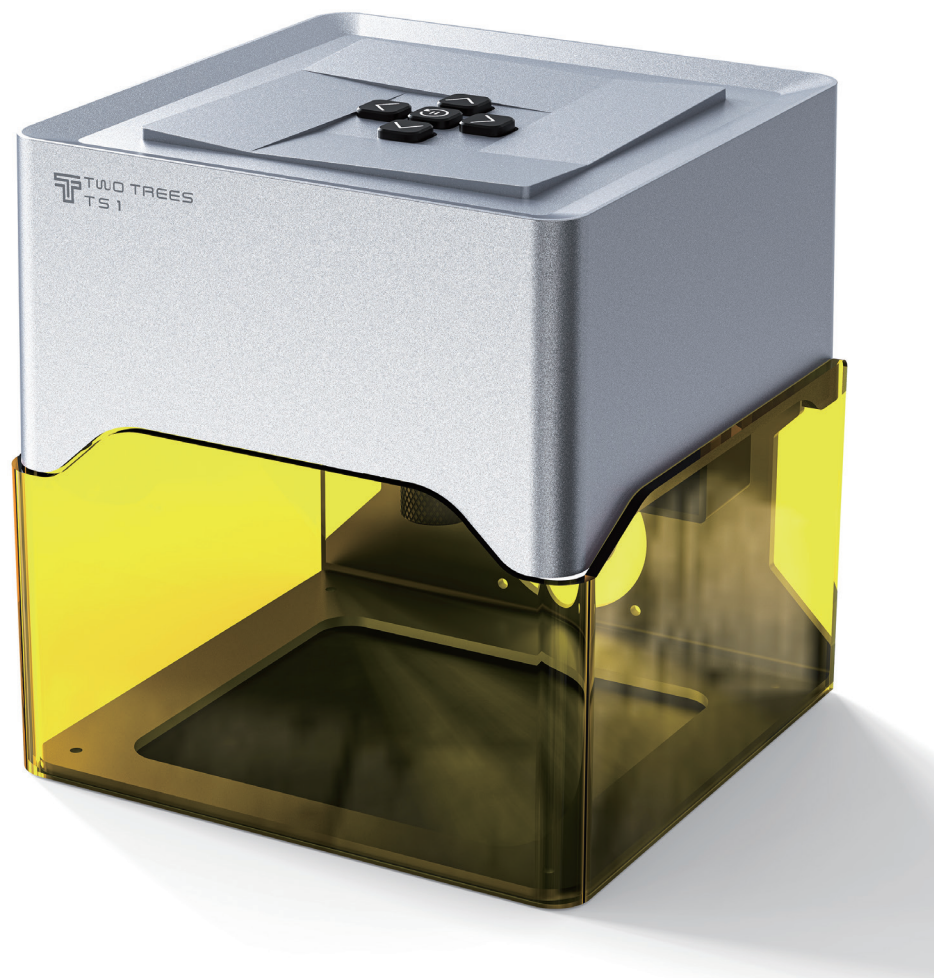




TS1 User Manual

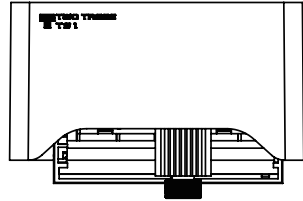
Please read these instructions carefully before use

Note: The picture is for reference only, and the actual product shall prevail

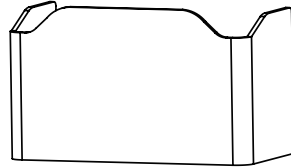
Catalogues

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3.Product Structure	02
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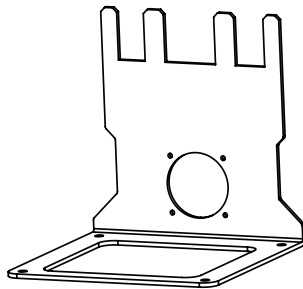
1. List of Accessories



