DAJA®

DJ6 Pro User Manual

Please read this instruction manual carefully before using the product and keep it in a safe place.

Model: DJ6 Pro

FCC SDOC

FCC ID:2BHH8-DJ6PRO

FCC Statement
This equipment 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.

FCC Radiation Exposure Statement:
The equipment complies with FCC Radiation exposure limits set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Catalogs

Safety Precautions

In order to prevent damage to your personal and property safety, and so that you can use this product safely and correctly, please read the instruction manual carefully and follow the steps in the instruction manual.

Safety Precautions

★Before operating the equipment, the user must read the instruction manual carefully and strictly follow the operating procedures.

★Laser processing can be risky and the user should carefully consider whether the object to be processed is suitable for laser work.

★Processing objects and emissions should comply with local laws and regulations.

*This equipment uses a Class IV laser (strong laser radiation), which may cause the following conditions:

①Ignition of flammable materials in the vicinity;

②During laser processing, other radiation and toxic and hazardous gases may be generated depending on the object to be processed.;

③Direct exposure to laser radiation can cause human injury, the use of the place must be equipped with fire-fighting equipment, prohibited in the workbench and equipment around the stacking of flammable, explosive substances, while making sure to maintain good ventilation.

*The environment where the equipment is located should be dry, no pollution, no vibration, no strong electricity, strong magnetism and other interference and influence. Working environment temperature 10-35 ℃, working environment humidity 5-95% (no condensation)

★Equipment working voltage: DC24V.

*The engraving machine and any other equipment associated with it must be safely grounded before it can be turned on and operated.

★When the equipment is on, it needs to be guarded throughout the whole process, and all power must be cut off before the personnel leave to prevent abnormal conditions from occurring, and if it happens, please disconnect the power supply immediately to deal with it!

*It is strictly prohibited to place any irrelevant fully reflective or diffusely reflective objects in the device to prevent the laser from reflecting on the human body or flammable objects.

*The equipment should be kept away from electrical equipment that is sensitive to electromagnetic interference and may cause electromagnetic interference to it.

*There is high pressure or other potential danger inside the laser device, and disassembly by non-professionals is strictly prohibited.

*Caution use of controls or adjustment of performance of procedures other than those specified herein may result in hazardous radiation exposure

Security instructions

Do Not Look Directly

1. The brightness of the laser is harmful to the eyes, so please do not look directly at the laser.

No Reaching In

2. Hands should not be close to the machine when it is working to avoid injury.

Caution Laser

3. When the laser is turned on, it should not be directed at people, animals or flammable objects to avoid skin burns and fires.

CAUTION

TURN OFF MACHINE WHEN NOT IN USE

4. Turn the machine off when it is not in use to avoid misuse by third parties.

Maintenance and upkeep

Laser modules are consumables;

suggestion:
Turn off the machine for 5 minutes after 1 hour of cutting;
Turn off the machine for 5 minutes after 2 hours of engraving.。

1. Do not use the machine in humid/high temperature conditions.

2. Do not operate the machine by touching it with wet hands.

3, the machine's lens, please regularly wipe with a cotton swab dipped in alcohol, is conducive to the protection of the lens.
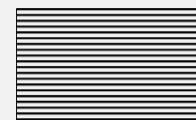
Accessory Details
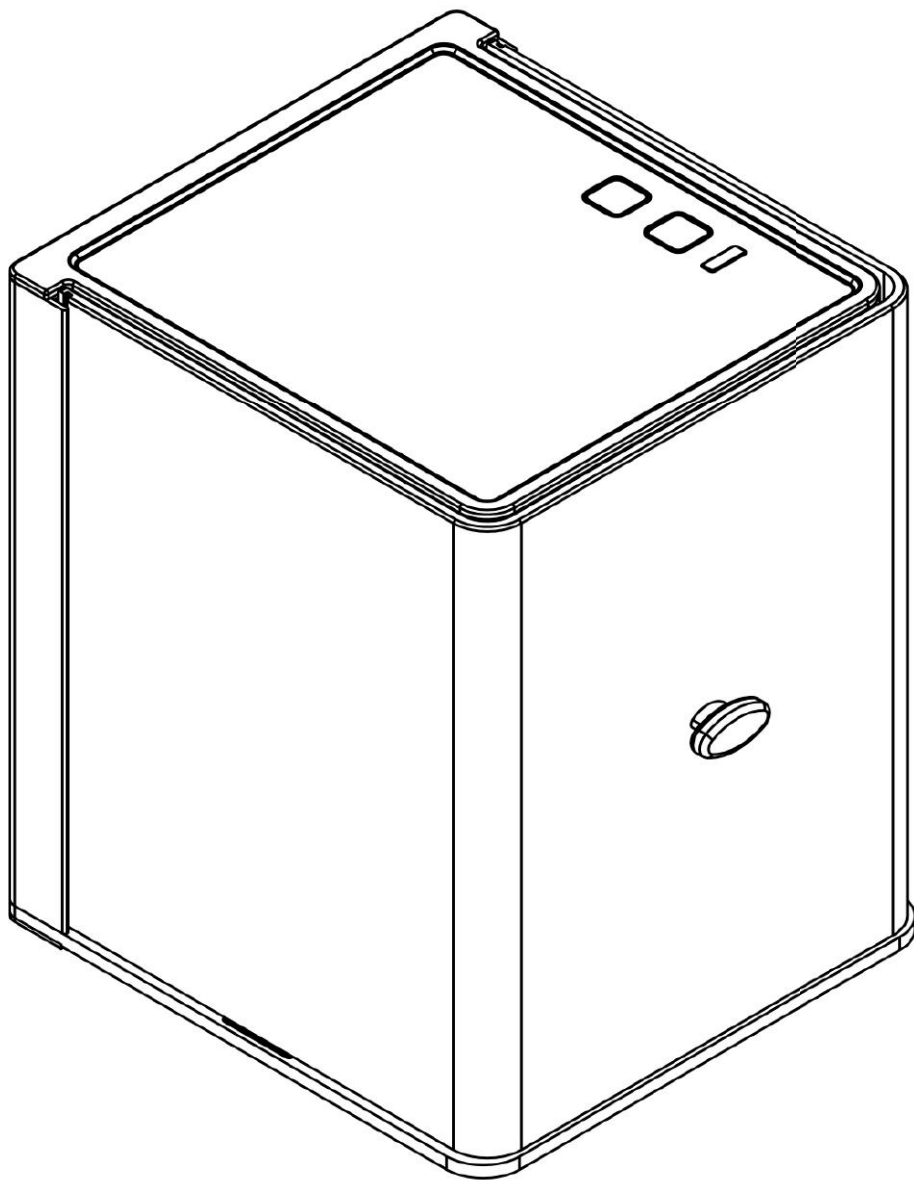
Standard accessories

Power supply
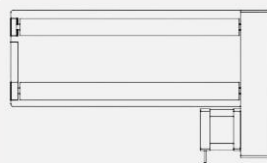

Type-c data cable

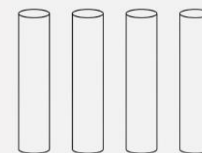Glasses

U disk

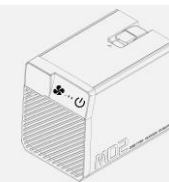cutting board

User Manual

Hexagonal wrench
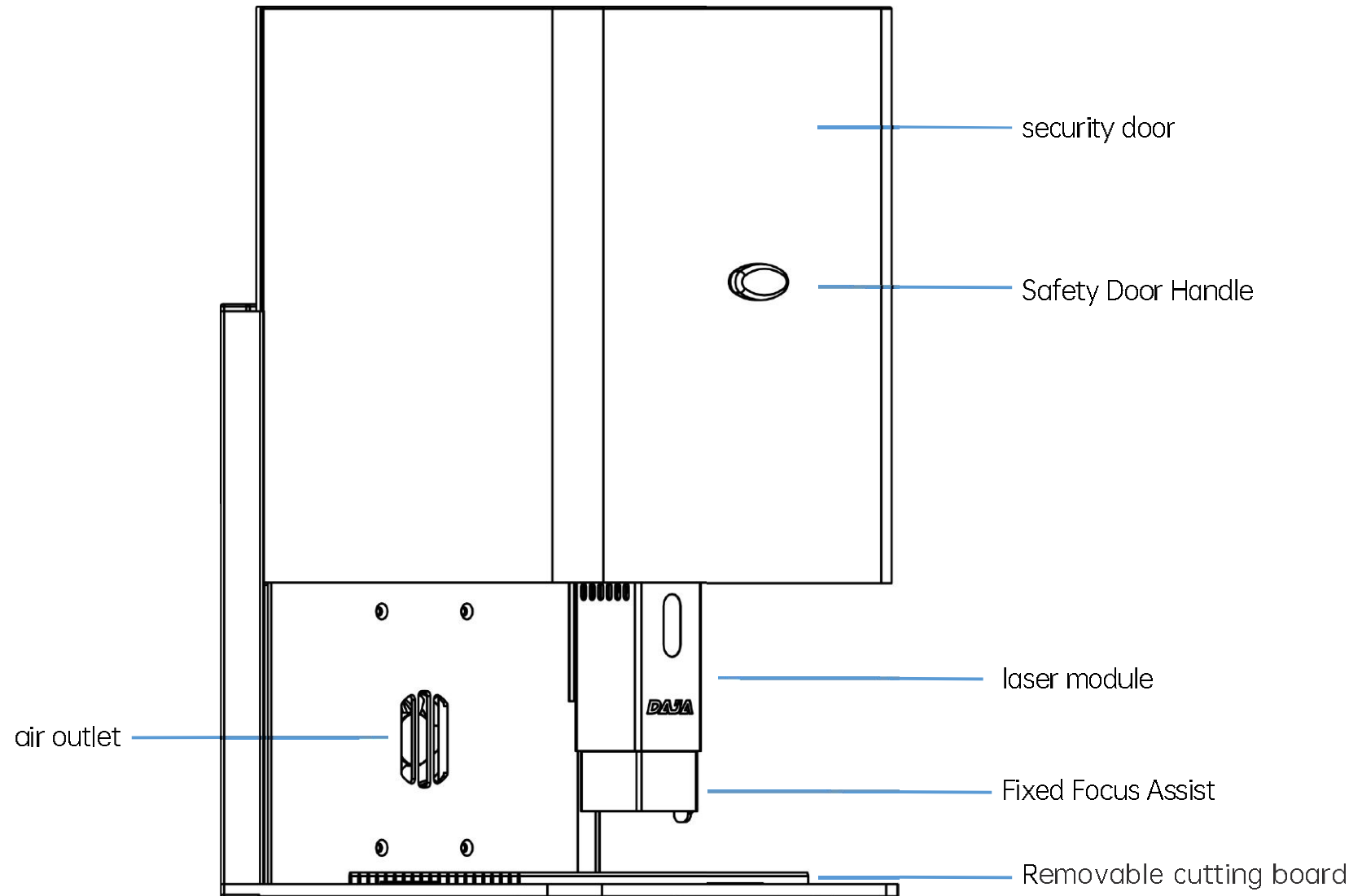
Optional accessories

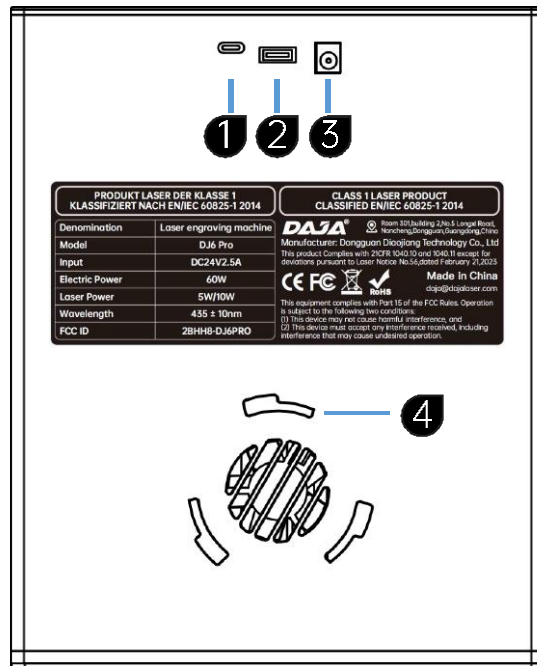RT5 Roller

Heightening

air purifier

Product Parameters

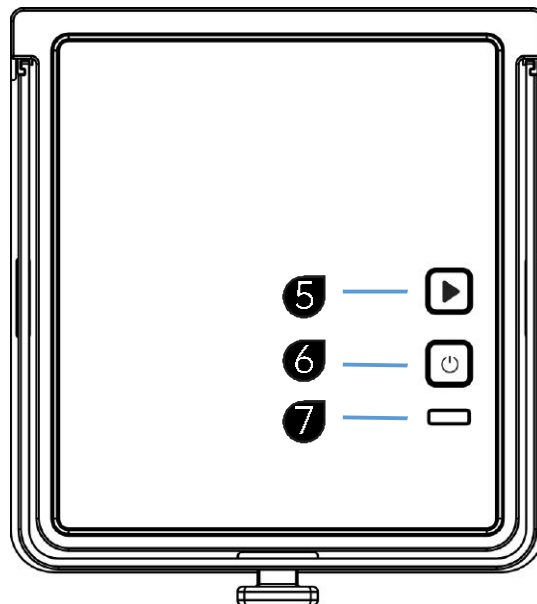|	
Product Model	DJ6 Pro
Main material	ABS+ High Strength Metal
laser wavelength	Blue light: 455nm Infrared light: 1064nm
Engraving speed	8000mm/min
Laser lifetime	>10000h (at 27°C ambient temperature)
Focus mode	fixed focal length
Engraving area	100*100mm
Engraving precision	±0.1mm
Engravable Materials	Blue light can engrave most non-metallic materials, non-transparent materials (paper, wood chips, plastic, leather, fabric, cardboard, leather) Infrared light can engrave all metal materials and some non-metallic materials
Machine power	≤ 60W
Input Voltage	DC 24V 2.5A
Data transfer	USB wired transmission, Bluetooth wireless transmission
Cooling method	air cooling
support system	DJLaser software (windows、macOS、Android、IOS) LightBurn software (windows、macOS)
Supported formats	picture format: JPEG/BMP/JPG/PNG vector format: DXF/PLT
Machine net weight	2.9KG
Machine Size	211*200*245mm (L*W*H)

