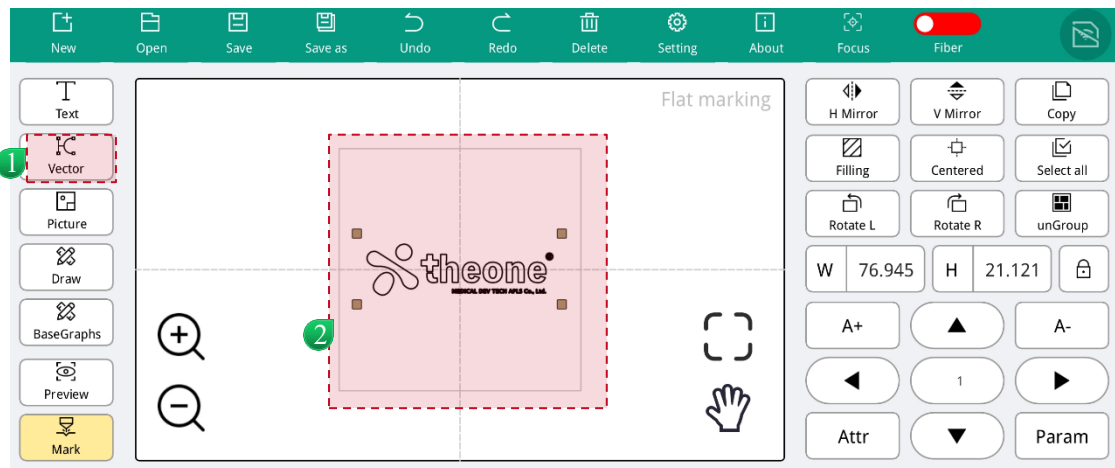


1. Click "Text" in the drawing toolbar;
2. Select the TextType to be entered, including: regular text, single line text, barcode text;
3. Edit the text content;
4. Font: Options for selecting plain text or single line text. Select the font for the text;
Barcode type: The option for selecting barcode text as the text type. Select the type of barcode text;
5. Mark the work area and do not draw content beyond the designated area;
6. Content attribute settings, which can set the position, text type, text content, font, and spacing of the text;



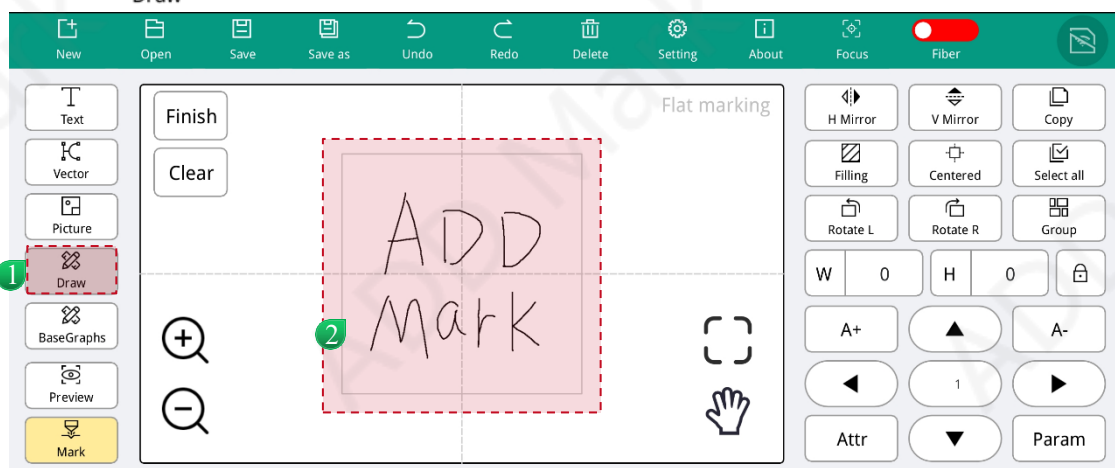
9-4 Draw Vector File

1. Click the icon  and open the vector image file that needs to be marked on your phone. The format supports formats such as "PLT", "DXF", "AI", etc.



