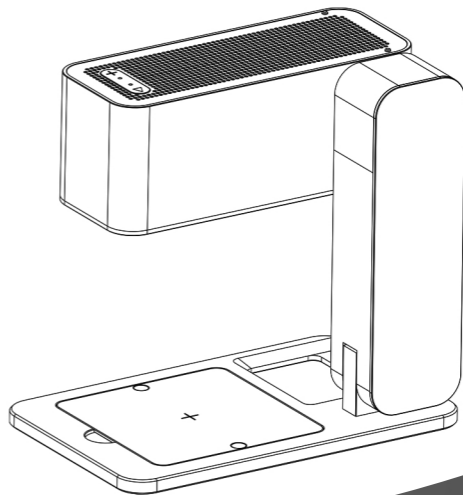


Z3 Instruction



Z3 Marking Machine Instruction
Please read this instruction carefully before use

Safety Instructions

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

Hereby Certify!

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

Safety Instruction

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

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

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

*The environment where the equipment is located should be dry, free of pollution, vibration, strong electricity, strong magnetism, etc. Working environment temperature 0~30°C, working environment humidity 30-65% (non-condensing water)

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

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

★When the equipment is turned on, it needs to be on duty throughout the whole process. The operator must cut off all power before leaving to prevent abnormal conditions. If any, please cut off the power immediately!

*It is strictly forbidden to place any irrelevant total reflection or diffuse reflection objects in the equipment to prevent the laser from being reflected on the human body or flammable objects.

Safety Instructions

- *The equipment should be far away from electrical equipment sensitive to electromagnetic interference, which may cause electromagnetic interference.
- *There are high voltages or other potential dangers inside the laser equipment. Non-professionals are strictly forbidden to disassemble it.

Pay attention to



1. After the laser is turned on, it is forbidden to aim at people, animals and flammable materials to avoid skin burns and fire
2. The brightness of the laser is harmful to the eyes, please try not to look directly at the laser
3. Keep your hands away from the machine when the machine is working to avoid injury
4. Turn off the machine switch when the machine is not in use to avoid third-party operations

Z3 Marking Machine Instruction

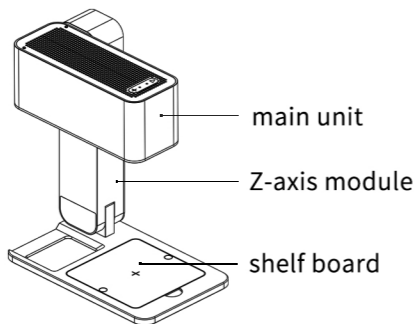


Contents

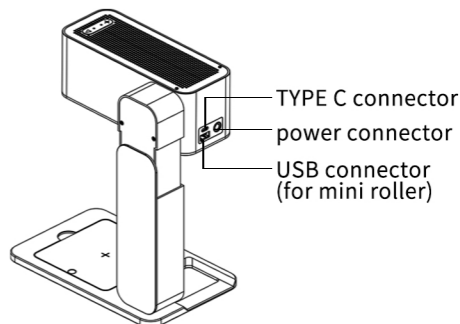
01	Product Structure Accessories	01
02	Product Parameter	03
03	Introduction of the Features	04
04	Installation of Driver and Software on PC	06
05	Driver Installation on PC and Online Operation	07
06	Introduction to Software Application on PC	10
07	Software Download and Online on Mobile Devices	15
08	Introduction to Software Application on Mobile Devices	16
09	FAQ	21