Products

security door

Safety Door Handle

laser module

air outlet

Fixed Focus Assist

Removable cutting board

DAJA

Products

rear view

PRODUKT LASER DER KLASSE 1 KLASSIFIZIERT NACH EN/IEC 60825-1 2014		CLASS 1 LASER PRODUCT CLASSIFIED EN/IEC 60825-1 2014	
DAJA			Room 301,building 2,No.5 Longst Road, Nancheng,Dongguan,Guangdong,China
Denomination	Laser engraving machine	Manufacturer: Dongguan Diaojiang Technology Co., Ltd	
Model	DJ6 Pro	This product Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.56,dated February 27,2025	
Input	DC24V2.5A		Made in China
Electric Power	60W	CE FC RoHS	daja@dajalaser.com
Laser Power	5W/10W	This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:	
Wavelength	435 ± 10nm	(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including	
FCC ID	2BHH8-DJ6PRO	interference that may cause undesired operation.	

top view

1 tpye-c connection to computer

2 Connecting Roller

3 24V2.5A power input

4 Air Purifier Interface

5 Offline Carving

The machine records the last engraving

1. Short press once to start preview;

2. Short press again to stop the preview;

3. Press and hold for 2 seconds to start engraving.

6 power switch

1. Short press to turn on the power;

2. When the power is on, press and hold for 1 second to turn off the power.

3. Press twice quickly to reset the machine.

7 status indicator
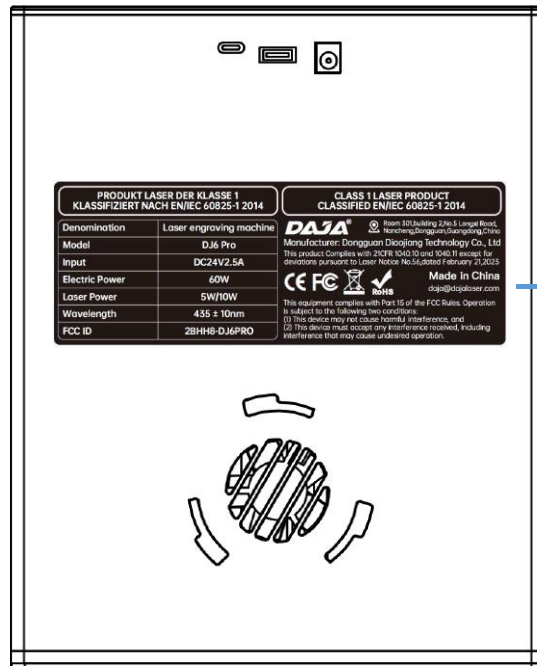
1. Blue light is always on: power on state;

2. Green light is always on: the software is connected;

3. Green light flashing: Engraving work in progress.

4. Red light blinking: alarm status;

Tip: In the alarm state; the machine is unable to preview and engrave operations.

Products

PRODUKT LASER DER KLASSE 1 KLASSIFIZIERT NACH EN/IEC 60825-1 2014		CLASS 1 LASER PRODUCT CLASSIFIED EN/IEC 60825-1 2014
Denomination	Laser engraving machine	
Model	DJ6 Pro	
Input	DC24V2.5A	
Electric Power	60W	
Laser Power	5W/10W	
Wavelength	435 ± 10nm	
FCC ID	2BHH8-DJ6PRO	

DAJA® Room 301,building 2,No.5 Longxi Road, Nancheng,Dongguan,Guangdong,China

Manufacturer: Dongguan Diaojiang Technology Co., Ltd

This product Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.56,dated February 21,2023

CE FC RoHS

Made in China
daja@dajalaser.com

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
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Nameplate information

rear view

Safety Protection Functions

【Description of tilt protection function】

When the host machine is tilted to a certain angle with the horizontal plane and maintained for more than 1 second, the machine will stop running immediately, the laser module will stop laser output, and enter the protection state. The machine must be level to resume normal function. (This function can be turned off in the settings)

Tip: Machine tilts, status indicator flashes red.
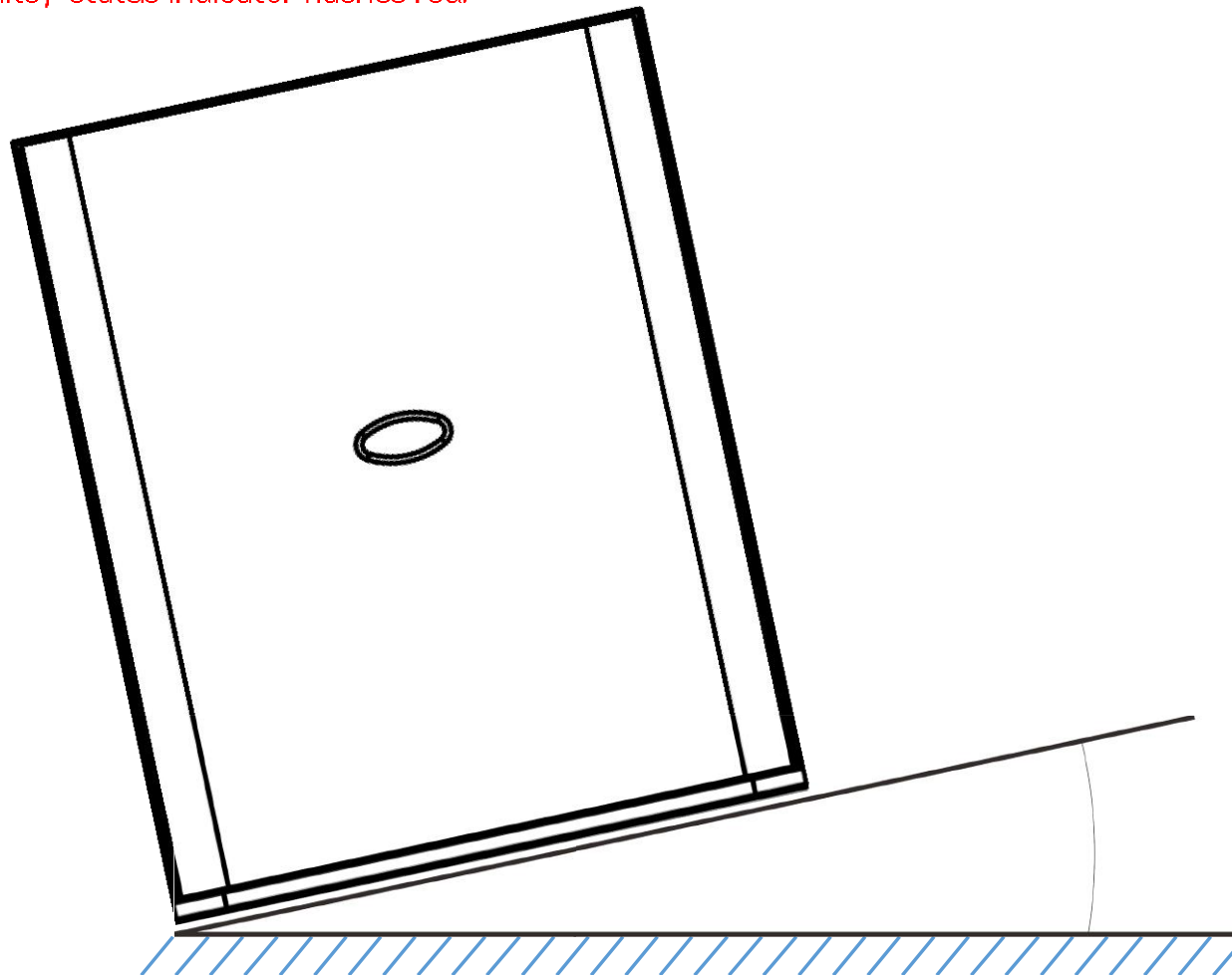
Safety Protection Functions

【Functional description of the safety gate】

When operating the machine, be sure to put down the light shield, otherwise the machine can not be controlled; During the engraving process, the safety door lifting status will cause the laser module to stop outputting laser light immediately. (This function can be turned off in the settings)

Tip: Safety door open, status indicator flashes red.
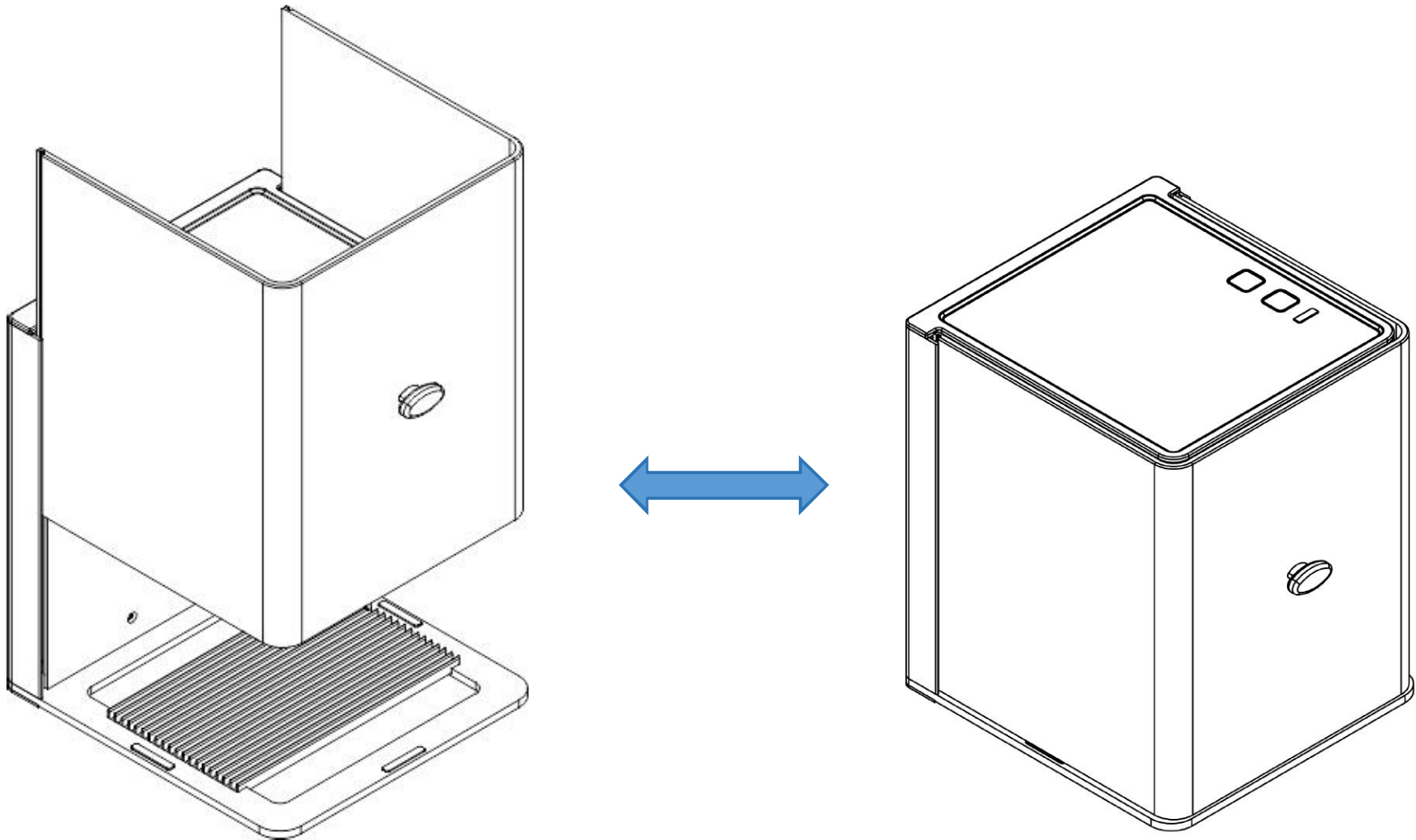
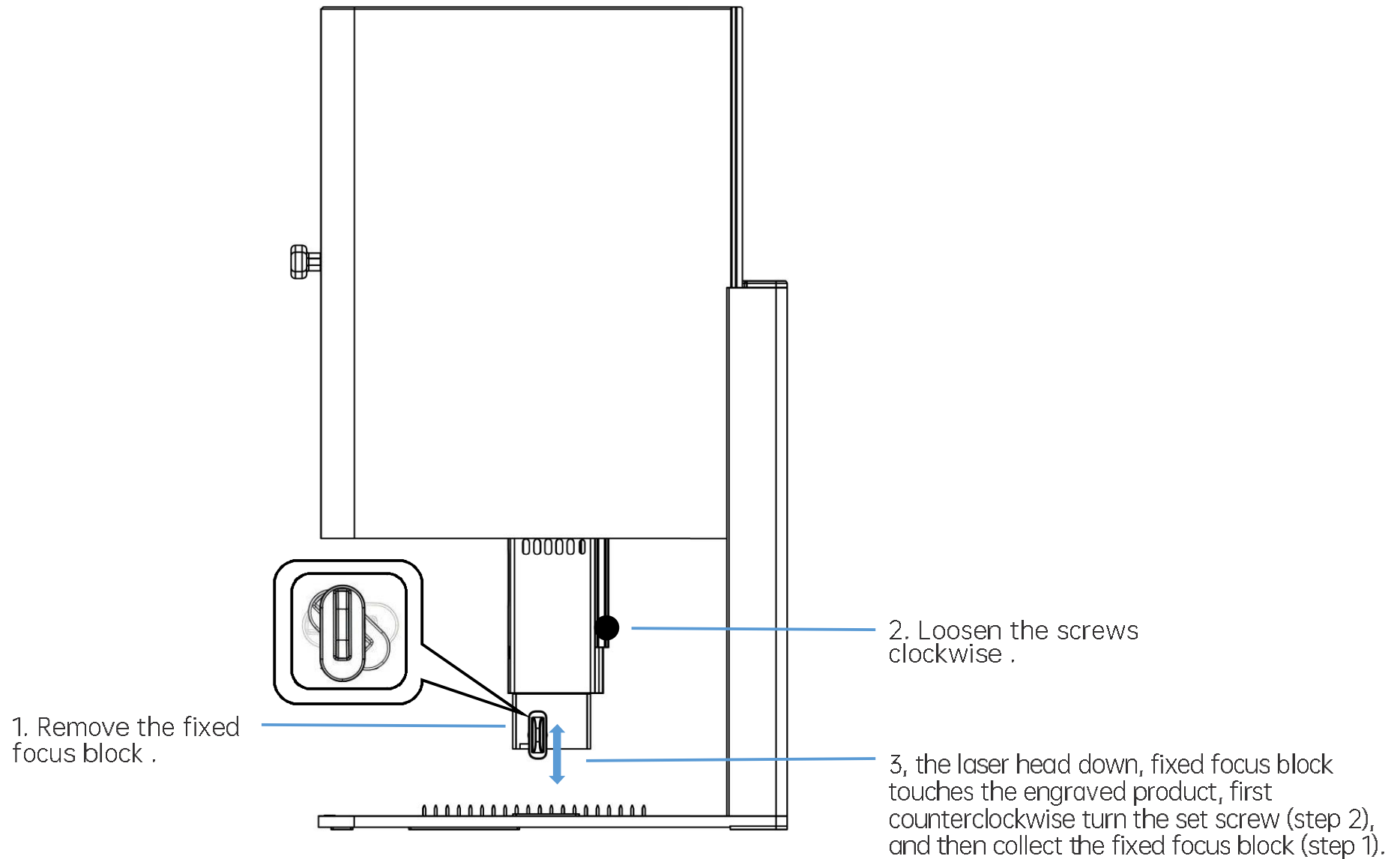# Laser module focusing method

5W Blue Laser Module

Focus mode: fixed focus

Rotate the focusing block, the best focus is when the block touches the surface of the object.
Adjusting focus is paramount.