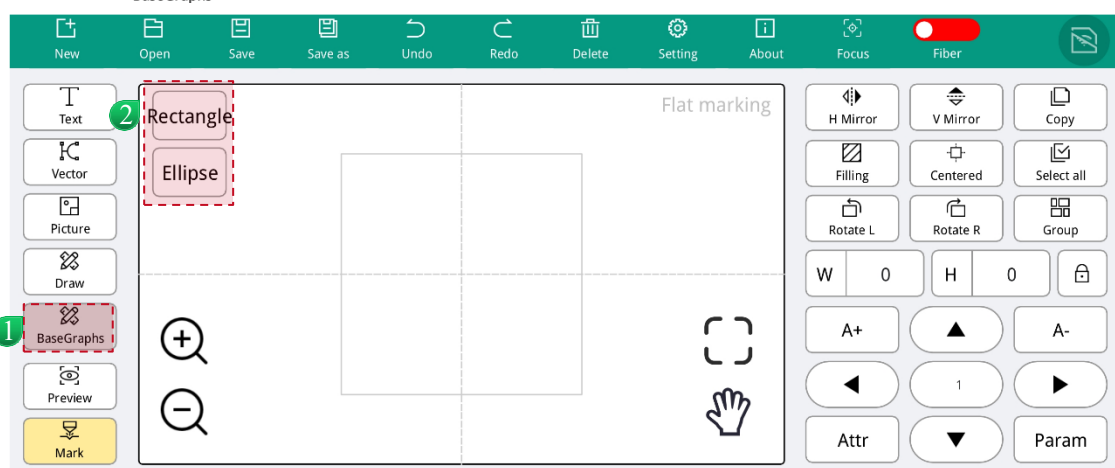
9-5 Hand Drawn

1. Click the icon  and use your finger or stylus to handwrite content in the content area



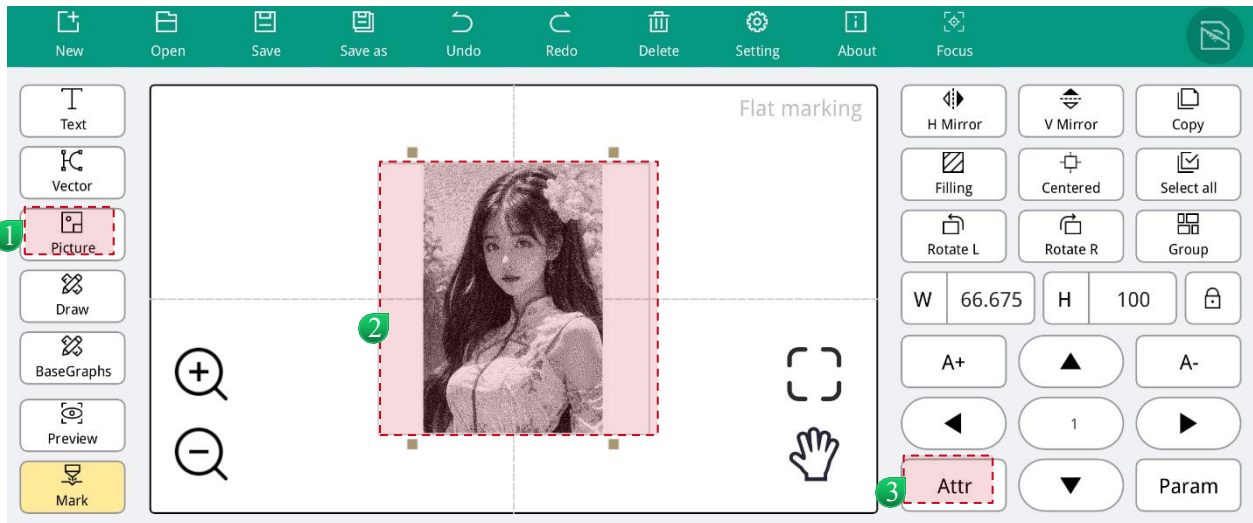
9-6 Draw Basic Graphics

1. Click the icon  , Click on "Rectangle" or "Ellipse" to draw the desired shape as needed.



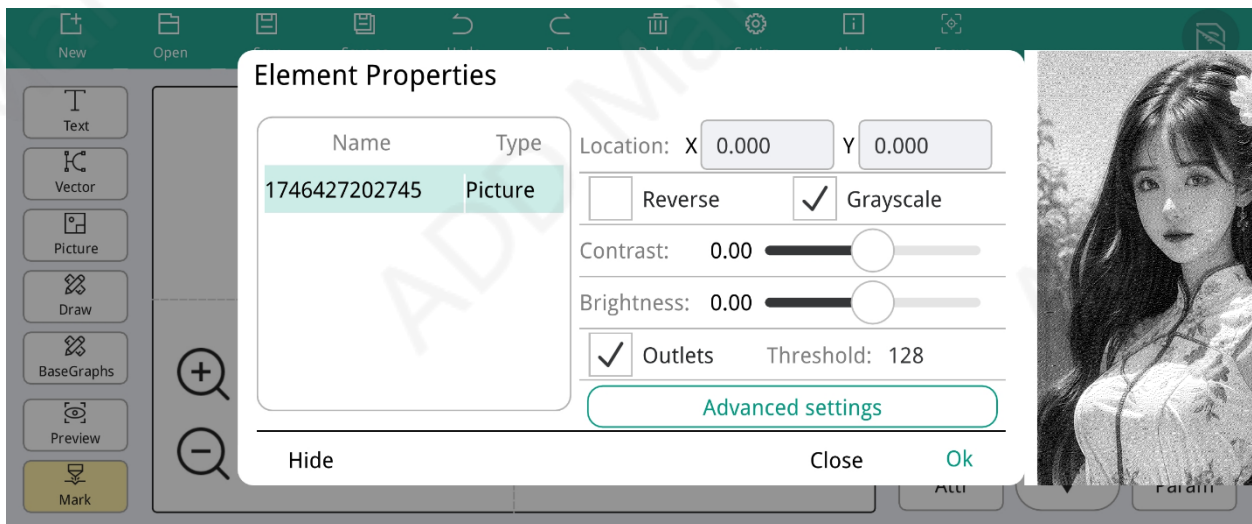
9-7 Draw Pictures

1. Click the icon  and open the image that needs to be marked on your phone. The format supports "jpg", "gif", "png" and other formats.