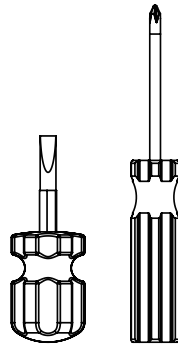
Machine Body



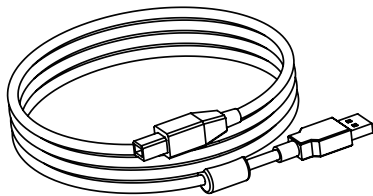
Filter Plate



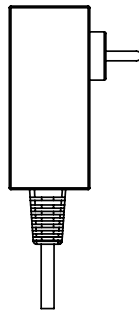
Accessory Foot Stand



Phillips Screwdriver

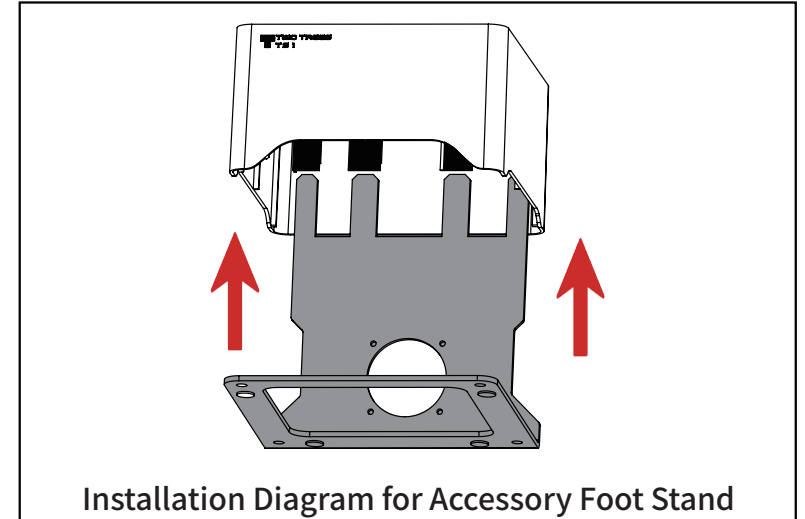


USB Data Cable



Adapter

2. Installation Instructions



Installation Diagram for Accessory Foot Stand

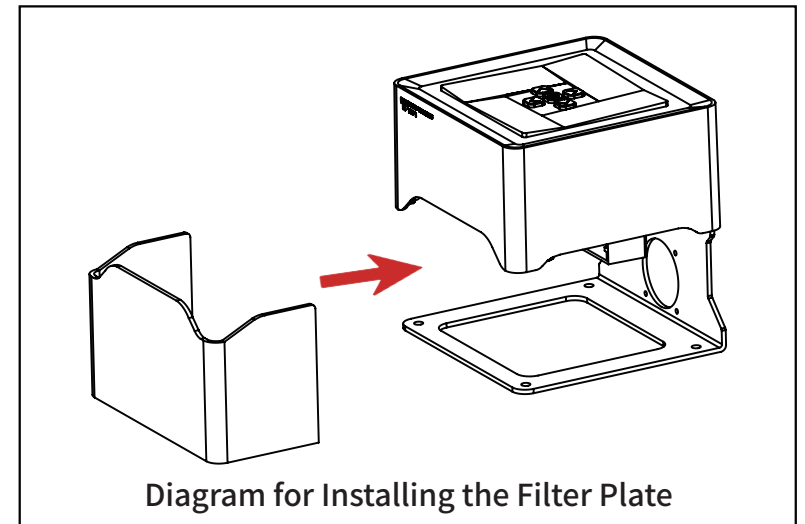
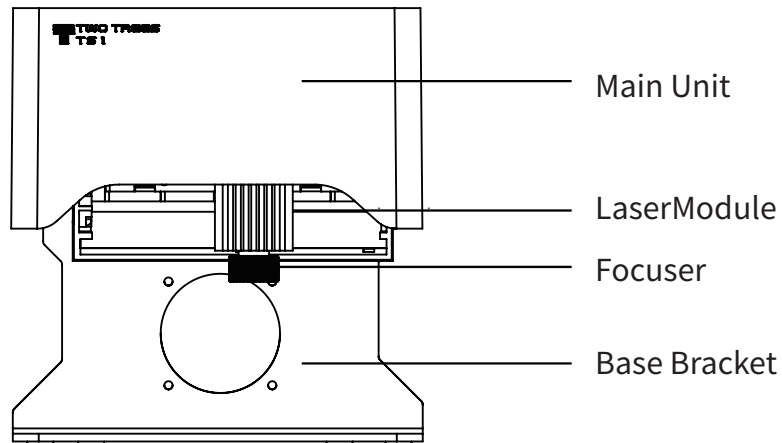