1. The fixed focus block touches the surface of the object as the best focus point.
2. The distance has to be readjusted for carving objects of different heights.

Rotating Stowage Fixed Focus Block

objects

10W Blue Laser Module

Focus mode: fixed focus

Rotate the focusing block, the best focus is when the block touches the surface of the object.
Adjusting focus is paramount.

1. The fixed focus block touches the surface of the object as the best focus point.
2. The distance has to be readjusted for carving objects of different heights.

Rotating Stowage Fixed Focus Block
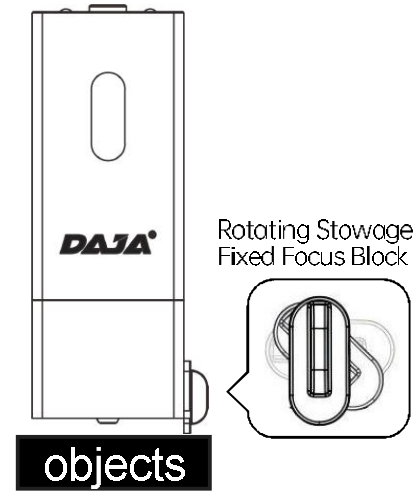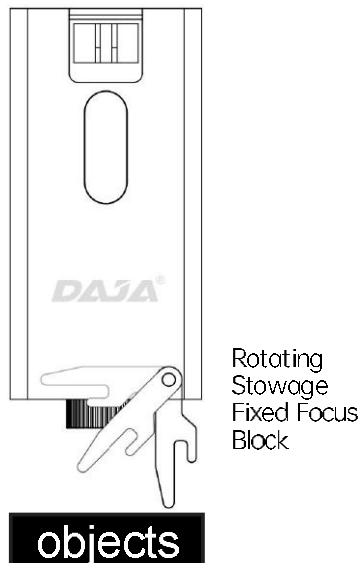
objects

1W infrared laser

Focus mode: fixed focus

Rotate the focusing block, the best focus is when the block touches the surface of the object.
Adjusting focus is paramount.

1. The fixed focus block touches the surface of the object as the best focus point.
2. The distance has to be readjusted for carving objects of different heights.

Rotating Stowage Fixed Focus Block

objects

Note: Laser module is an optional accessory, the actual purchase shall prevail.

Laser module focusing method

1. Remove the fixed focus block .

2. Loosen the screws clockwise .

3, the laser head down, fixed focus block touches the engraved product, first counterclockwise turn the set screw (step 2), and then collect the fixed focus block (step 1).
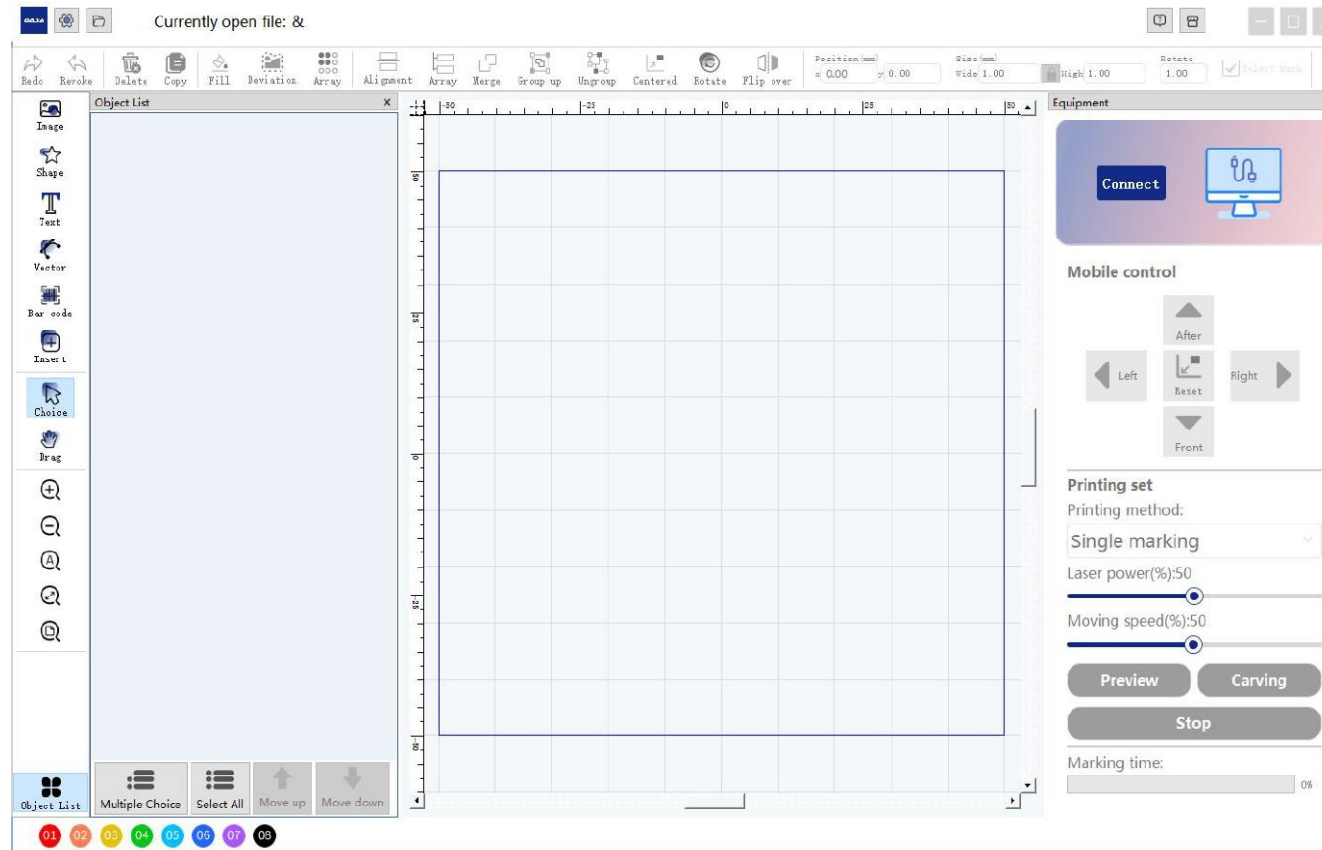
PC software acquisition and installation

Method 1:

1. Install the U disk drive file "*1 driver*" "copied to the computer desktop, open the folder, double-click *"dpinst.exe"*to install the driver

2. "*2 software*" copied to the computer desktop, open the folder, double-click "*DJLaser.exe*", after installation to start the software;

Method 2:

Please go to our website: *mr-carve.com/pages/software-and-manual* to find the corresponding machine model for download.

software interface

PC software function introduction

Currently open file: &

| Redo | Revoke | Delete | Copy | Fill | Deviation | Array | Alignment | Array | Merge | Group up | Ungroup | Centered | Rotate | Flip over |

Object List

Image
Shape
Text
Vector
Bar code
Insert
Choice
Drag

Equipment

Connect

Mobile control

After
Left   Reset   Right
Front

Printing set
Printing method:
Single marking
Laser power(%):50
Moving speed(%):50
Preview   Carving
Stop
Marking time:
0%

Object List   Multiple Choice   Select All   Move up   Move down

01 02 03 04 05 06 07 08

1 System Toolbar

2 Drawing Toolbar

3 Object list area

4 Layer Selection Area

5 Engraving workspace

6 Connection Status Area

7 Mobile Control Area

8 Engraving control area

16

PC software function introduction

1 System Toolbar

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲

| Redo | Revoke | Delete | Copy | Fill | Deviation | Array | Alignment | Array | Merge | Group up | Ungroup | Centered | Rotate | Flip over | Position(mm) x 0.00 y 0.00 | Size(mm) Wide 1.00 High 1.00 | Rotate 1.00 | Select Mark |

① Redo

② Revocation

③ delete

④ copy

⑤ Fill: Support text or vector graphics in dxf and plt formats

⑥ Offset: offset the contour line. This function is suitable for cutting.

⑦ Array

⑧ Alignment: Multiple contents can be aligned

⑨ arrangement

⑩ merge

⑪ Grouping: combining multiple objects

⑫ Ungroup: Dissolve the group

⑬ Center: Center the selected object in the engraving area

⑭ Rotation

⑮ Flip: Mirror horizontally or vertically

⑯ Position: The coordinates of the object in the engraving area

⑰ Size: Object engraving size

⑱ Rotation Angle

⑲ Select Marking

PC software function introduction

❷ Drawing Toolbar

Image

Shape

Text

Vector

Bar code

Insert

Choice

Drag

① Importing image files

② Draw a shape

③ Draw Text

④ Importing vector files

⑤ Draw QR code and barcode

⑥ Insert library material

⑦ Select content

⑧ Drag the engraving area

⑨ Enlarge the engraving area

⑩ Reduce the engraving area

⑪ Show All Objects

⑫ View Selected Objects

⑬ Show Engraving Area

❸ Object list area

Display all objects in the engraving area.

❹ Layer Selection Area

Different layers can set different engraving parameters, which can realize engraving and cutting.

❺ Engraving workspace

The engraving content is displayed. The engraving object should not exceed the blue boundary line. The blue boundary line is the engraving area of the machine.

❻ Connection Status Area

After the device is connected, the device model and picture will be displayed.

❼ Mobile Control Area

The laser head position can be moved and the machine reset.

❽ Engraving control area

You can select roller engraving, adjust laser power and speed, preview the frame and start engraving.

set

Language selection, after connecting the device, you can turn on or off: anti-tilt and cover opening emergency stop functions.

Note: The cover opening emergency stop function is only available on devices with safety doors.

Image Editing

1 Plug in the machine and turn it on, connect the data cable to the computer, open the software, and click Connect Device.

2 Click "Image" on the drawing toolbar to import the image file to be engraved.

3 Select the object and adjust the engraving size.

4 Adjust the image's brightness, contrast, sharpness, and inversion as needed.

5 Mode selection:

Black and white: black and white processing of pictures

Engraving character photos: grayscale, sketch, cartoon 1-2 modes available

Contour: Contour cutting mode

| Blackwhite | Grayscale | Outline | Sketch | Manga1 | Manga2 |
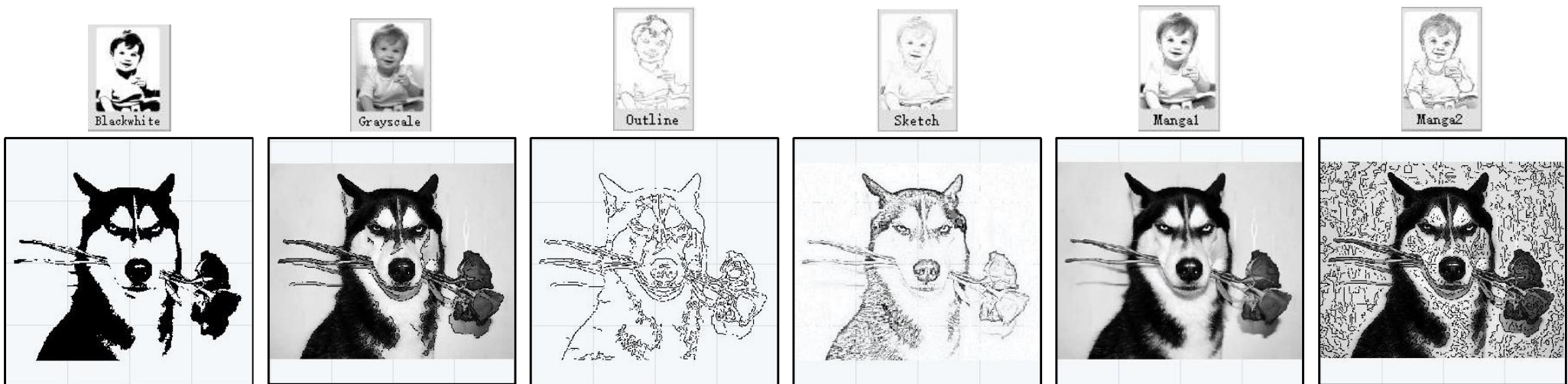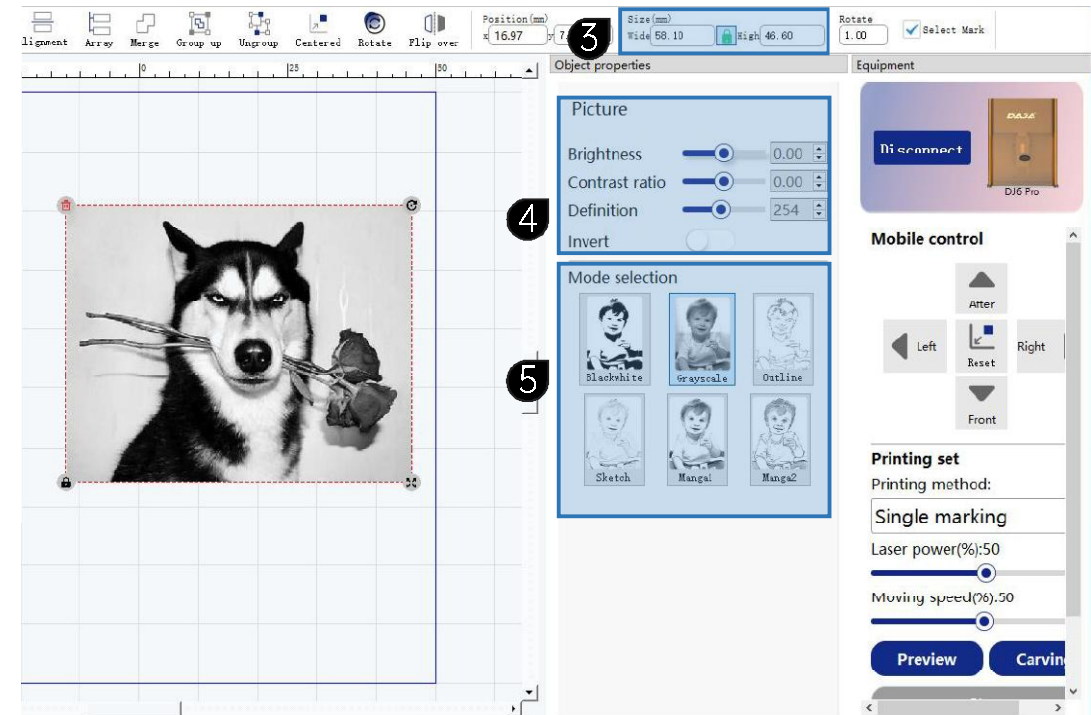
Text Editing