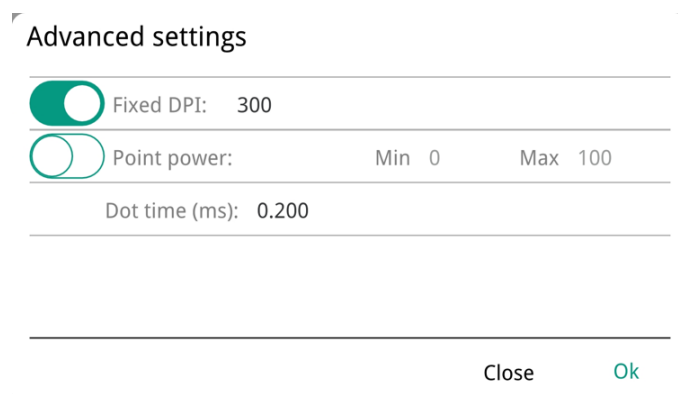
2. Load the opened image in the object content area and convert it to grayscale and dot format by default.

3. Click "Attr" and select "Grayscale" and "Dots" in the "Element Properties" window. Adjust the "Contrast" and "Brightness" of the image based on its clarity and brightness until the main body of the image is clear.



4. Click on "Advanced Settings" and in the pop-up box, adjust the "Fixed DPI" and "Dot Time" according to the actual pixel size of the image until the best grayscale effect is achieved.

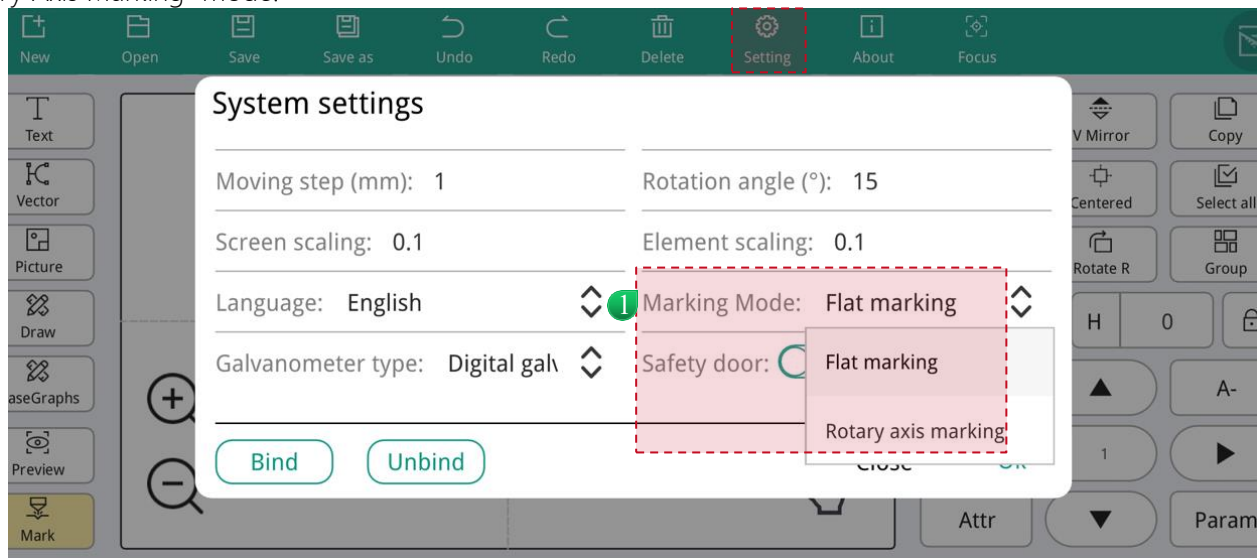
Recommended value - fixed DPI-500, dot time -0.4.



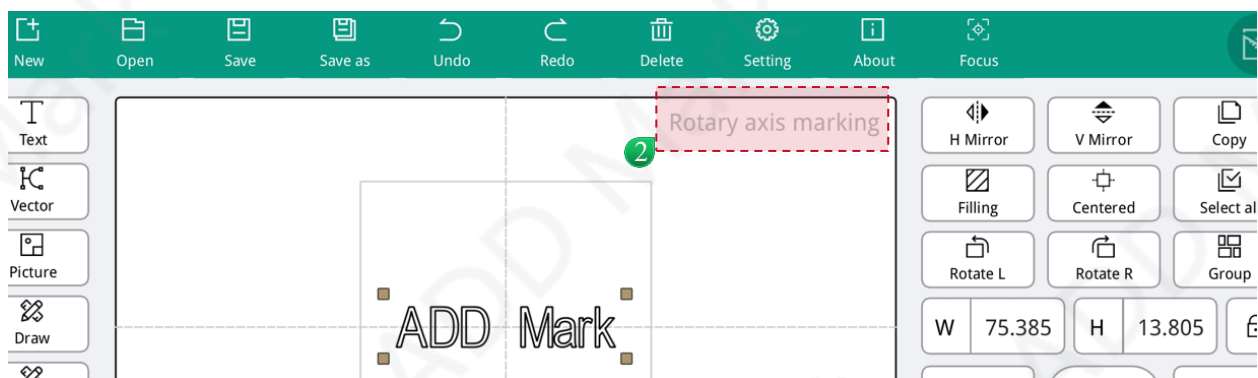
* The higher the DPI value, the clearer the carving effect;
The longer the dotting time, the deeper the carving effect.