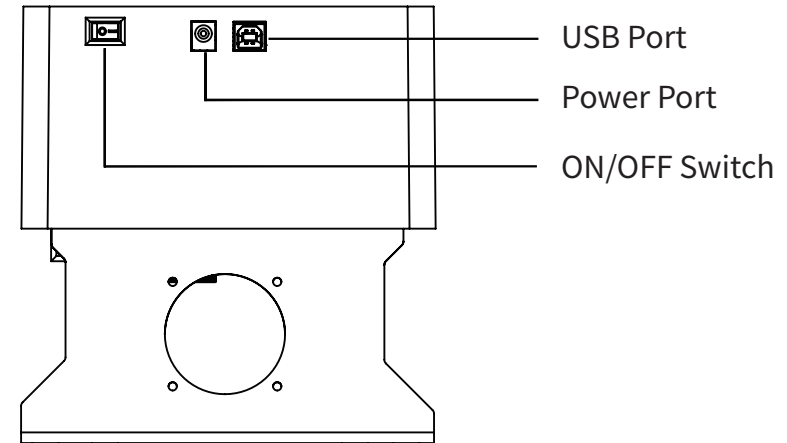
Diagram for Installing the Filter Plate

3. Product Structure Diagram

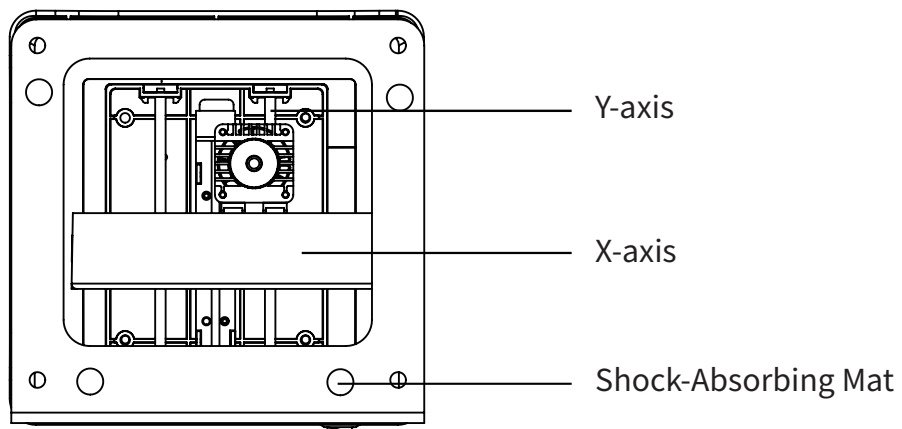
1. Main View



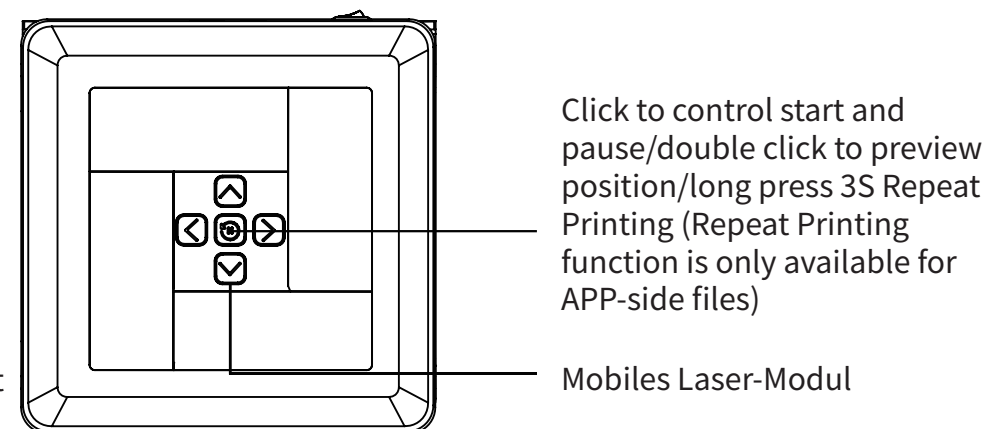
2. rear view



3. Elevation View



4. Top View

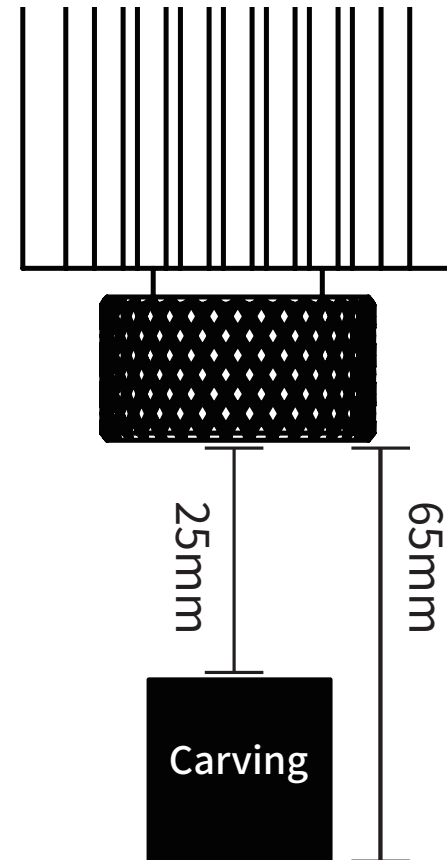


4. Focus Guidelines

Laser Head Focusing Instructions:

Place the object to be engraved flat on the workbench and place the supplied black focus card over it and ensure you wear goggles to protect your eyes. Adjust the focus of the laser head to the finest point, if the focus is not fine enough, engraving may not be possible or the result may be unsatisfactory.

1. Rotate the focuser left or right to minimise the focus/point of light, the smaller the focus the higher the accuracy and the better the result.
2. Optimal focal length: 25-65mm