1 Click "Text" on the drawing toolbar and enter text.

2 Select the object and modify the engraving size.

3 The text content can be modified twice.
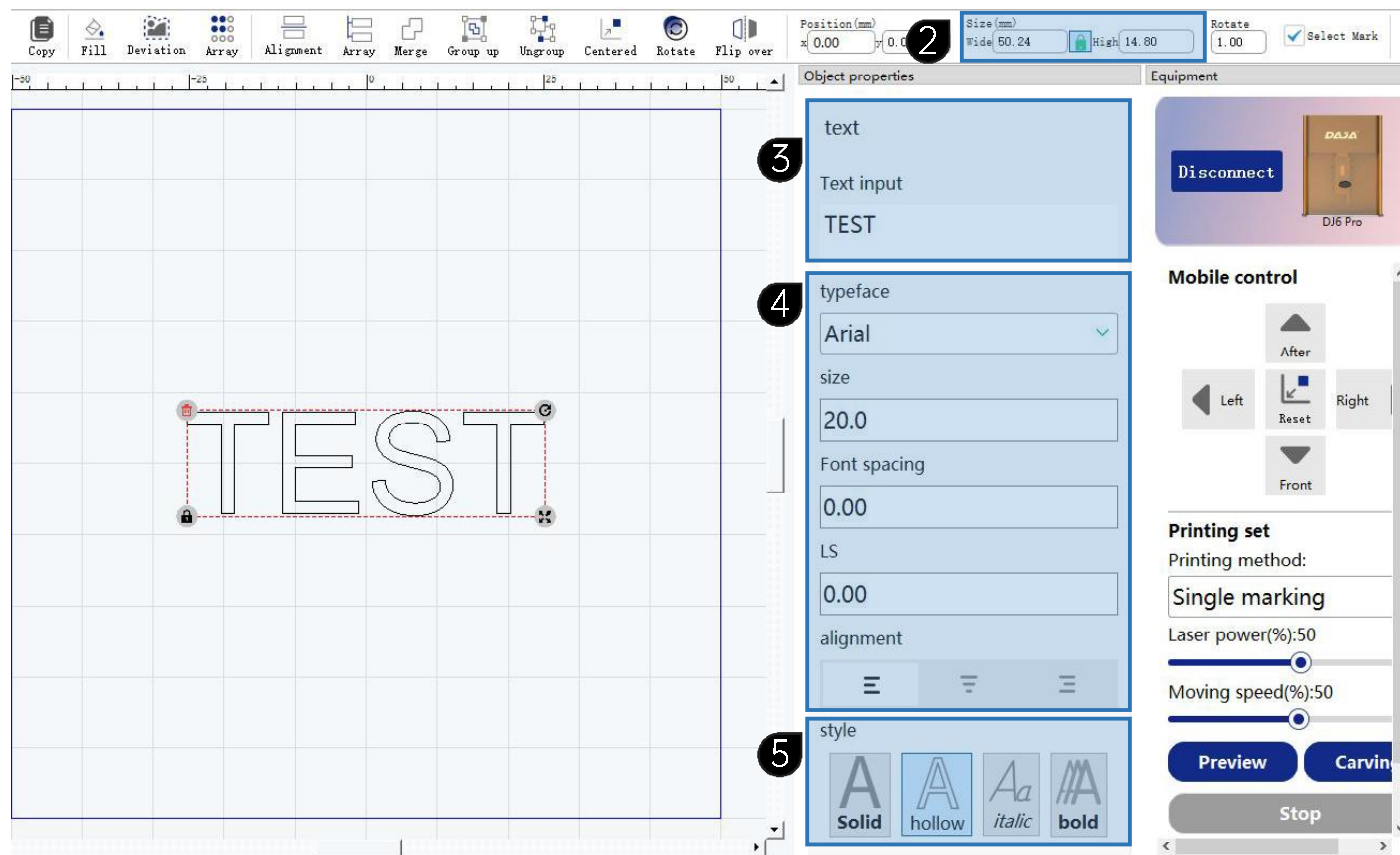
4 You can modify the font, size, spacing, leading, and alignment.

5 Solid: Fill carving mode.

Hollow: Contour cutting mode

Italic

Bold

Vector Graphics Editing

1 Click "Vector" on the drawing toolbar to import vector files, supporting DXF and PLT formats.

2 Click Fill, if not filled it is outline mode.

3 Select the object and modify the engraving size.
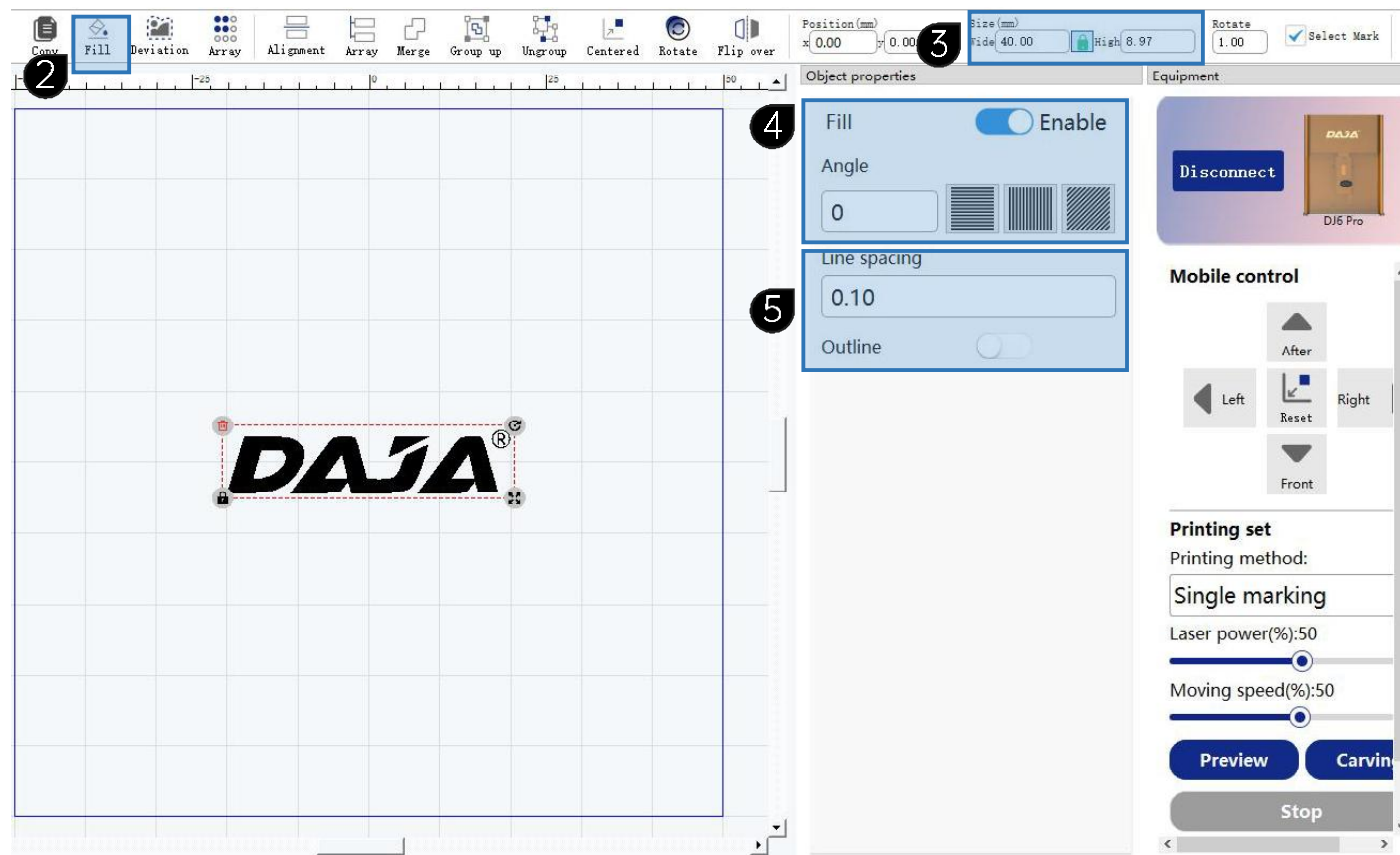
4 Enable fill, and modify fill type and angle.

5 Line spacing: The default value is 0.1. The smaller the value, the higher the accuracy and the slower the speed.

Barcode Editing

1 Click "Bar code" on the drawing toolbar and select "QR Code" or "Bar code".

2 Select the object and modify the engraving size.

3 The encoding type can be modified.
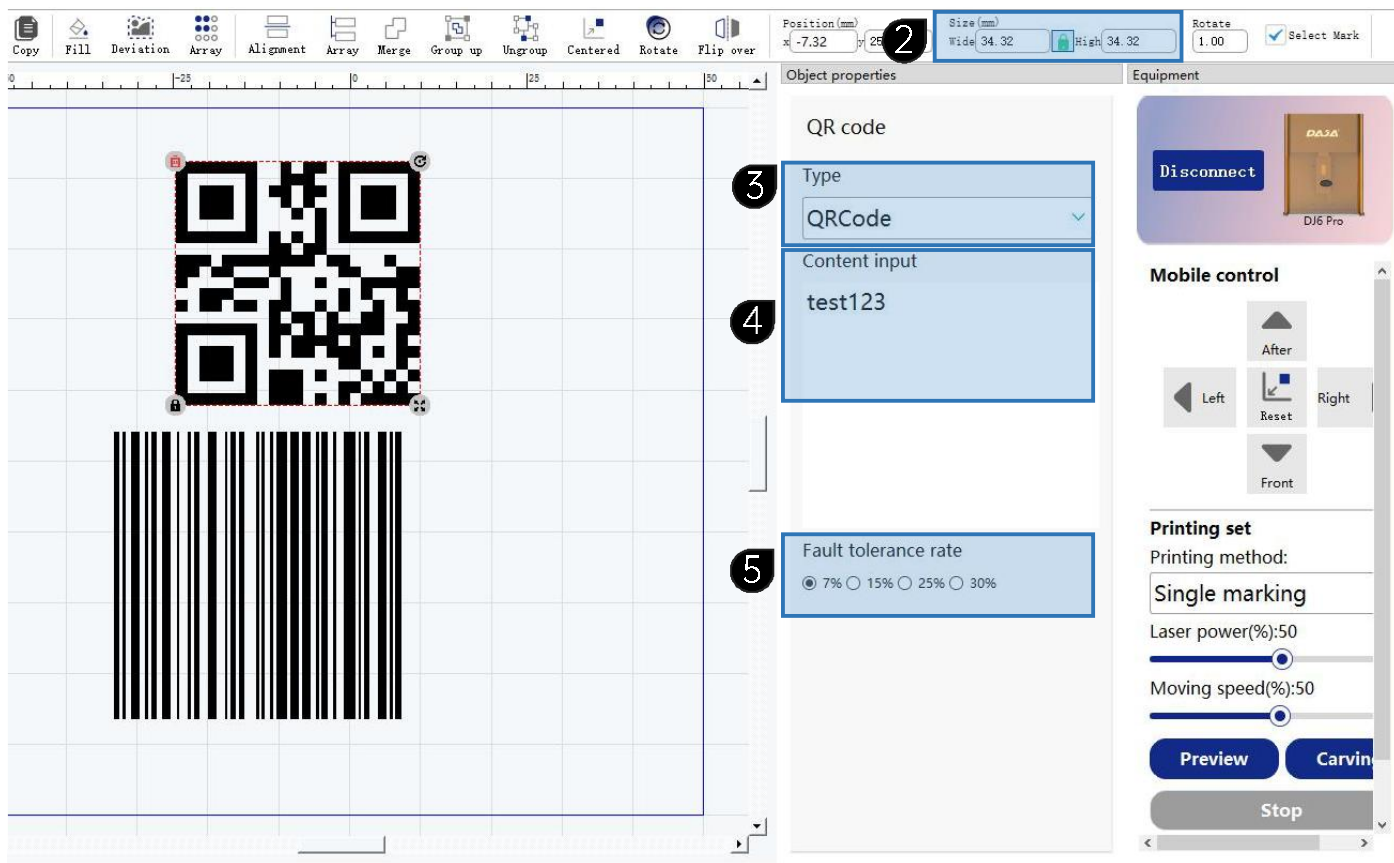
4 The content can be edited again.

5 The error tolerance rate refers to the ability of a QR code to be scanned normally after a part of it is blocked. The higher the error tolerance rate, the larger the part of the QR code image can be blocked.

Preview and Mark
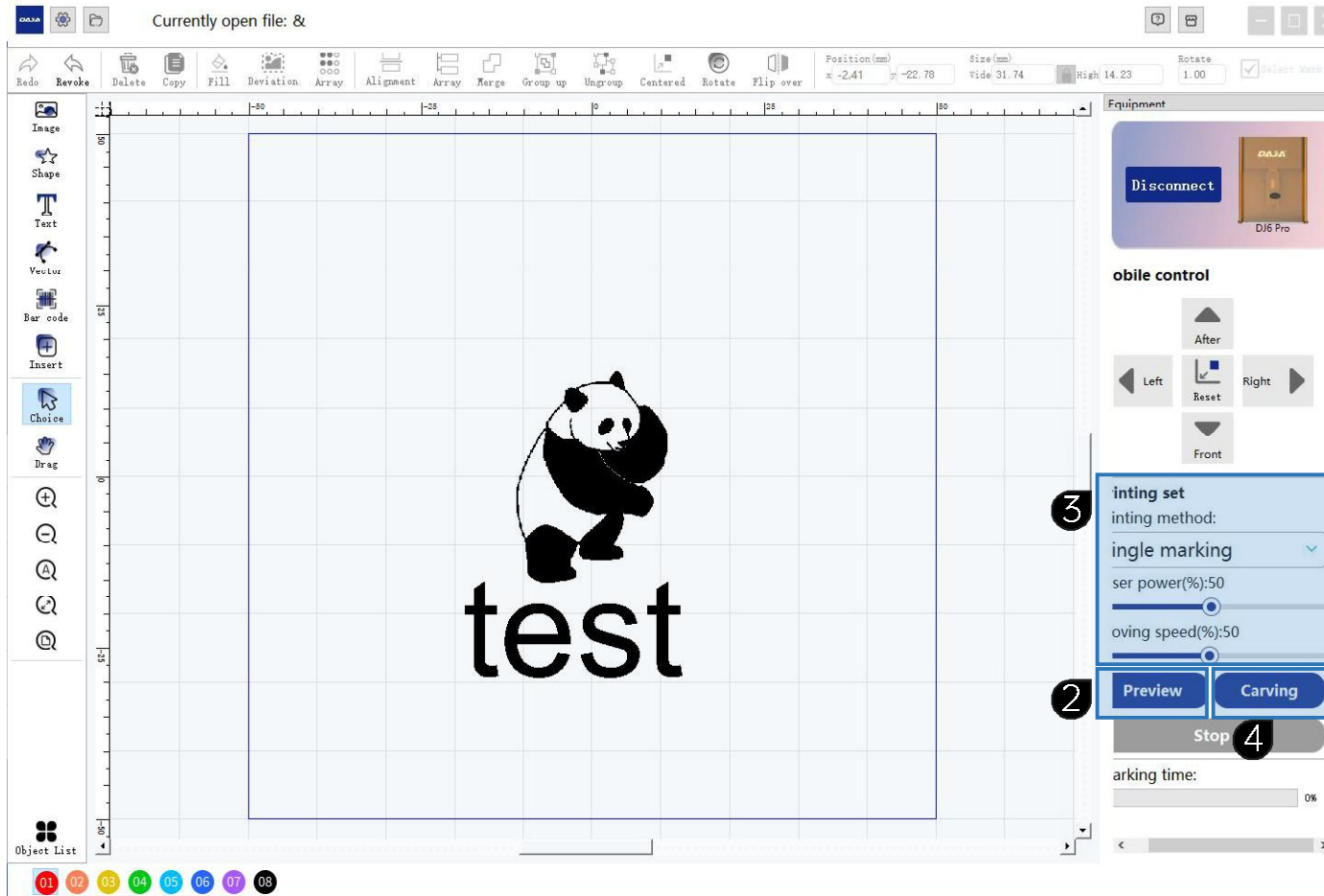
1. Fix the engraving focal length. Refer to page P13 for " Laser module focusing method".