9-8 Rotation Axis Marking

1. Click the icon  and in the "System Settings" window, change the marking mode from "Flat Marking" to "Rotary Axis Marking" mode.



2. Change the content area marking mode from "flat marking" to "rotating axis marking", and input the marking content.



3. Click on "Param" - select "Axis of rotation" to set the rotation axis parameters.

Axis direction - Set that rotation direction of the rotating shaft accord to the direction of the rotating shaft.

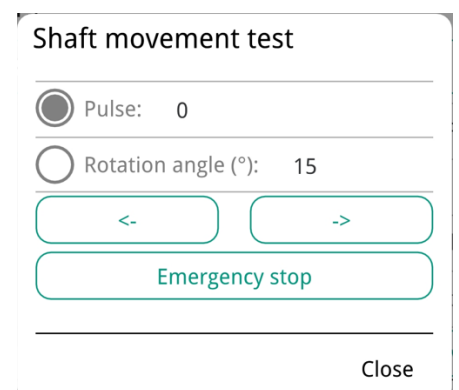
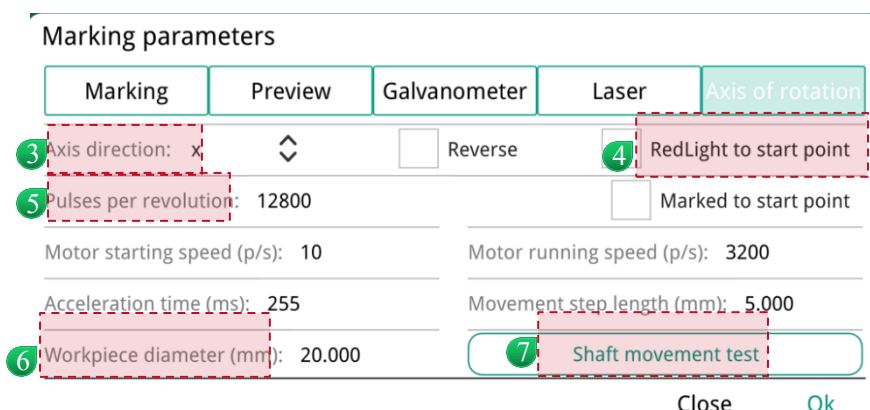
Redlight to start point - After the red light preview, the rotation axis returns to the starting point.

Pulses per revolution - According to the specification setting of rotating fixture, the default value is 12800.

Workpiece diameter - set according to the marked product diameter.

4. Click on 'Shaft movement test'

Set the "pulse" to 12800, click the left or right arrow to see if the roller drives the object (such as the cup) to rotate once. If it doesn't rotate once, increase the value of "pulse", if it exceeds once, decrease it until it just rotates once. The "pulse" value of one revolution is "number of pulses per revolution". Just fill in the tested pulse value as "number of pulses per revolution"..



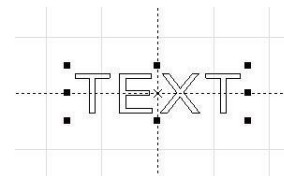
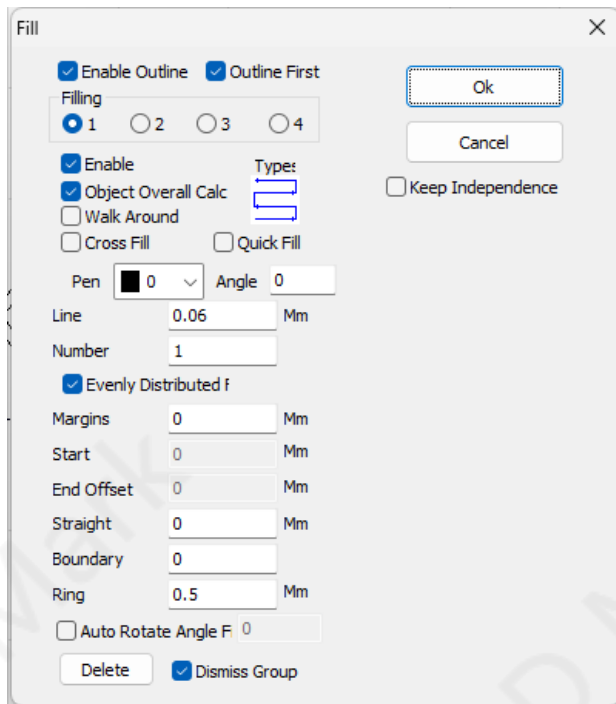
Filling

After editing the content, it is necessary to fill it in to change it from hollow to solid. For example, hollow text, hollow barcodes, hollow vector file, shapes.

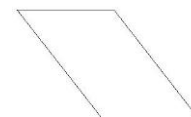
When marking unfilled content, only the border lines of the content will be marked.

10-1 Computer

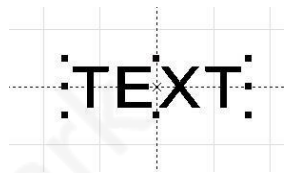
Select the content, click the "Fill" icon  in the toolbar or property bar.



Before Filling



Unfilled state, enlarged display



After Filling



After filling, the status is enlarged and displayed

Enable Outline: Indicates whether to display and mark the contour of the original graphic.