3. The best effect is when the engraved object is 25-65mm away from the bottom end of the laser head.
4. Re-adjustment of the laser focus is required when engraving objects of different heights.



5. APP Download & Guidelines

1. APP Download & Installation

Mode 1: APP download URL

https://drive.google.com/drive/folders/137dsKVyxcw2bLARS2nsukShmJPHa1ype?usp=drive_link

Mode 2: Scan the QR code below to download



Android



IOS

2. APP connects to machine

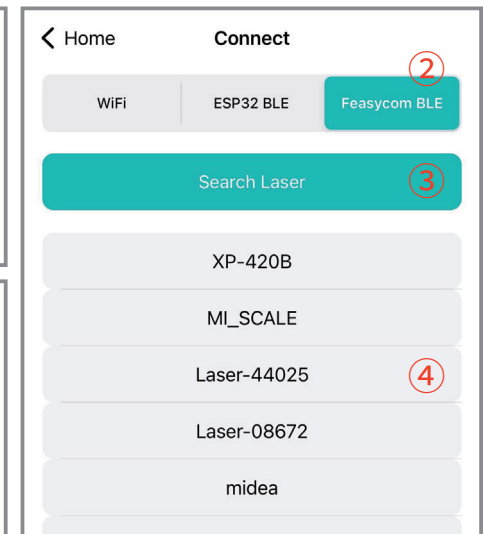
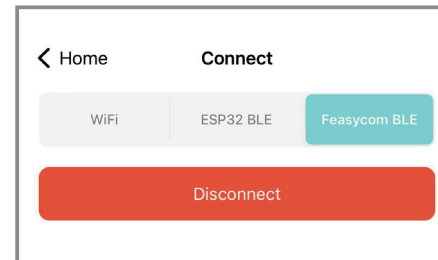
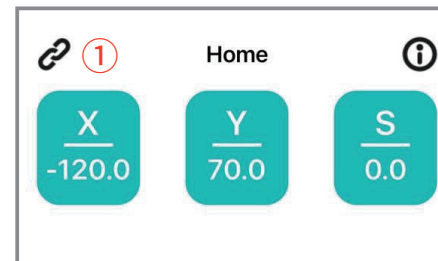
2.1 Connect the device to the power supply

2.2 Enabling Bluetooth on mobile phones

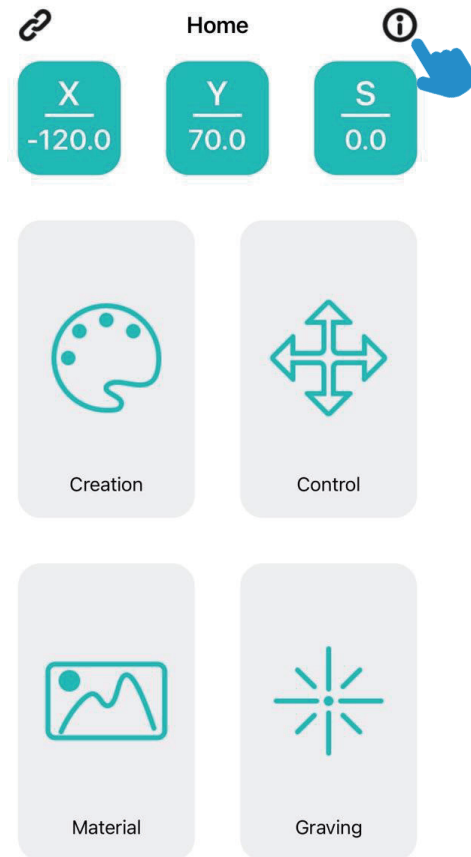
2.3 Open the engraving app and click on the red numbers

①→②→③→④ When ③ shows orange, the connection is successful. Note: (Laser-XXXXX) is the name of TS1 Bluetooth.