01 Product Structure Accessories

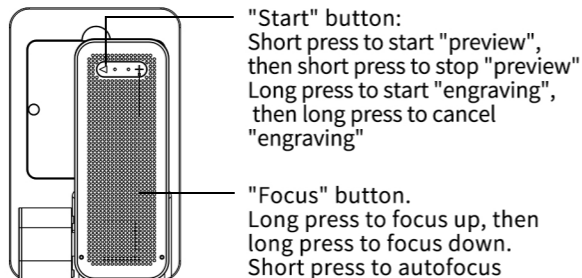
Front View



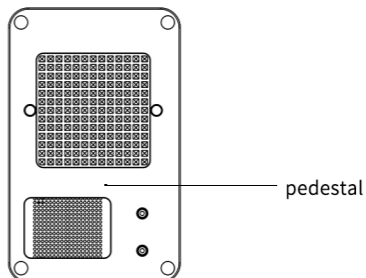
Back View



Upper View



Bottom View



01 Product Structure Accessories

【Standard parts】



power *1



USB flash disk *1



type C data line *1



protective glasses *1



marker *1

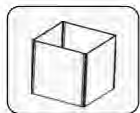


brush *1



kraftpaper *4

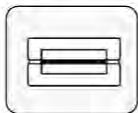
【Optional parts】



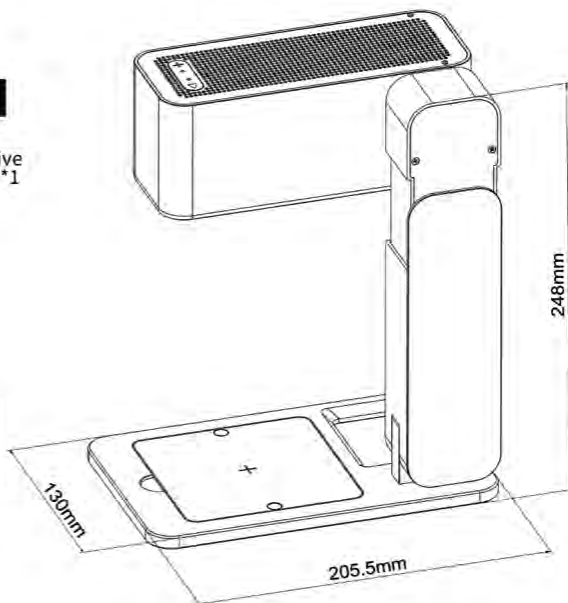
magnetic acrylic
folding protection board



mobile power



mini roller

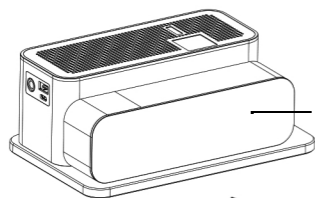



02 Product Parameter

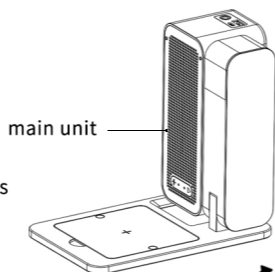
model	Z3
laser focusing	One-button autofocus
Material appearance	High strength aluminum, anodized, space gray
Communication	Dual-mode Bluetooth 5.0 wireless connection, supporting IOS and Android mobile apps; USB-TypeC connector wired connection, supporting MAC and Windows desktop apps.
Power input	12v/5A DC power supply or mobile power
Power consumption	Standby current <1.5A, working current <5A
Heat dissipation method	Air-cooled
Laser life	>10000h
Engraving area	8cm * 8cm
Engraving accuracy	0.05mm
Engraving speed	Maximum speed up to 600mm/s. Note: Speed is related to material and depth.
Engravable materials	Wooden material, bamboo material, acrylic, leather, paper, fabric, woolen, corrugated paper, food, fruit, plastic, bone, glass, shale/brick/cement, ceramic
Cutttable materials	Wood, bamboo, acrylic, leather, paper, fabric, wool, corrugated paper
Support System	Win7/Win8/Win10/IOS/MAC/Android
Image Format	JPEG/BMP/GIF/PNG/JPG/XJ/PLT/DXF/HPGL
Main unit size	Length, width and height: 22cm * 13cm * 22cm
Package Size	Length, width and height: 35CM * 25CM * 14CM


03 Introduction of the Features

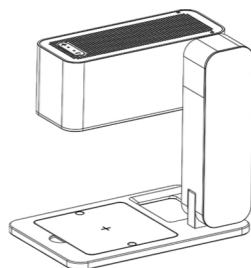
1. Expand the machine;



① Open the Z-axis 

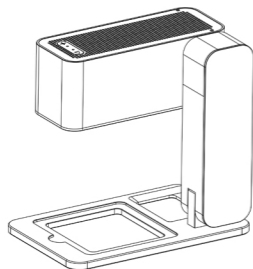


② Open the main unit 

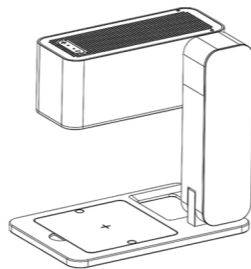


③ Finish

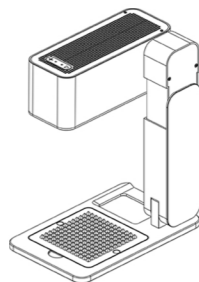
2. movable board installed according to demand;



State ①: Remove the plate, the bottom is hollow, suitable for carving on the surface of large objects



State ②: Place the board with the flat surface facing upward, suitable for carving small objects



State ③: Place the board with the convex side facing upward, suitable for cutting small size objects.