2. Preview the frame and position the object for engraving.

3. Laser power: control the power output of the laser head;

   Movement speed: control the engraving speed;

   The faster the movement speed, the lighter the color of the engraving will be.
   The slower the movement speed, the darker the color of the engraving will be.

4. Start carving

   Tips: Please read the "Safety Precautions" on page 3 carefully before starting to carve.

Mobile APP download and connection

1、Scan the following QR code to download the mobile app

Android

IOS

System requirements: Android:7.0+, IOS:13.0+

Note:
1, Android phones need to use the mobile browser to scan the QR code to download;
2, after successful installation you need to give relative permissions;

DJLaser

Set   **DAJA Creative Space**

DJ6 Pro
🔗 Unconnected

Connected

Picture   Camera

Graffiti   Text

Material   Historical Projects
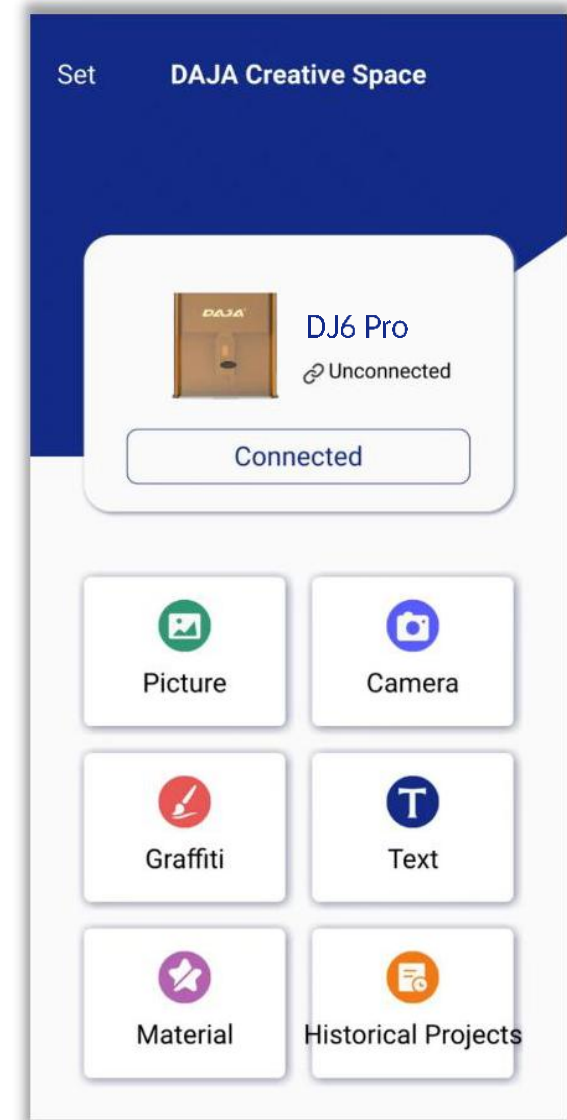
app interface

1. Plug the machine into the power supply and turn on the Bluetooth function on your phone.

2. Click [Connected] and find DJ6 Pro_xxx in the Bluetooth list; click Connect;

3、After successful connection, the device appearance picture and connection status will be displayed.

DJ6 Pro
🔗 Unconnected

Connetced

DAJA Creative Space   Set

DJ6 Pro
🔗 connected

Disconnect

Picture | Camera

Graffiti | Text

Material | Historical Projects

Return   Bluetooth   🔄

DJ6 Pro -806599C9903C
80:65:99:C9:90:3E
not connected
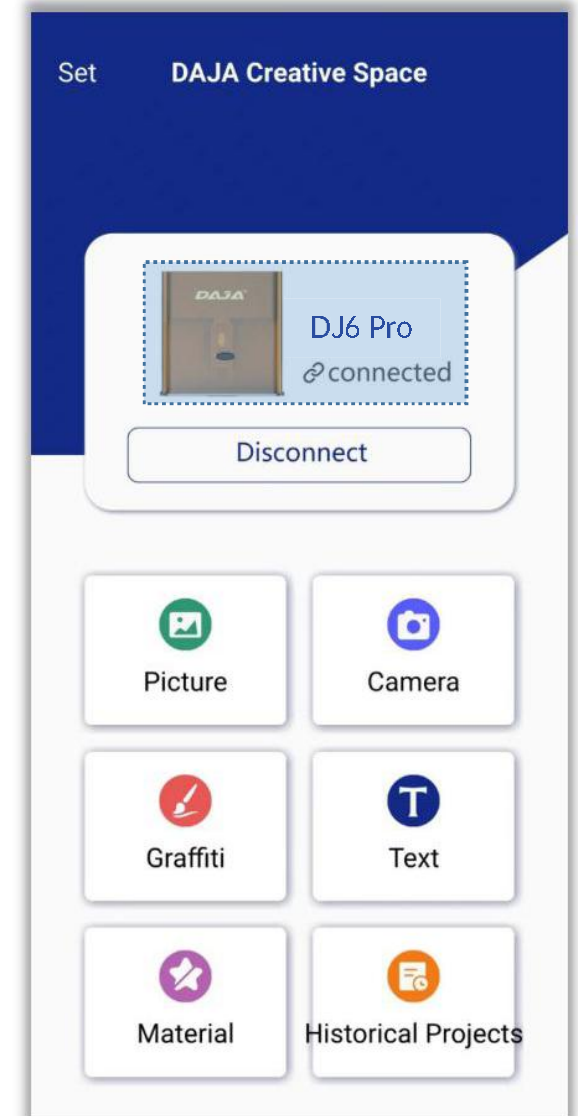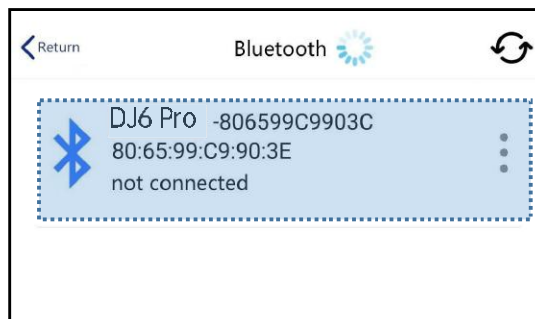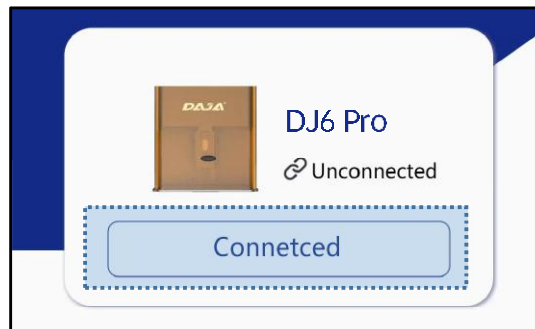
Note:
After the app is connected, the phone please do not rest the screen, answer the phone call, switch the app to the background of the phone, if any of the above operations to do will lead to the connection is not responsive, if the operation is not responsive, please exit the cell phone app completely, and then repeat the steps 1-3 to re-try to connect.

Mobile APP Function Introduction

1 Set

< Return

Language	English >
Unit	mm >
About	>
Firmware update	>
Anti-pitch	⬤
Open cover protection	⬤
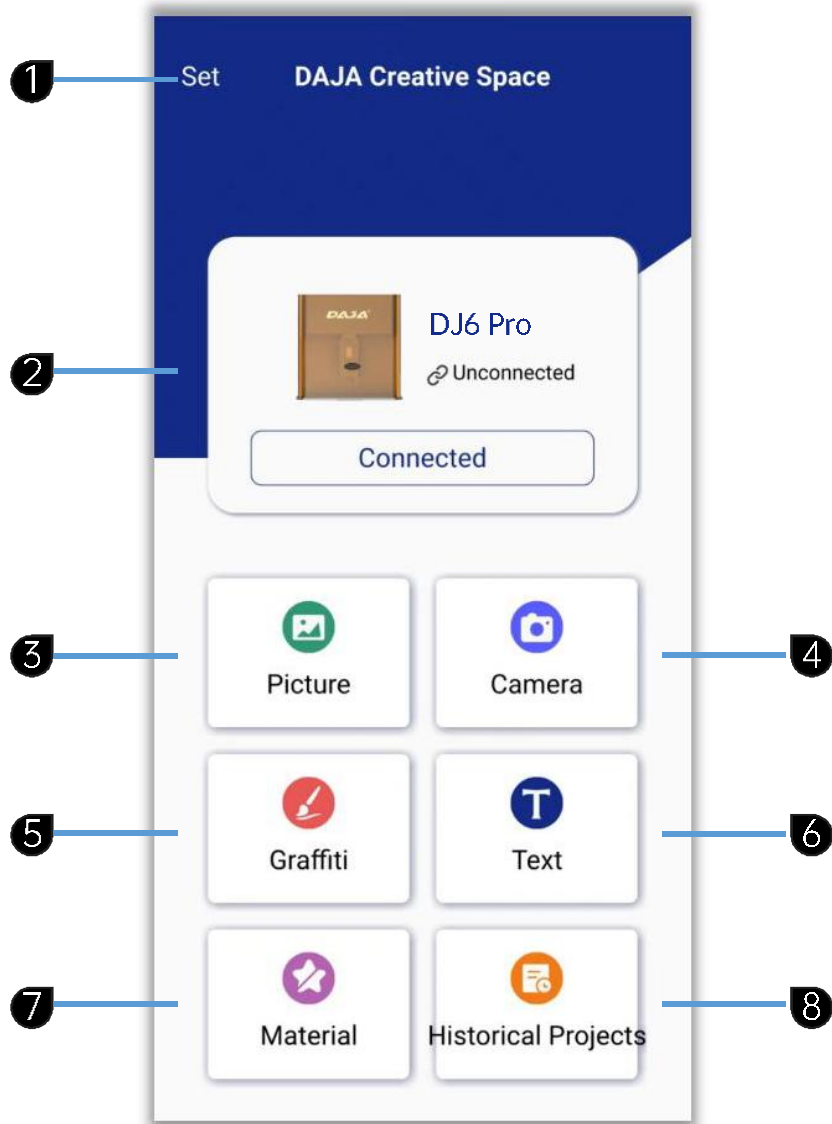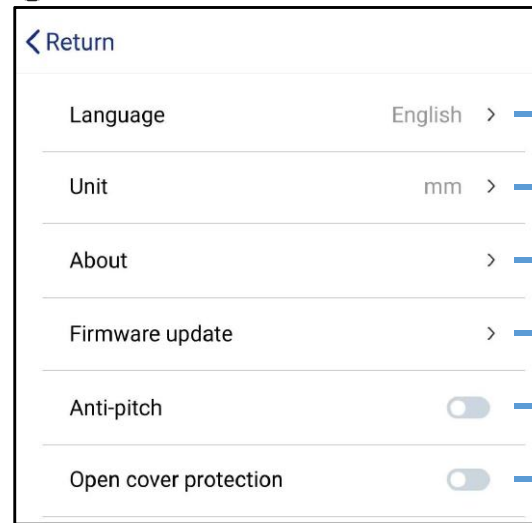
Language Switching

Unit Switching

Check the firmware version

Firmware Update

Anti-tilt switch

Safety door switch

Tip: This option will not be displayed when a device without a safety door is connected.

Set — **DAJA Creative Space**

1 Set

DJ6 Pro
🔗 Unconnected

Connected

2 Device connection status

Picture

Camera

3 Import album image files

4 Take a photo and import the image file

Graffiti

Text

5 Hand-painted brushes

6 Text Editing Engraving

Material

Historical Projects

7 Sculpture Library

8 View Historic Engraving Project

Image Editing

1 Click "Picture" to select a picture file.

2 After importing the picture, enter the photo editing interface to crop and erase the picture content.

3 Next step enter the editing interface

Image Editing

❶
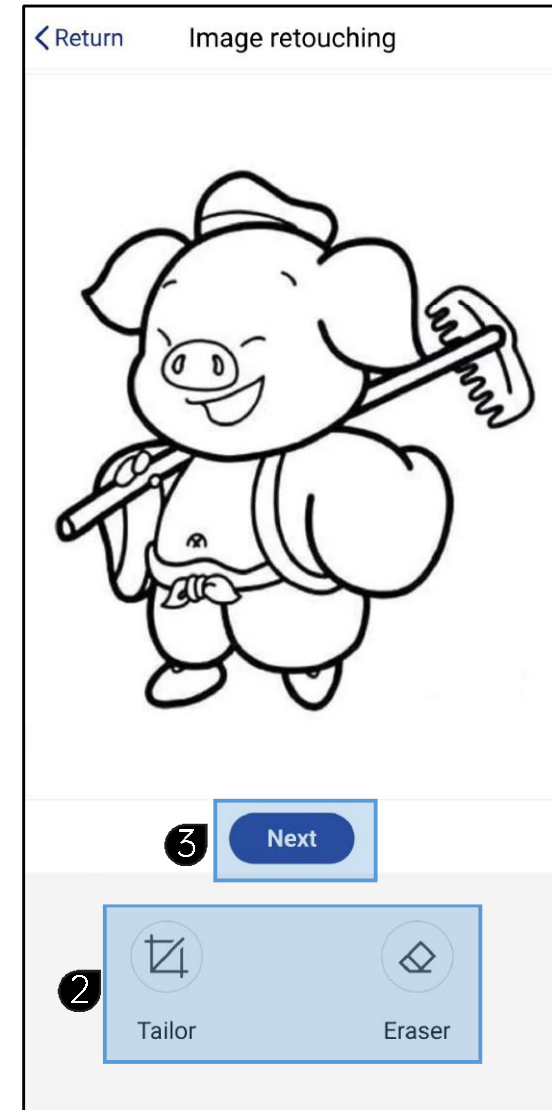
↩ Revocation

↪ Redo

🗑 delete

1:1 1:1 display

MAX Maximize Display

❷ Working area: Do not exceed the engraving area.