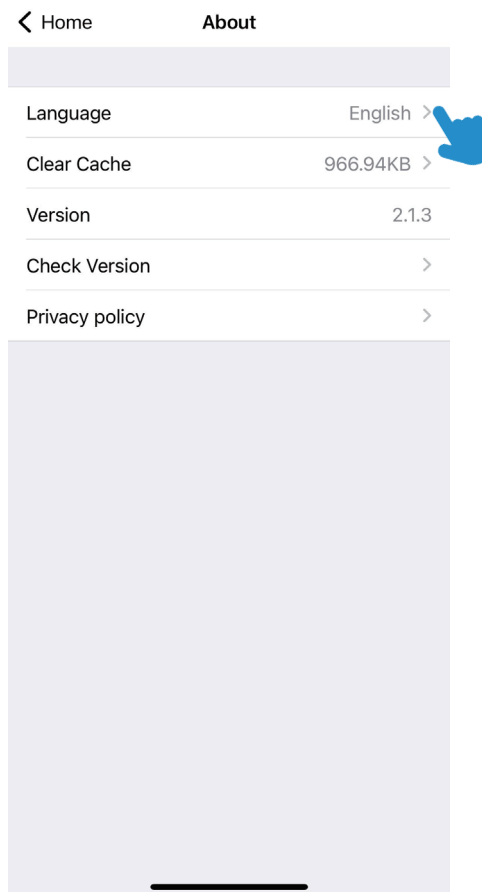
Example: Laser-xxxxx



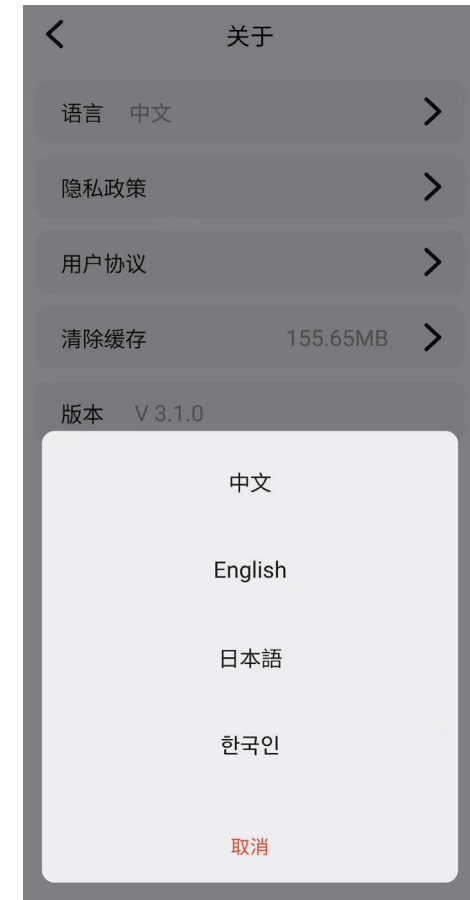
3. Language System Selection



Click on Settings in the upper right corner



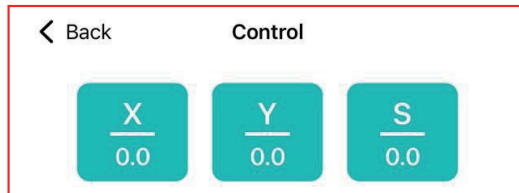
Click on Language Selection



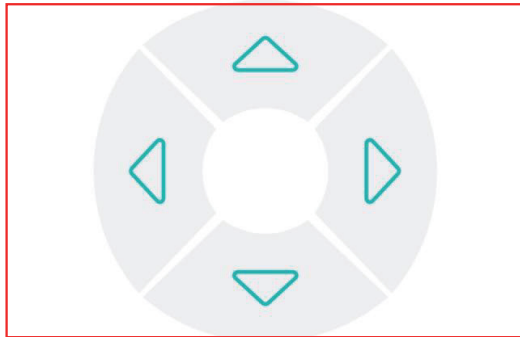
Slide to Select Desired Language

6. Introduction to the use of APP

1. Description of interface icons



X:X-axis coordinate display
Y:Y-axis coordinate display
S:Output power of the laser head