03 Introduction of the Features

3.Button function and autofocus.

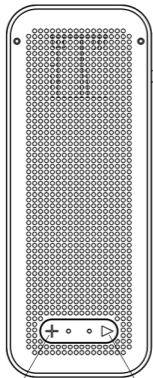
Button function:

["Focus" button]:

press and hold to go up, then press and hold to go down;
short press to autofocus; press and hold to power on, it will
enter firmware update mode.

["Start" button]:

Short press to start "preview", then short press to stop
"preview", Long press to start "engraving", then long
press to cancel "engraving"



"Focus" button

"Start" button

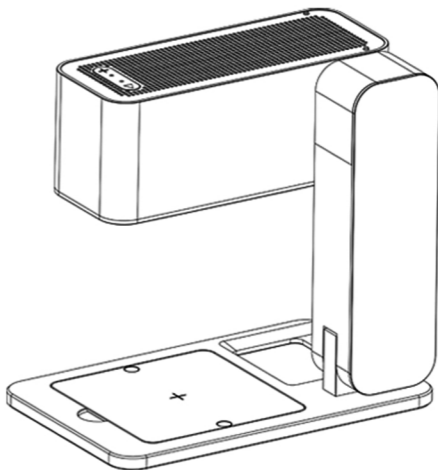
Autofocus:

[Auto Focus]:

Short press the "Focus" button to
focus automatically.

[Manual Focus]:

By long press the "Focus" button, the laser module
and the engraving distance is about 125mm, and when the blue
light point is the smallest, it is the best focus.



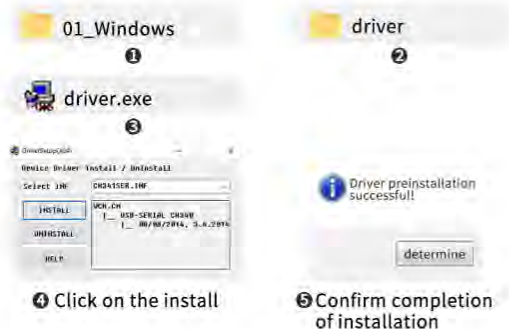
04 Installation of Driver and Software on PC

Driver and software acquisition method:

Method 1: Insert the accessory U disk into the computer, the U disk has been added with drivers, application software, pictures and other data (Note: When using it for the first time, please copy all the data on the U disk to your computer for backup to prevent loss due to improper operation)


Method 2: Visit the official website to download the Windows/ MAC version driver application Software:<http://www.dkjxz.com>

Windows driver software installation



1.Driver installation path:

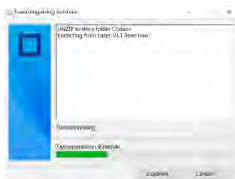
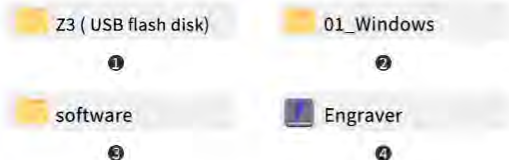
Double-click the U disk folder/01_Windows/driver/driver.exe/ click to install/Driver installation is successful, for detailed steps, please watch the U disk related installation demonstration video

 Installation video of driver and software on Windows

05 Driver Installation on PC and Online Operation

2.Path to Install Software:

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



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

Tips:

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

3.Online Operation:

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



1 Double click the software icon



2 Click the “connect device” icon

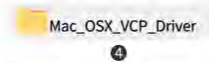
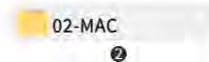
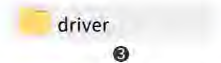


3 The icon turns blue to complete the online connection



05 Driver Installation on PC and Online Operation


Mac Driver Installation



1.Path to Install Driver:

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

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

 Video of MAC driver and software installation

05 Driver Installation on PC and Online Operation

Mac software installation and online Introduction

Z3(USB flash disk)