❸

🗑 delete

⟳ Rotation

🔒 Lock ratio

⤢ Drag to zoom in and out

❹ Adjustment of contrast and brightness.

❺ Mode selection: For portrait photos, choose grayscale or sketch.

❻ Mirror and invert images.

‹ Return   Edit

❶ ↩ ↪ 🗑 1:1 MAX

❷

❸

Next

Cancel   OK

❹ Contrast   100
   Brightness   0

❺ B&W   GS   Line   Sketch   Toon1   Toon2

❻ Invert ◐   X RVS ▷◁   Y RVS ⟱

Image Editing

❶ Multiple content engraving can be added.

❷ 🖼 Add a picture

T Add text

✦ Add stock images

▦ Add a QR code or barcode.

🎣 Add DXF and PLT format vector files

❮ Return   Edit

↶ ↷ 🗑 1:1 MAX

❶

test

Next

❷ 🖼 Images T Text ✦ Material ▦ QRcode 🎣 Vector

Image Editing

1 Resize the carving

2 If a rotating roller is connected, please check "Rotating axis engraving"

3 Preview laser intensity: Default is 5%, if it is too bright, reduce it appropriately, otherwise increase it

4 Border preview positioning

5 Next step enter the engraving interface

‹ Return   Size

5 Next

1 W 36.79 mm   A⁺ A⁻   Enlarge Narrow

H 39.92 mm

2 ☐ Rotating shaft

**3** Preview brightness:5%

4 Outline

Text Editing

1 Select text

2 Enter text content
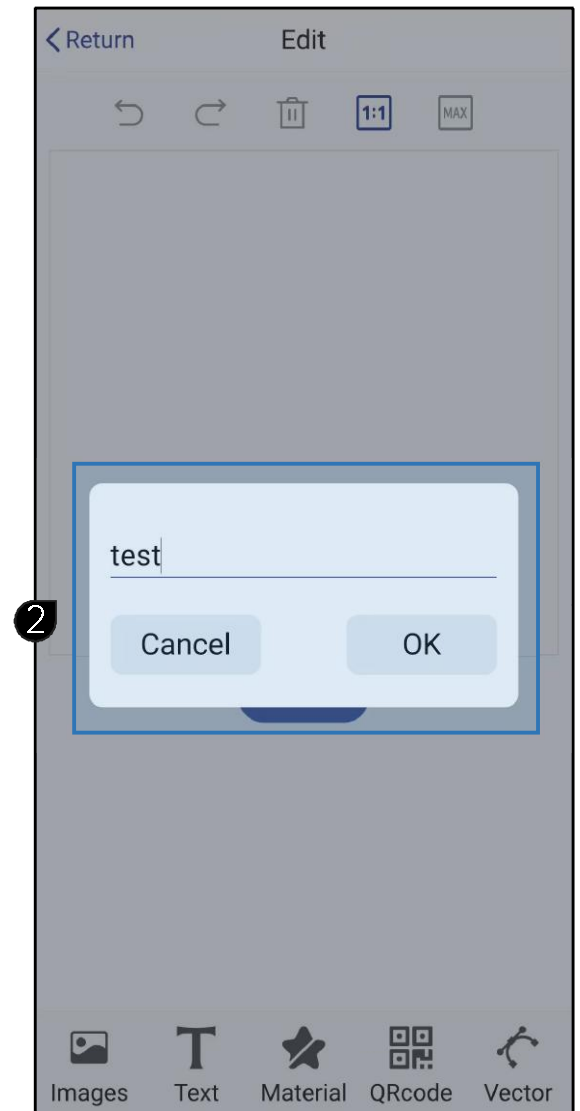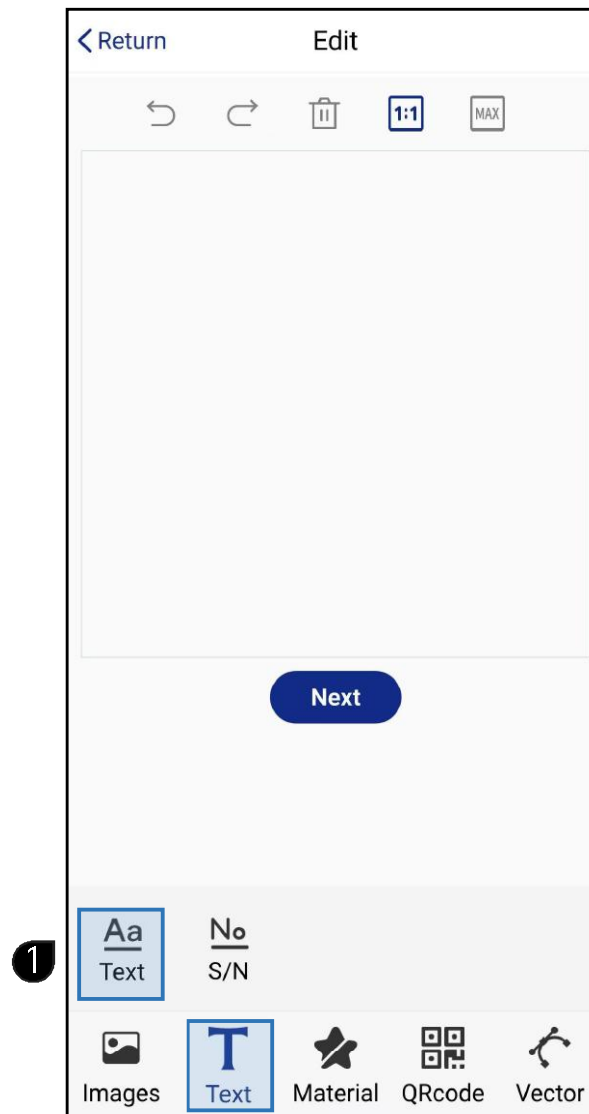
Text Editing

1 Click to edit the text again

2 You can modify the font, alignment, spacing, and size

3 Solid: Fill mode

Hollow Out: Outline Edge Mode

Italic

Bold

4 Font Selection

5 Multiple content engraving can be added.

Add a picture

Add text

Add stock images

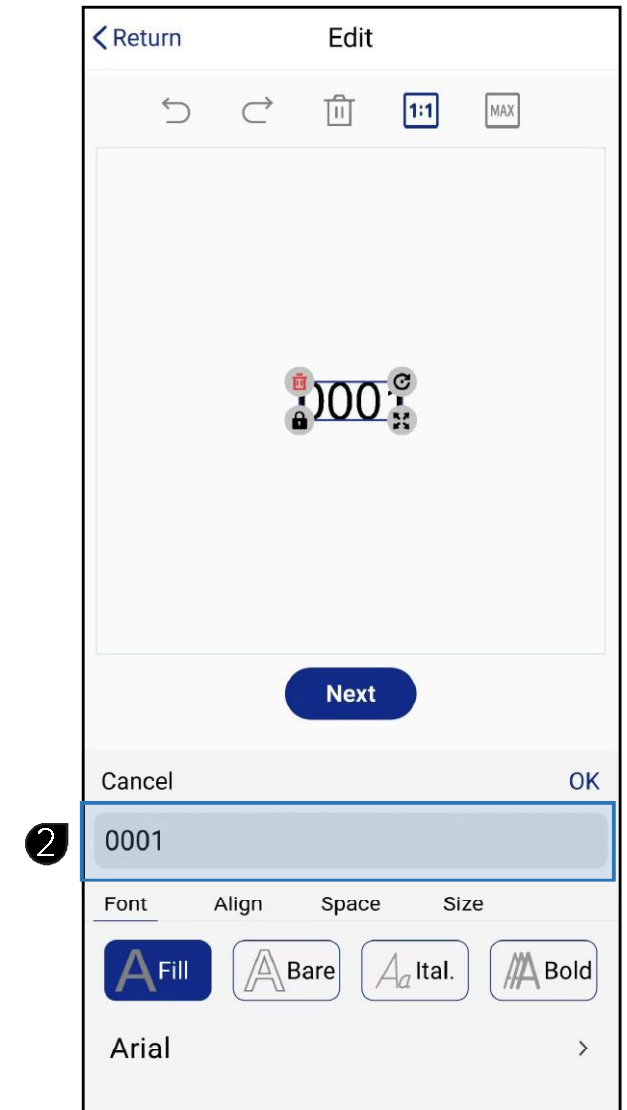Add a QR code or barcode.

Add DXF and PLT format vector files
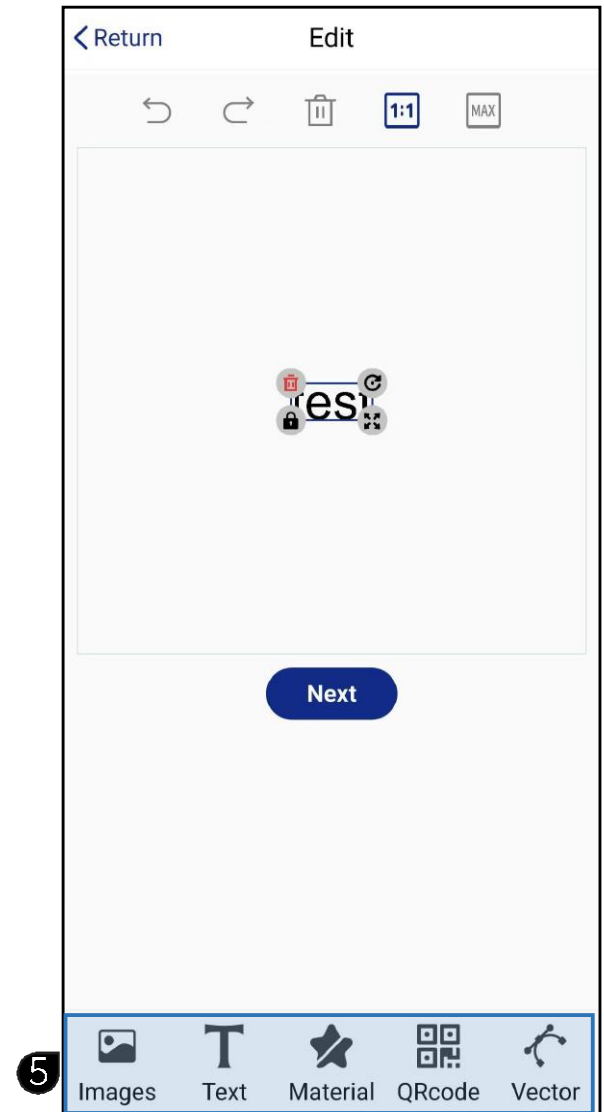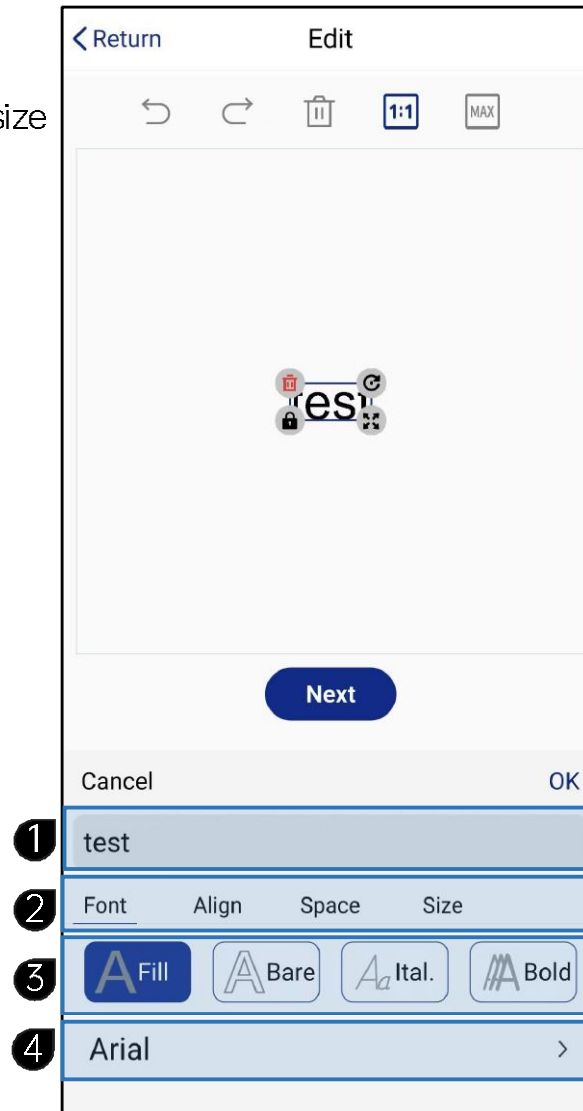
Text Editing