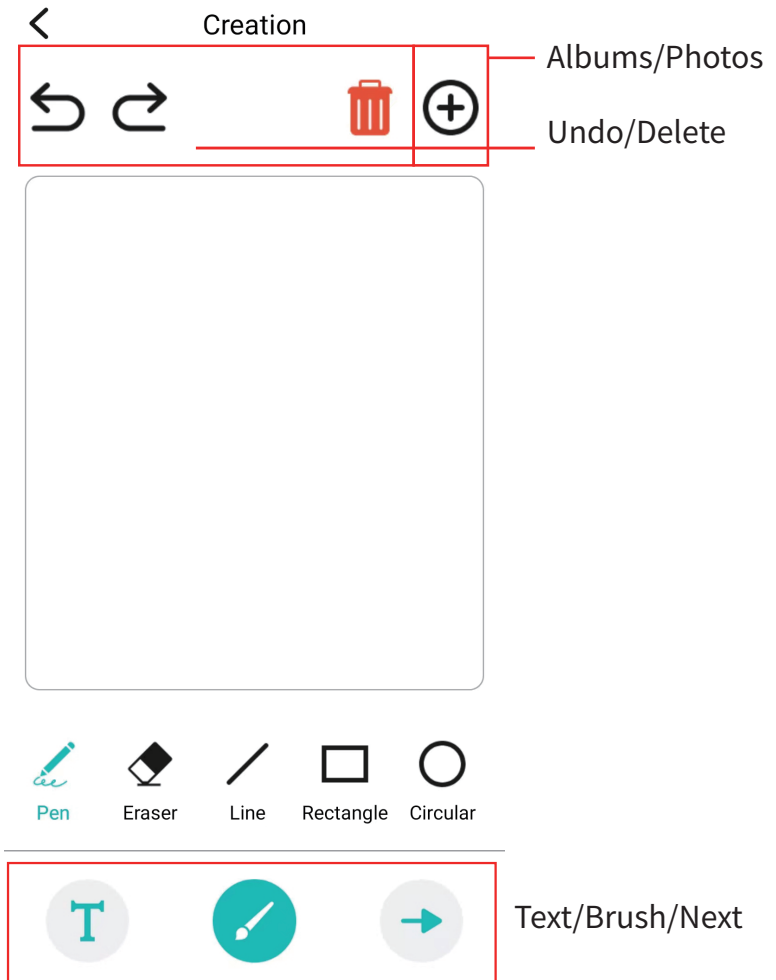
XY axis movement control



Movement speed control
Movement distance control



①Return to zero soft home position
②Positioning the current laser head position as the home position
③Laser on and off



2. Creation and Engraving

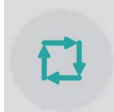
2.1 Return to the home page, click 'Create' to enter the creation interface.

2.2 Importing pictures by selecting the function of taking pictures/albums/drawing etc.

2.3 Use various filter functions, brightness and contrast adjustments for image beautification

2.4 Click Next “”, enter the parameter setting page, the name of the work, size, engraving rate and laser power settings

2.5 On the parameter page click on Control “”, move the engraving head to the desired engraving start point and click on Position “”.

2.6 Go back to the parameter setting page and click on “” on the edge of the patrol.

2.7 Click “” to upload and engrave the file.

Example (take a photo album as an example):

The sequence of screenshots illustrates the following steps:

- Creation:** A blank workspace with a toolbar at the bottom (Pen, Eraser, Line, Rectangle, Circular) and a top bar with navigation icons. A blue hand icon points to the '+' button in the top right corner.
- Style Setting:** The tiger image is loaded. Below it are style options: Gray, Strong, Sketch, and Dither. Sliders for Brightness (100%) and Contrast (80%) are shown. A blue hand icon points to the 'Next' arrow button at the bottom right.
- Parameter Settings:** The image is shown with engraving parameters: File Name (DLC32001), Size (39 x 42 mm), Work Speed (500 mm/min), and Laser Power (500). A blue hand icon points to the 'Next' arrow button at the bottom right.
- Control:** A control panel with X, Y, and S coordinates (all 000), a directional pad, and speed settings (Slow, Medium, Fast). A blue hand icon points to the location pin icon at the bottom.
- Parameter Settings:** The same parameter screen as in step 3, with a blue hand icon pointing to the 'Next' arrow button at the bottom right.