①

software

③



④ Double click the software icon



⑥ Complete installation

02-MAC

②



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

2. Path to Install Software:

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

3. Online operation:

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



① Double click the software icon



③ The icon turns blue to complete the online connection

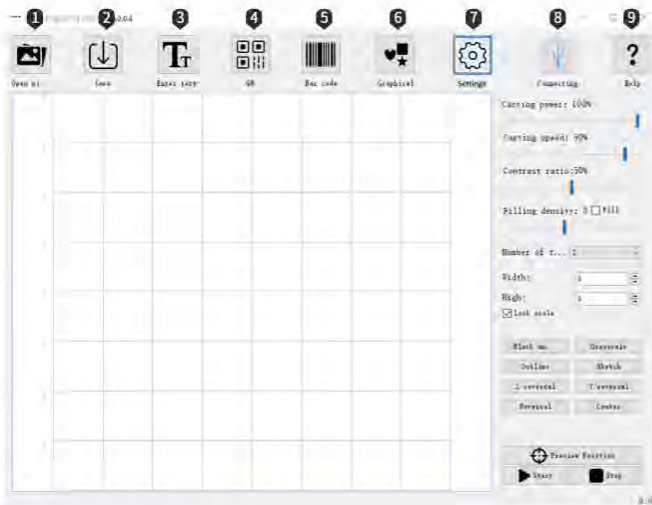


② Click “connect device” icon



06 Introduction to Software Application on PC

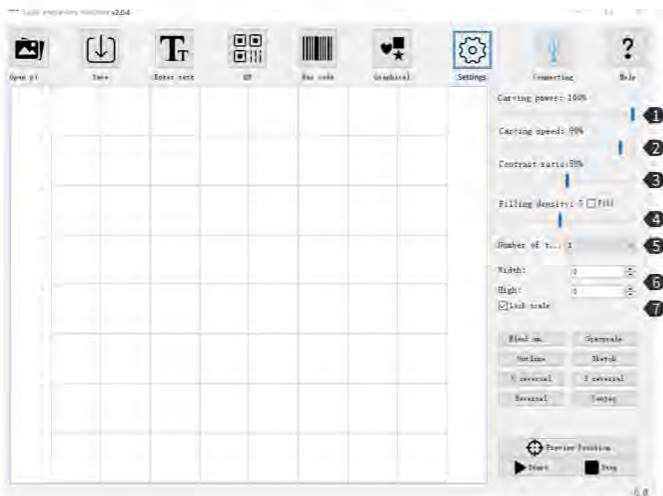
Introduction to Icon Functions in Software Interface:



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

06 Introduction to Software Application on PC

Setting of Software Parameters:



1 Engraving Power

Adjust the power level to engrave different materials

2 Engraving Speed

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

3 Contrast

Drag the slider to adjust the contrast of text and photo

ABCD ABCD ABCD
Contrast 16 Contrast 50 Contrast 80

4 Filling Density; Filling

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

5 Engraving Times

Set the number of engraving times

6 Width; Height

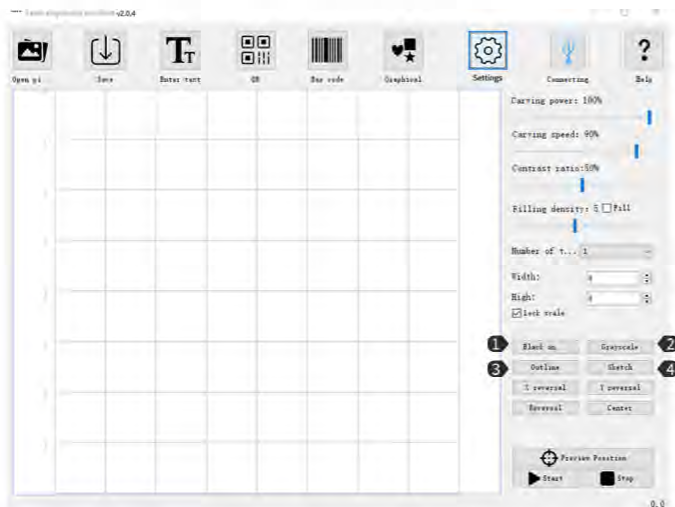
Adjust the width and height of text photo separately will

7 Proportional Zoom

Lock photo text to proportionally zoom in/out

06 Introduction to Software Application on PC

Setting of Software Parameters:



1 Black and White

To process photos to black and white

2 Grayscale

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

3 Contour

Cutting mode for wireframe cutting of engraving machine

4 Sketch

Sketch mode, enhance the 3D effect of photo outline



Black and White



Grayscale



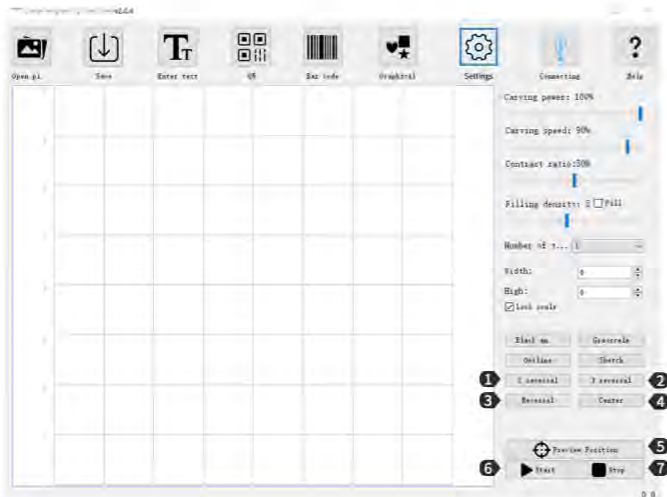
Contour



Sketch

06 Introduction to Software Application on PC

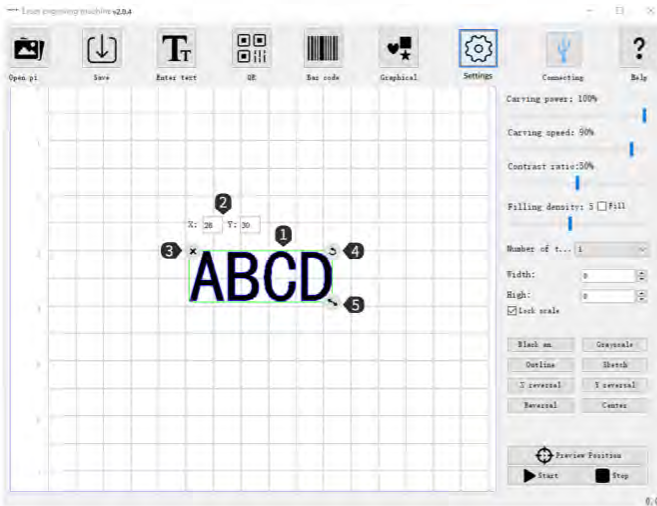
Setting of Software Parameters:



- 1 **X Mirror**
Horizontal Rotation Effect
- 2 **Y Mirror**
Vertical Rotation Effect
- 3 **Reverse Color**
Reverse background color of text and photo
- 4 **Center**
One click to center the text and photo in preview area
- 5 **Preview Location**
Preview to confirm engraving position
- 6 **Start**
Start engraving
- 7 **Stop**
Stop engraving

06 Introduction to Software Application on PC

Introduction to Interface Loading Content:



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

07 Software Download and Online on Mobile Devices

1. Software Download and Installation:

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

Method 2: Scan the QR code to download.



Google Play



Android



iOS

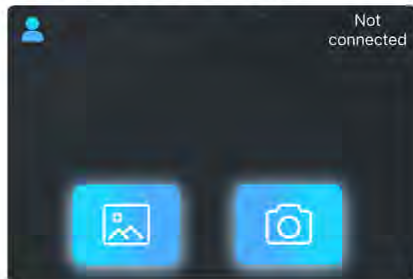
URL to Obtain Information:

User Manual Download URL:
www.dkjxz.com

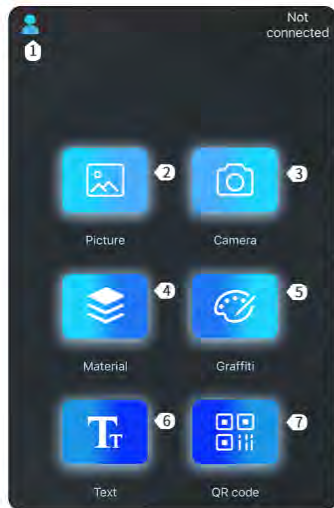
- Note:**
1. For Android system, open the browser to scan the QR code to download;
 2. Corresponding authority should be permitted after successful installation;

2. Connect APP with Machine

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



Introduction to Software Interface (Load Content):



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

Roller Settings



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

Introduction to Software Interface (Load Content):



① Cutting

- Customized Cutting
- Round Cutting
- Square Cutting

② Photo or Text

(Content can be overlapped)