Outline First:: Mark the outline first and then mark the hatch .

* Filling 1, 2, 3, 4: Can use up to four sets of unrelated padding parameters for padding operation at the same time, and usually you only need to use padding 1.

* Enable: Allow the current fill parameter to be valid.

Object Overall Calc: All the contents that are not included with each other will be calculated as a whole.

Walk around: After filling, add an outline figure around the periphery of the filling line.

Cross filling: perform another 90 ° filling on top of the original filling.

Keep independent: multiple objects are still filled together, resulting in multiple objects.

* Fill Type: Recommended Selection. 

* Pen: Select the pen number used for filling display, corresponding to the laser parameter pen number set in the laser parameter column.

Angle: Angle between the filling line and the X-axis.

* Line: refers to the distance between adjacent lines of the filling line. The default is 0.06.

Margin: Distance between filling and contour.

Number: The number of the filling is marked.

Delete: Remove the object's fill line and restore the original content.

Dismiss group: Deleting a population will dissolve the group status.

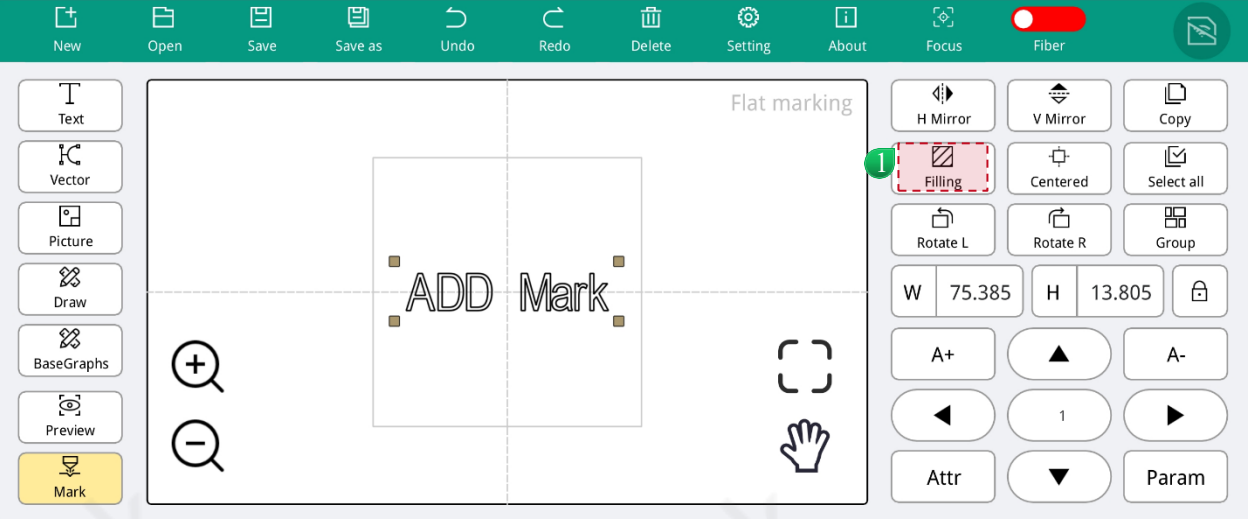
* Usually, options such as fill, enable, fill type, pen number, and line spacing need to be set, while other options can be set according to the marking effect requirements.

* Line ", the smaller the value of line spacing, the denser the filling, the more laser work, the longer the time, and the slower the marking speed; On the contrary, the sparser the filling, the fewer laser works, the

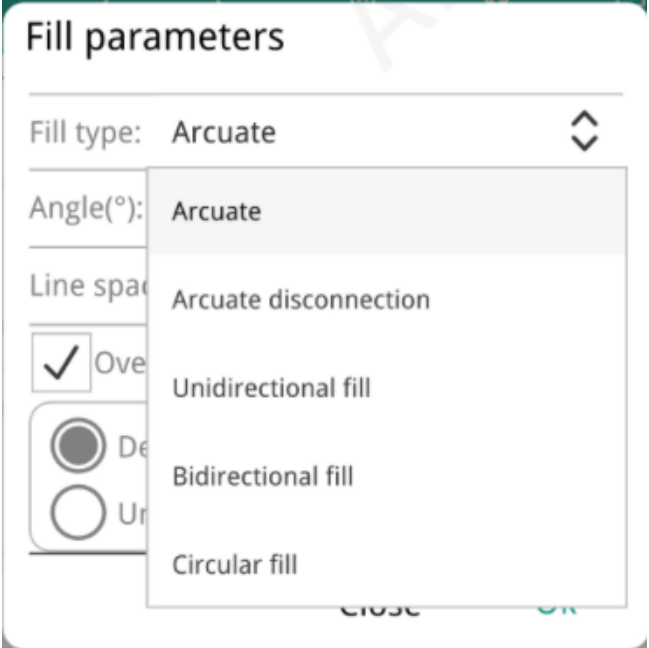
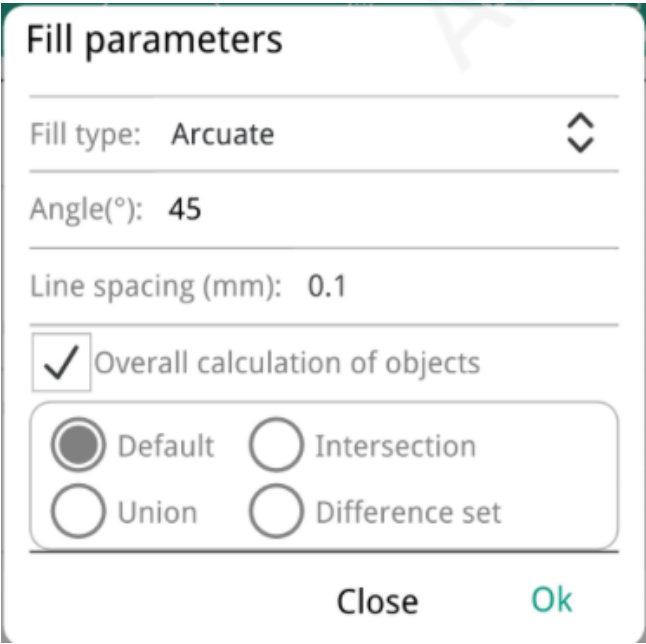
shorter the time, and the faster the marking speed. For example, for metal marking depth, a dense filling of 0.001 is used.