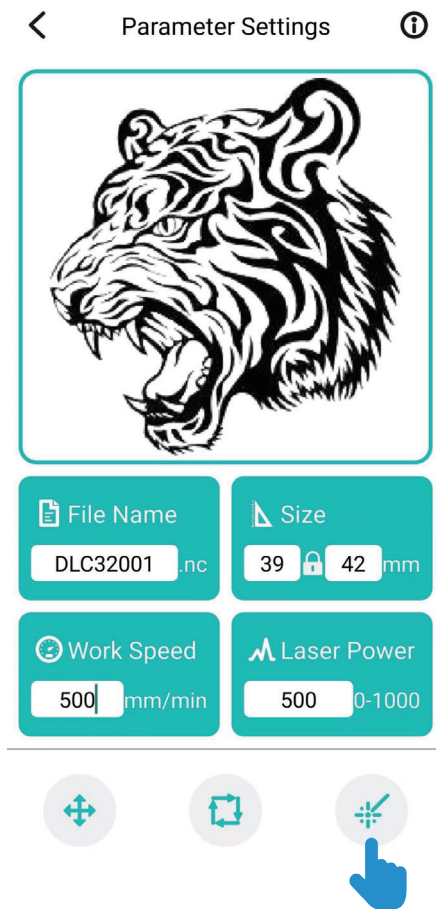
Click to select the image, place it in the box and click next.

Adjust the parameters and click Next

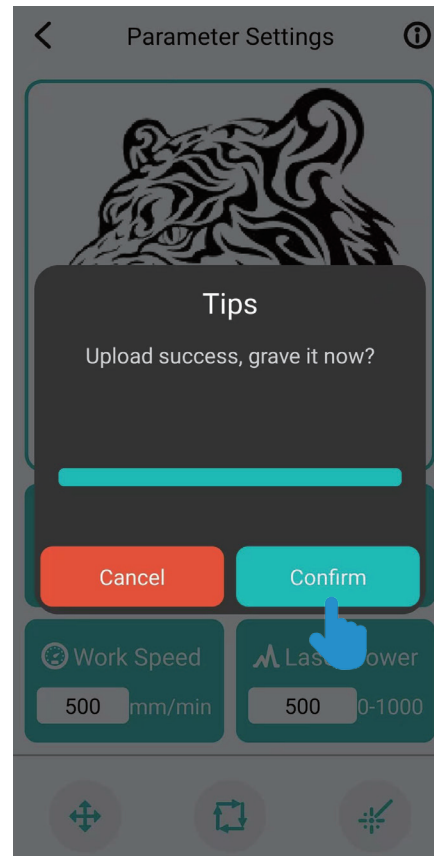
Set the engraving ratio/rate/power and click

Move the laser head to the desired engraving starting point and click on position.

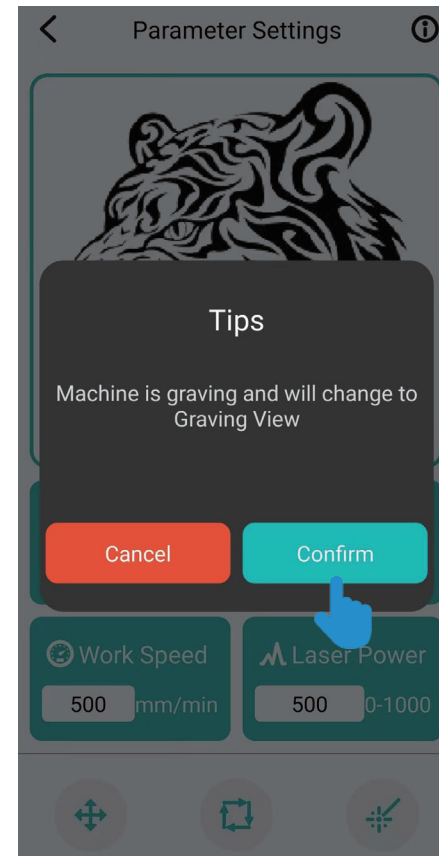
Return to click on the edge of the patrol after setting