Input Text



Load Photos
from Album



Shoot via
Camera



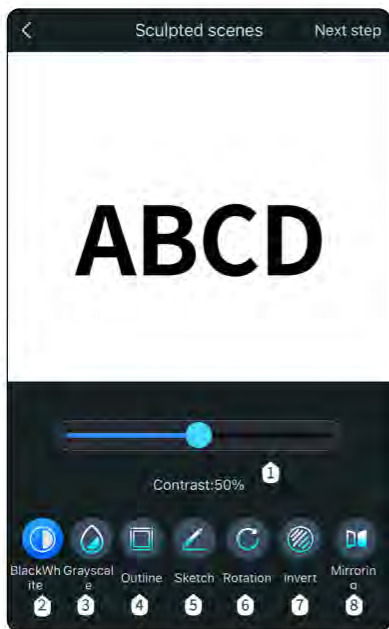
Add Photo from
Material Library

③ Eraser

Modify the photo with erase

08 Introduction to Software Application on Mobile Devices

Introduction to software interface (Loading content) :



- ① **Contrast**
Drag the slider to adjust the contrast of text and photo

ABCD ABCD ABCD
Contrast 16 Contrast 50 Contrast 80

- ② **Black and White**
To process photos to black and white

- ③ **Grayscale**
Grayscale mode, adopt the function for engraving photos to adjust photo grayscale

- ④ **Contour**
Cutting mode for wireframe cutting of engraving machine

- ⑤ **Sketch**
Sketch mode, enhance the 3D effect of photo outline



Black and White Grayscale Contour Sketch

- ⑥ **Whirling**
Can rotate 90 degrees, 180 degrees or 360 degrees

- ⑦ **Reverse Color**
Reverse background color of text and photo

- ⑧ **Mirroring**
Horizontal Rotation Effect, Vertical Rotation Effect

08 Introduction to Software Application on Mobile Devices

Introduction to Software Interface (Load Content):



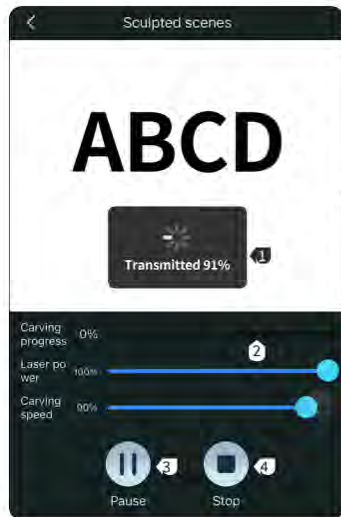
- 1 Width**
Set engraving width
- 2 Height**
Set engraving height
- 3 Lock Ratio**
Scale engraving size proportionally
- 4 Region Positioning**
Preview Engraving Position Determine Engraving Position



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

08 Introduction to Software Application on Mobile Devices

Introduction to Software Interface (Load Content):



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



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

09 FAQ

Z3 FAQ

One、 No response when the machine is powered on

1. No power: check sockets, switches, and body power sockets to ensure that they are plugged in and are normally powered on;

Two、 Can't connect to computer (PC)

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 back of the fuselage.
2. The driver is not installed normally: Complete the driver installation according to the operating instructions. After the installation is complete, the computer recognizes the device as a serial port, indicating that the hardware connection is OK.
3. Other special circumstances: Pull out the USB data cable and power supply, and reconnect the device after 5S after the device is completely powered off.

Three、 No response from the mobile phone APP connected to the machin

1. Wrong Bluetooth connection: make sure the Bluetooth released by the machine is connected. For details, read the App connection part of the manual.
2. Compatibility failure: After the newly-listed mobile phone or the upgraded system, if there is an abnormal connection due to compatibility issues, you can contact our customer service and send back the screenshot of the mobile phone configuration to get fast technical support.

Four、 Engraving effect is very shallow or no trace

1. Inaccurate focus: Read the focus part of the manual to focus accurately.
2. Engraving speed: too fast or too short burning time. Read the engraving parameter section of the manual to readjust the parameters.
3. The picture is too light: the imported picture should be clear, the lines are too thin, and the color is too light will directly affect the engraving effect.
4. Placement of engraved objects: the engraved object is placed obliquely, and the focal length of the laser is fixed, so the engraved object should be placed flat and parallel to the body. Otherwise, the focal length will be inaccurate, resulting in abnormal engraving effects.

Five、Abnormal stop during offline engraving

1. The picture download is incomplete when connected to the computer, just download it again.

Six、Inaccurate focus

1. Read the manual for auto focus and manual focus. When focusing, please use the yellow focus plate that comes with the body to operate. If the focus plate is lost, you can use a thin and rough yellow or white cardboard instead. You need to refocus. For relevant information, please contact online customer service.

FCC Warning:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.