10-2 APP

Select the content, click the "Fill" icon  in the auxiliary toolbar



- Set in pop-up box
- Fill type - bow shaped;
 - Angle - default 45 °, can be changed as needed;
 - Line spacing - default to 0.05, can be changed as needed;
 - Overall calculation of objects - default selection;



Focus

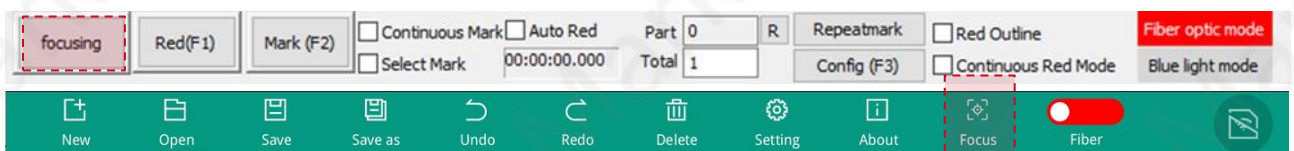
After setting the marking content, it is necessary to adjust the focal length of the machine to ensure that the surface of the marked product is at the laser focal length position.

1. Place the product to be marked under the laser head, and let the machine indicate the blue light point displayed on the surface of the marked product position.

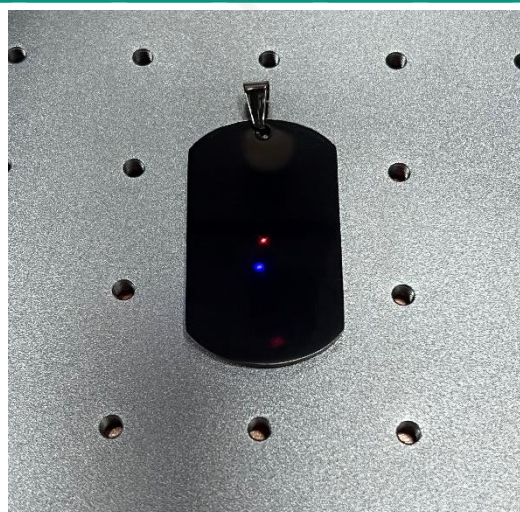


2. Click the "Focus" button on the software to display the auxiliary focus red light spot on the product marking surface.

Computer



App



3. Press the "up" and "down" buttons on the machine column to adjust the height of the laser so that the blue and red light points coincide or are parallel, which is the marking focal length.



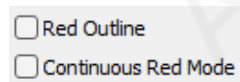
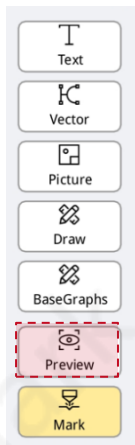
Preview

After setting the marking content and machine focal length, it is necessary to adjust the laser marking position on the product.

After setting the marking Content, Size, and Filling, click on "Focusing" or "preview" to preview the outline of the marking content, and adjust the product position or software content position based on the outline.