1 Resize the carving

2 If a rotating roller is connected, please check "Rotating axis engraving"

3 Preview laser intensity: Default is 5%, if it is too bright, reduce it appropriately, otherwise increase it

4 Border preview positioning

5 Next step enter the engraving interface
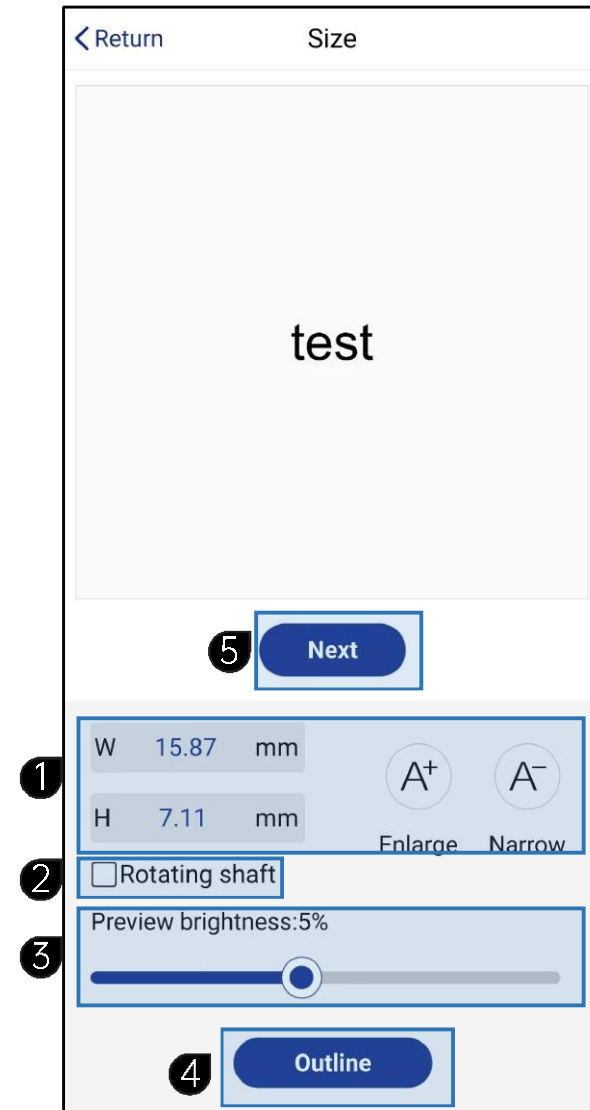
Serial number edit

1 Select Serial Number

2 Click Edit Serial Number

Serial number edit

3 Edit the serial number content as required and click OK to save.
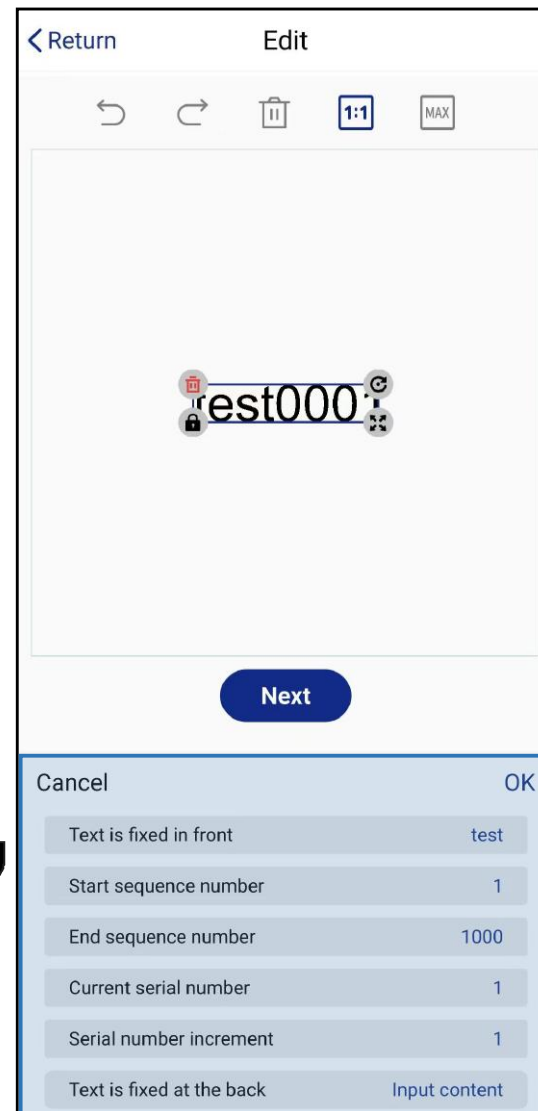
4 Multiple content engraving can be added.
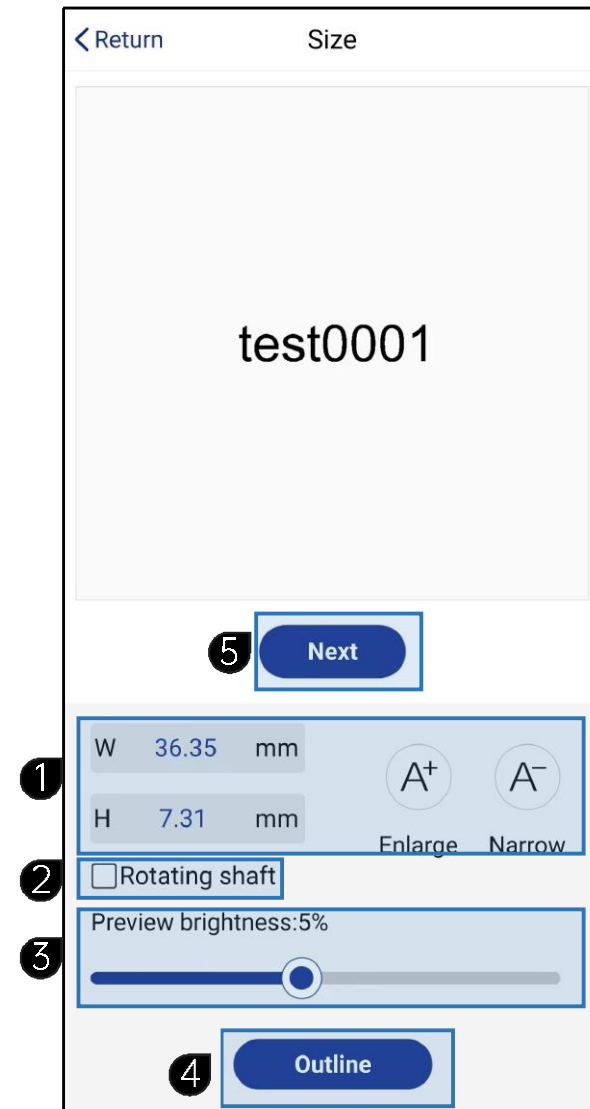
🖼 Add a picture

T Add text

✦ Add stock images

▦ Add a QR code or barcode.

⌒ Add DXF and PLT format vector files

‹ Return   Edit

↶ ↷ 🗑 1:1 MAX

est000

Next

Cancel   OK

Text is fixed in front	test
Start sequence number	1
End sequence number	1000
Current serial number	1
Serial number increment	1
Text is fixed at the back	Input content

‹ Return   Edit

↶ ↷ 🗑 1:1 MAX

est000

Next

🖼 Images   T Text   ✦ Material   ▦ QRcode   ⌒ Vector

Serial number edit

1 Resize the carving

2 If a rotating roller is connected, please check "Rotating axis engraving"

3 Preview laser intensity: Default is 5%, if it is too bright, reduce it appropriately, otherwise increase it

4 Border preview positioning

5 Next step enter the engraving interface

< Return   Size

test0001

5 Next

1
W   36.35   mm   A+   A−
H   7.31   mm   Enlarge   Narrow

2 ☐ Rotating shaft

3 Preview brightness:5%

4 Outline

Contour Engraving and Cutting

Tips: 5w-10w blue laser head can cut 1-2mm thick wood, paper, bamboo; multiple cuts may be required. Transparent materials cannot be cut, and red laser head cannot cut.
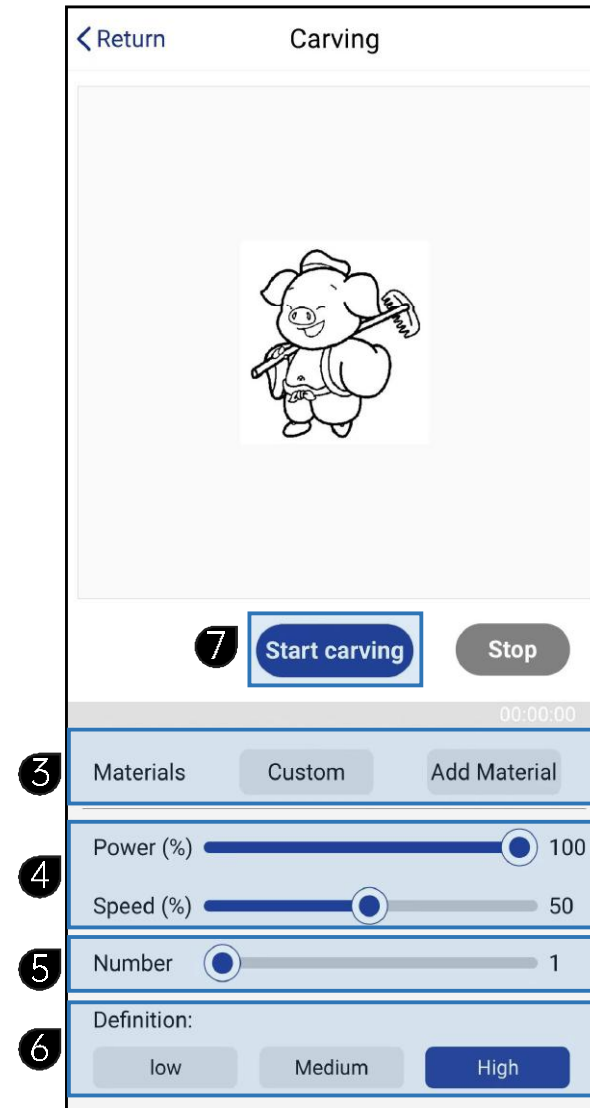
1 You can use pictures or vector graphics files in DXF or PLT format.

2 Select Outline Mode

3 For cutting, you need to adjust the laser power to 100 and the engraving speed to below 10.
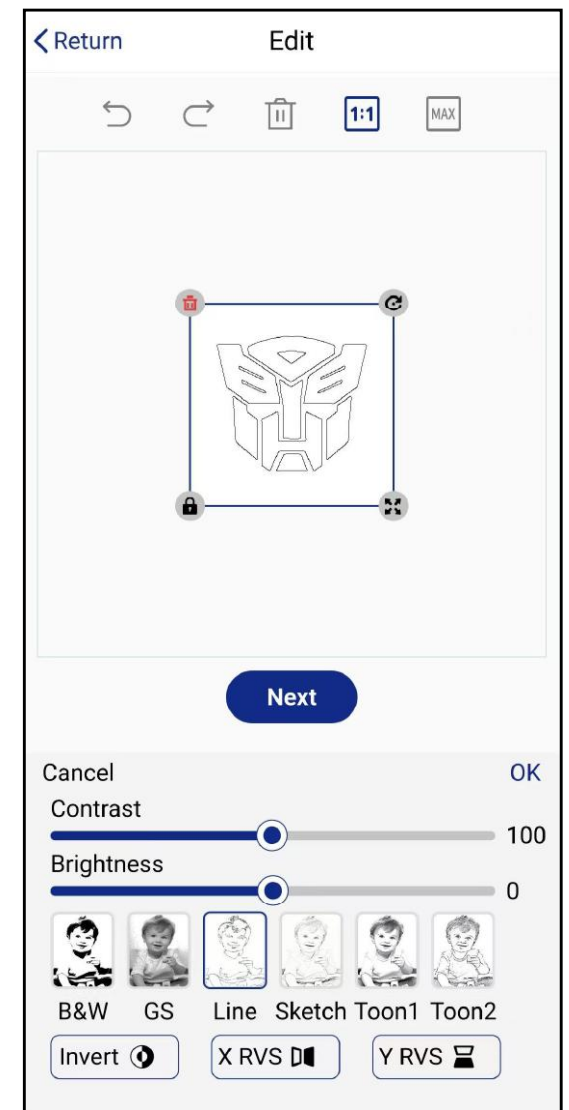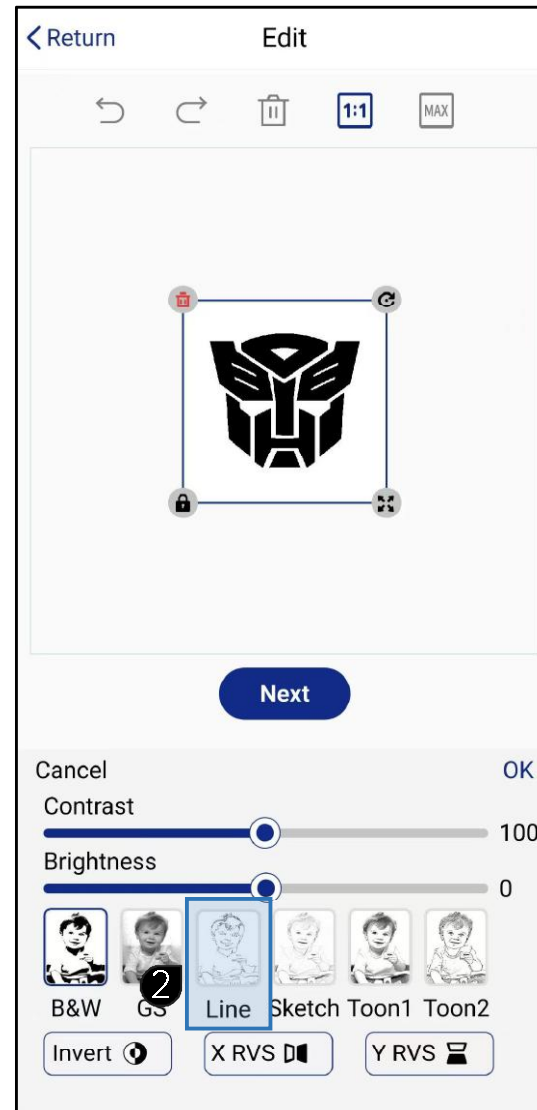
Start carving

1 Fix the engraving focal length, refer to page P13 " Laser module focusing method"

2 Preview the frame and position the object for engraving.

3 Material selection: You can add laser power and engraving speed for different materials yourself, which is convenient for later selection.

4 Laser power: control the power output of the laser head;

Engraving speed: control the engraving speed;

The faster the engraving speed, the lighter the engraved color will be. The slower the engraving speed, the darker the engraved color will be.

5 Number of engraving times: 1 by default, can be modified as needed.

6 Clarity: The higher the value, the clearer the engraving effect will be, but the engraving time will be slightly longer.

7 Start carving

Tip: Before you start engraving, please read the "Safety Precautions" on page P4 carefully.

‹ Return	Carving	

7 Start carving Stop

00:00:00

3 Materials Custom Add Material

4 Power (%) ————————● 100
Speed (%) ————●———— 50

5 Number ●———— 1

6 Definition:
low Medium High

LightBurn Software connectivity

Note: This document only provides tutorials for connecting the machine to LightBurn, it does not provide tutorials for the software or its use;

LightBurn software can be purchased and downloaded at *lightburnsoftware.com*;
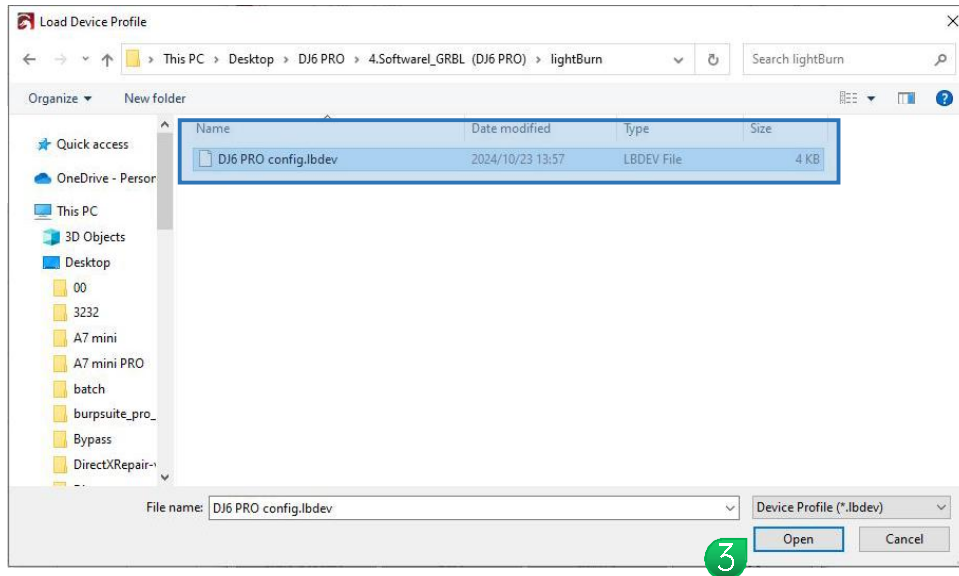
For tutorials on how to use the LightBurn software, please search the web yourself.