App Set the "Parameters" - "Preview" on the app



①



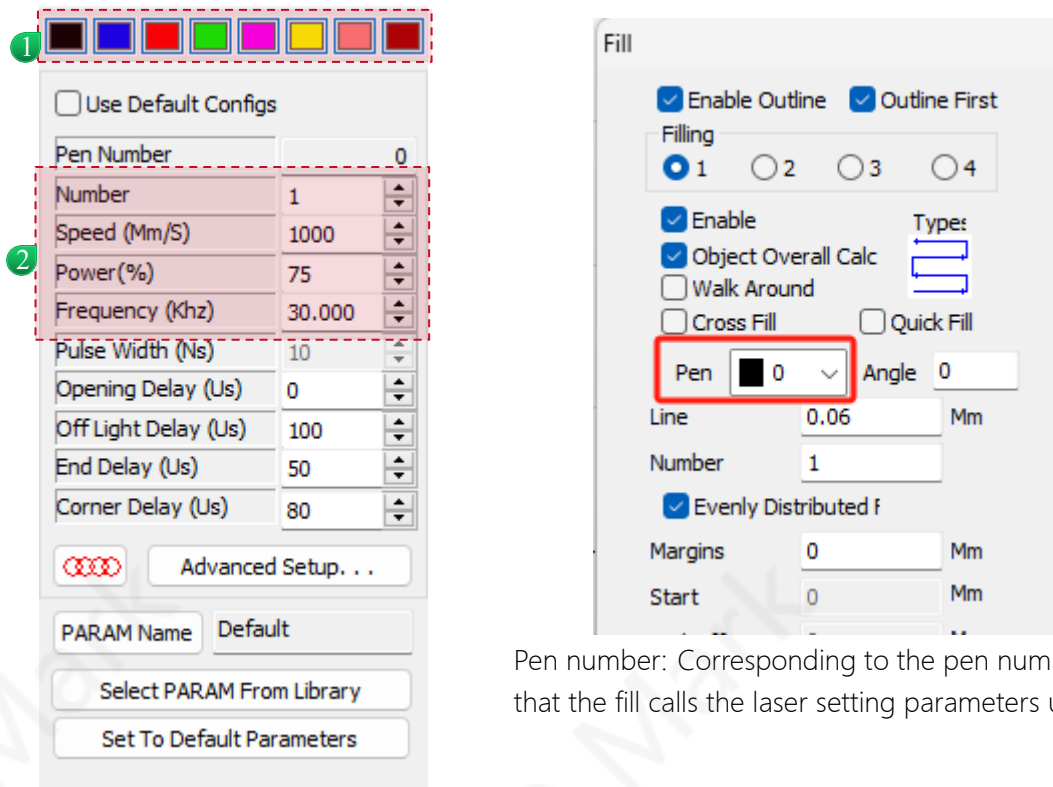
②

- ① Continuous border mode/External rectangle: Display the overall outline of the marking frame.
- ② Boundary display outline/contour line: Display the detailed outline of the marking content.

Marking Parameters

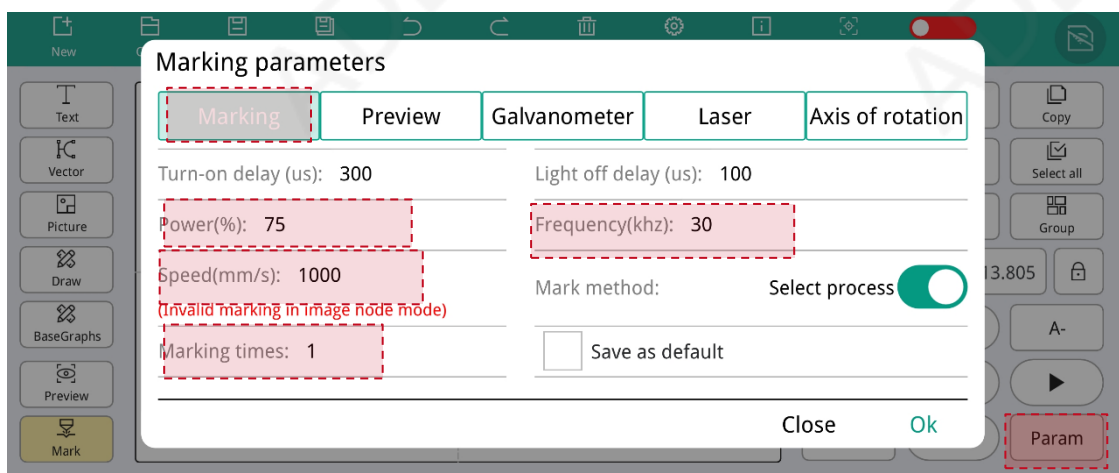
After setting the marking content and position, it is necessary to adjust the laser marking parameters.

1.Set the laser working parameters required for marking effect in the "laser parameter column" on the right side of the software.



Pen number: Corresponding to the pen number in "Fill", it means that the fill calls the laser setting parameters under this pen number.

2.Click on "Param" - "Marking" in the app



Marking parameters:

Number/Marking times: The number of times to click "Mark" for laser marking. default 1 and only 1 job;

Speed: The speed at which the laser works. usually set to1000- 1500;

Power: The power percentage of the current processing parameters, ranging from 10% to 100%;

Frequency: Laser frequency when laser works. default 30;

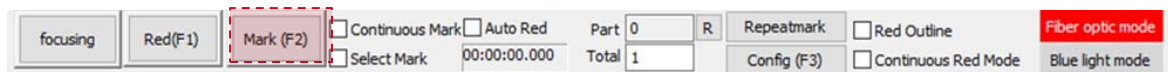
The greater the speed value, the faster the laser scanning speed, the smaller the laser force at the same time and the shallower the marking effect.

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.

Marking

1. Input content (Text, Picture, BaseGraphs, Vector, Barcodes, etc.);
2. Adjust content property (font, size, position, etc.)
3. Filling content (set fill type, line spacing, pen number [default is black pen number 0]);
4. The position of the redlight preview on the product;
5. Select laser mode "fiber mode" or "blue light mode" as needed
5. Set laser parameters (power, speed, marking times);
6. Click on "Mark", and the laser will start working;

Computer

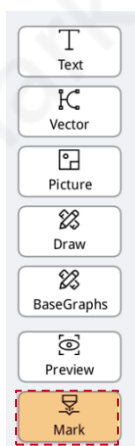


Continuous Mark: When selecting, the machine will repeat the marking process until manually stopped.

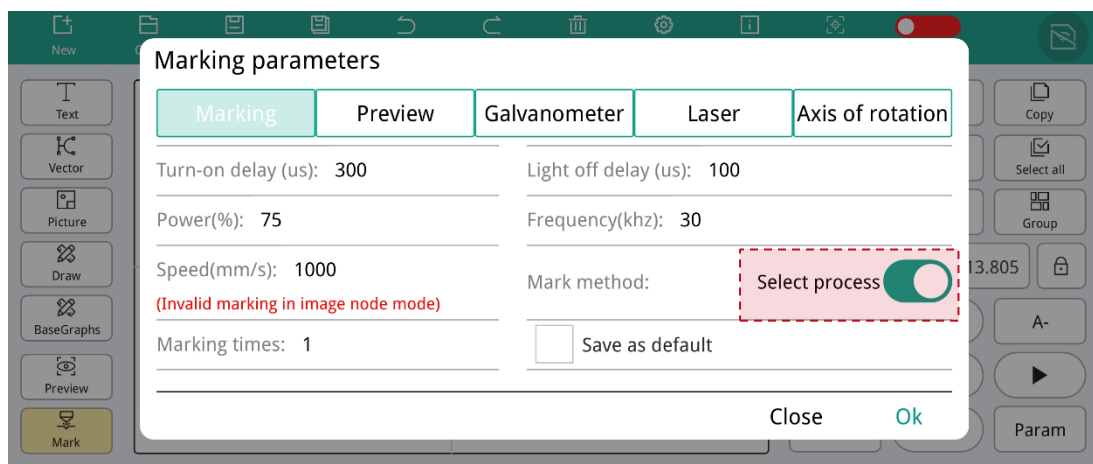
Select Mark: When selected, only the selected content object will be marked when there are multiple contents in the content display area.

If not selected, mark all content objects in the content area.

App



When there are multiple contents in the content area, you can click on "Param" - "Marking" to open "Select Process", only marking the selected content objects, and not marking the unselected content.



Parameter Examples

Blue light mode - graphic, text, and vector file engraving parameters			
Material	Line spacing	Power	Speed
wood	0.03/ 0.01	100	500/700
bamboo	0.005 / 0.001	100	500/700
plastics	0.03	100	1000 / 1500
leather	0.03	100	1000 / 1500
Stone material	0.01	100	500
Glass ceramic (requires color paper)	0.03	100	500
Paint material	0.03/0.01	100	200/400
Fiber mode - graphic, text, vector icon engraving parameter			
Material	Line spacing	Power	Speed
Metal	0.01 / 0.005 / 0.001	100	300 / 500
Painted metal	0.005 / 0.001	100	500
Plastics	0.03	100	1000 / 1500
Leather	0.05 / 0.01	100	1000 / 1500
Stone material	0.01	100	500
Painted glass	0.03	100	500
Paint material	0.03	100	1000 / 1500
Black and white image (ordinary bitmap)			
Material	Pictures	Power	Speed
Metal	Grayscale (check) Fixed DPI (x300 y300) Dot (check) Bidirectional scanning (check) Dot Time (0.4~0.5ms) Adjust Point Power (Check)	100	200
Painted metal		100	300
Plastics		100	500
Leather		100	500
Stone		100	200
Paint material		100	500
Color images (landscapes, people images)			
Material	Pictures	Power	Speed
Painted metal	Grayscale (check) Fixed DPI (x300 y300) Dot (check) Bidirectional scanning (check) Dot Time (0.4~0.5ms) Adjust Point Power (Check)	100	500
Electroplated metal			
Oxidized metal			
Abs plastic			

FAQ

1. The machine has no response

- Not powered on: Check the sockets, switches, power sockets, etc. to ensure they are connected to the power source and correctly plug in the power cord;
- Check the Power button on the machine to ensure that it is pressed and the button body light is on;

2. Unable to connect to computer software

- USB cable not connected: Check if the computer end and machine interface of the USB data cable are securely connected;
- The USB interface on the front panel of some desktop computers is invalid and needs to be connected to the socket at the back of the device;
- Driver not installed properly: Follow the user manual to complete the driver installation. After installation, if the computer recognizes the device as a serial port, it indicates that the hardware connection is normal;
- Other special circumstances: Disconnect the USB data cable and power supply, completely power off the device for 5 seconds, and then reconnect the device;

3. Unable to connect to mobile app

- Check if the mobile WIFI is connected to the WiFi of the machine name and ID;
- Is there any other phone already connected to the machine? If so, please unbind the connection or disconnect the WiFi in the settings first;
- Manually click on 'bind' in the settings to connect to the machine;

4. The carving effect is shallow or has no trace

- Focal length error: Refer to the user manual for accurate focusing in the focusing section;
- Mark speed: The speed value is set too high, resulting in a short laser working time. Re-adjust the speed value
- Too light image: The imported image should be clear, with thin lines and light colors that directly affect the carving effect;
- Object placement: The marking object is placed at an angle, and the focal length of the laser is fixed, so the carved object should be placed flat and parallel to the body. Otherwise, the focal length will be inaccurate, resulting in abnormal carving effects;
- Has the protective cover of the lens been removed;