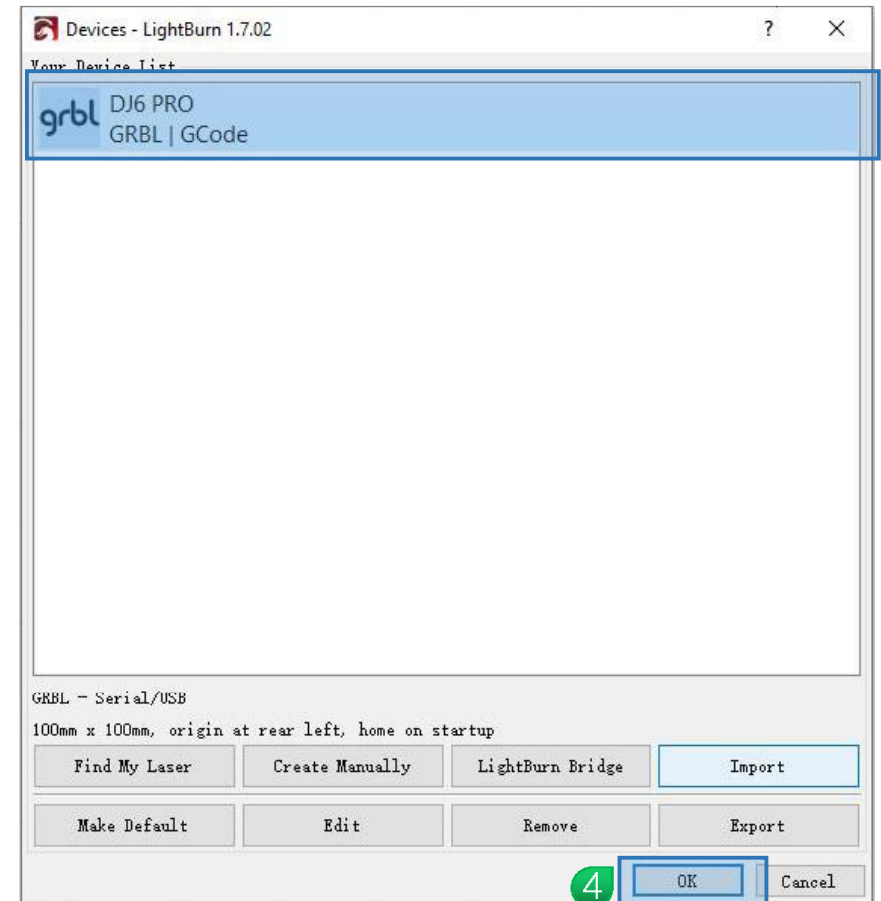1, the machine is plugged into the power cord and data cable to turn on the machine.
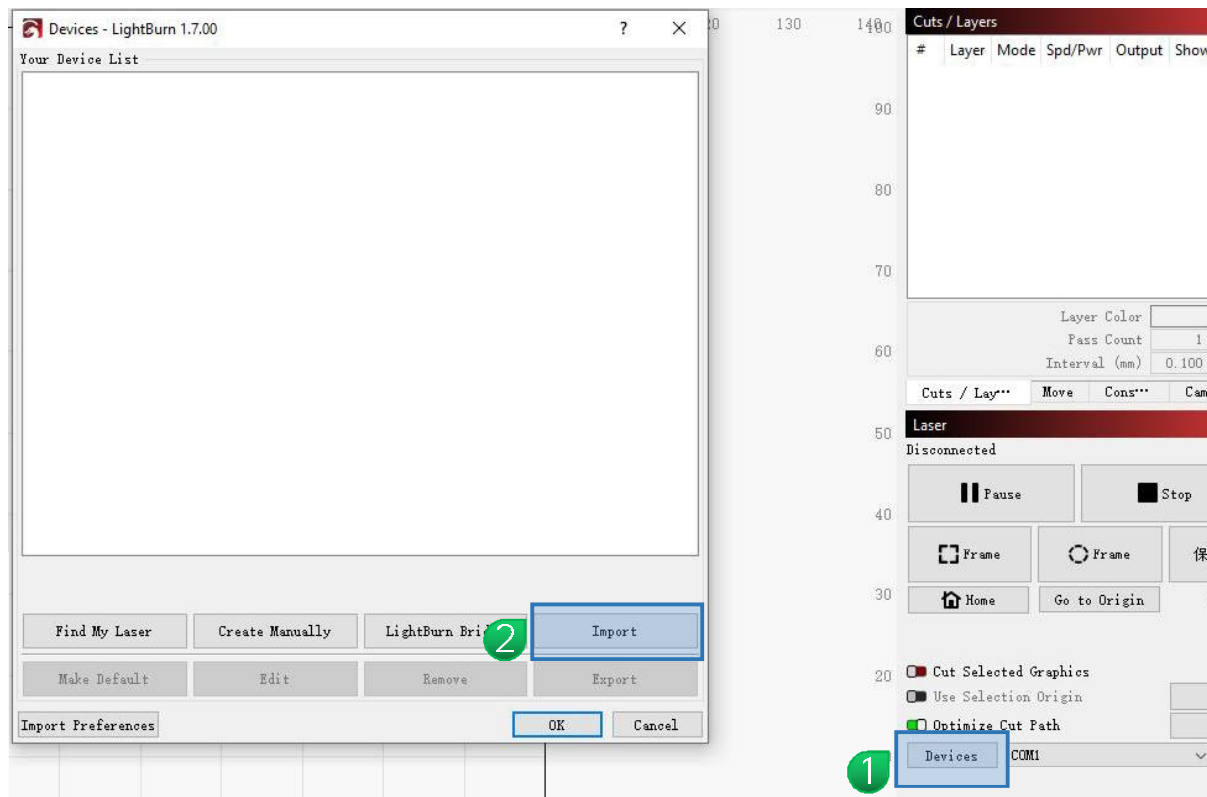
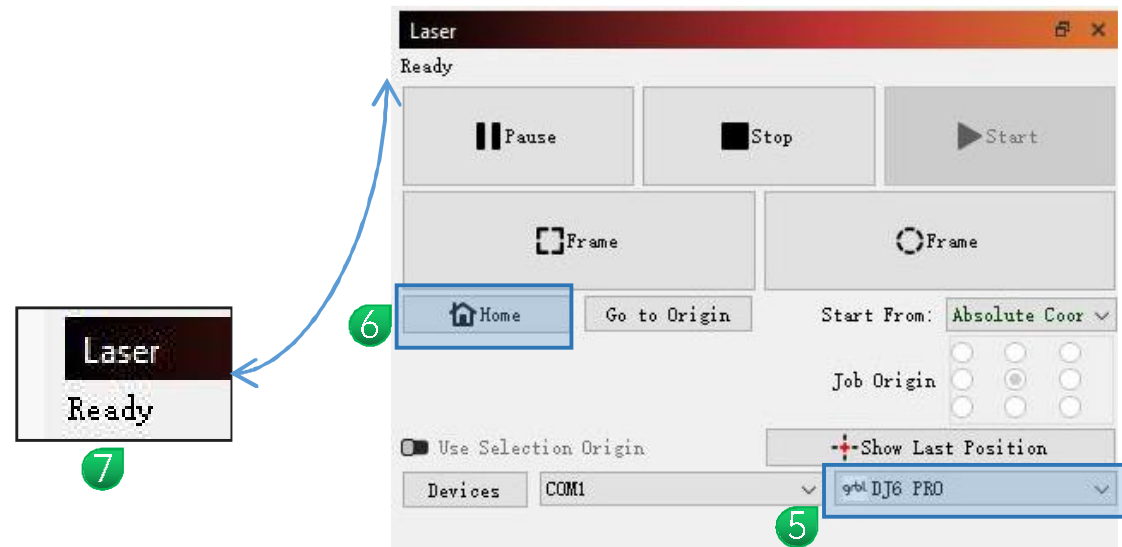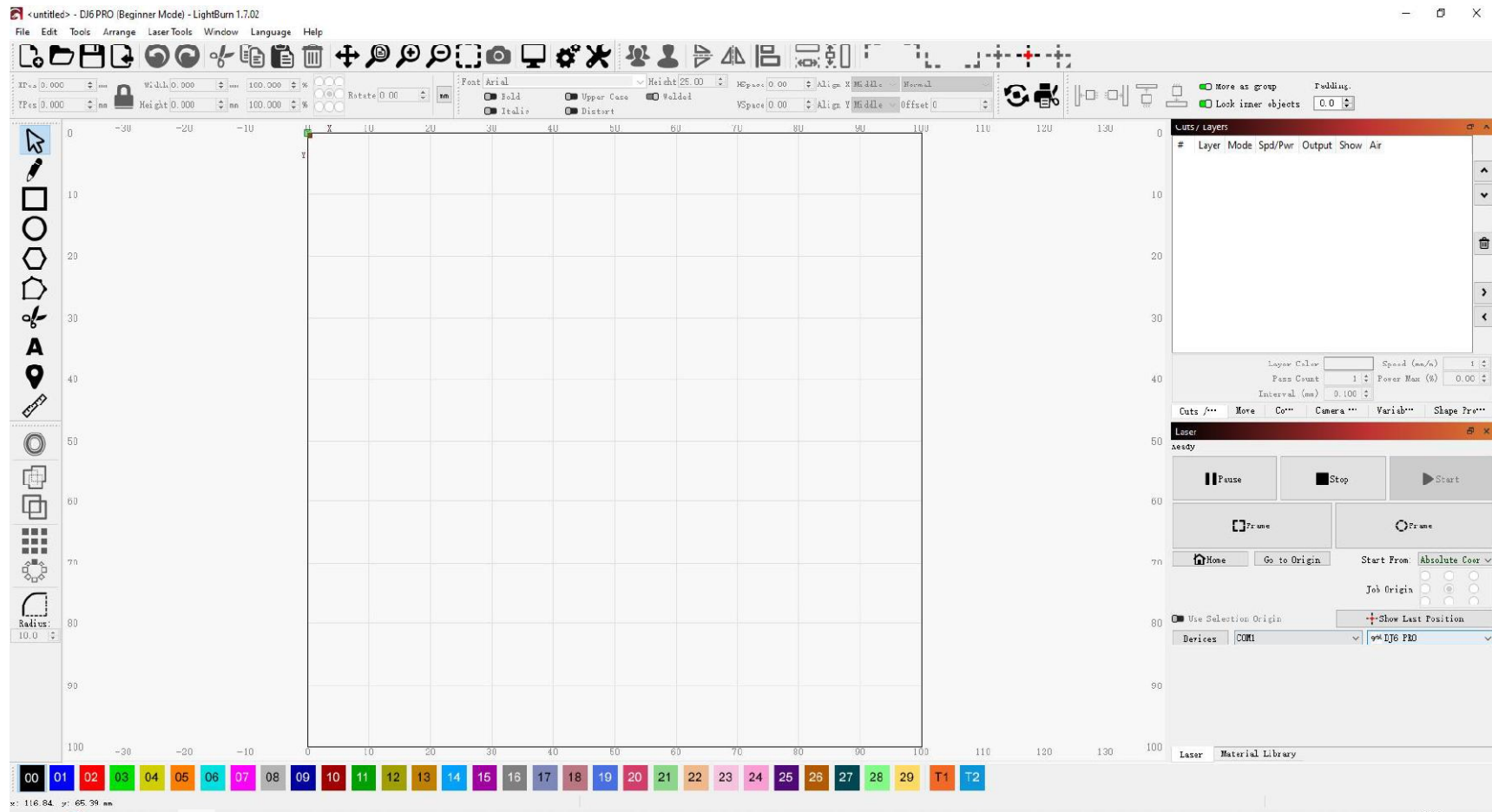1 Click on "Devices"

2 Click on "Import"

3 Import configuration file "DJ6 Pro config.lbdev"

file path "DJ6 Pro\4.Softwarel_GRBL (DJ6 Pro)\lightBurn".

4 Click on "OK"

5 Select the newly added device

6 Click on "Home"The device will reset

7 The display of "Laser Reay" indicates a successful connection.

LightBurn Software Interface

FAQ

DJ6 Pro FAQ

▶The machine does not respond when powered on

1. Not powered on: Check the sockets, switches, body power sockets, etc. to make sure they are plugged in and powered on normally; check whether the power switch is turned on.

▶Cannot connect to computer

1. The USB cable is not connected: Check the computer end of the USB data cable and the machine interface to ensure that it is plugged in place. The USB interface on the front panel of some desktop computers is invalid and needs to be connected to the socket on the rear of the fuselage.

2. The driver is not installed normally: Complete the driver installation according to the operating instructions. After the installation is completed, the computer recognizes the device as a serial port, indicating that the hardware connection is OK.

3. Other special circumstances: Unplug the USB data cable and power supply, completely power off the device for 5 seconds, and then reconnect.

4. This device will conflict with the printer device port. It is recommended to remove the printer data cable before operating.

5. To prevent false alarms from anti-virus software that may lead to unsuccessful driver or software installation, please manually close the anti-virus software before installation.

▶The engraving effect is very light or has no traces

1. Inaccurate focus: Read the focus section of the user manual to get accurate focus.

2. Engraving speed: too fast, caused by the burning time being too short. Read the engraving parameter section of the user manual to readjust the parameters.

3. The picture is too light: The imported picture must be clear. The lines are too thin and the color is too light, which will directly affect the engraving effect.

4. Place the object to be engraved: If the object to be engraved is placed at an angle, the focal length of the laser is fixed, so the object to be engraved must be placed flat and parallel to the fuselage. Otherwise, the focus will be inaccurate, resulting in abnormal engraving effects.

5. Engraving deformation and ghosting: Check whether the screw connection position of the machine is loose. Reset the machine. If the machine is elevated, please observe whether the elevation is stable.