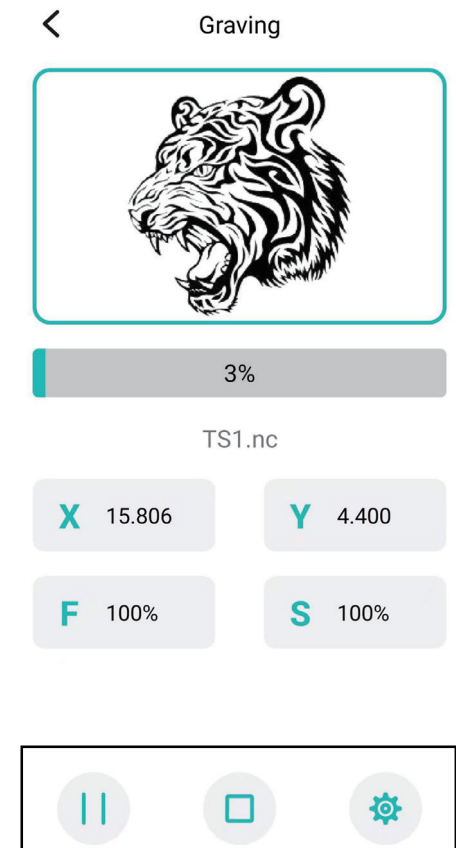
Upload the engraving after the patrol is correct



Click to confirm



Click to confirm



Go to Engraving Page
Start Pause/Cancel Engraving/
Engraving Settings
**Note: Engraving speed and power
can be redefined in the
engraving settings.**

7. PC Software Download Guide

1. PC Software Download Link:

https://drive.google.com/drive/folders/137dsKVyxcw2bLARS2nsukShmJPHa1ype?usp=drive_link

2. File extraction guide

2.1 Click on the pc file

PC	2024/10/26 14:24	文件夹
TS1_APP	2024/10/26 15:36	文件夹

2.2 Selection of required software

01-LaserGRBL	2024/10/28 15:57	文件夹
02-Lightburn	2024/10/26 15:52	文件夹

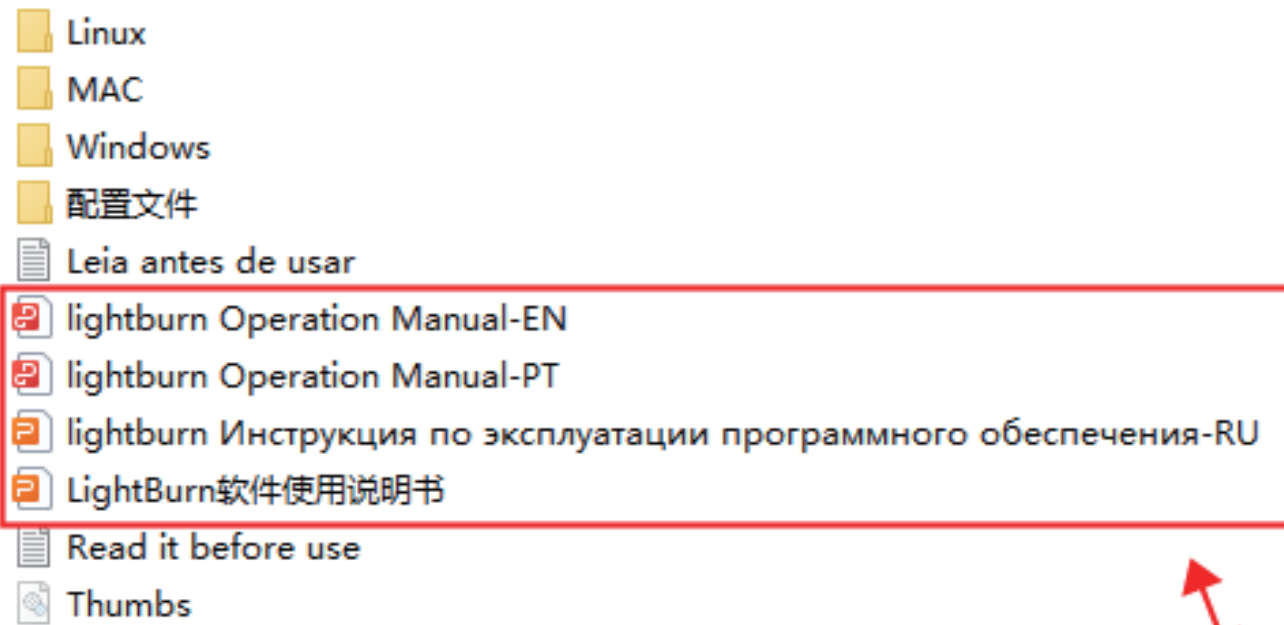
2.3 Select the corresponding computer system to extract the installation file

Linux		
MAC		
Windows		
配置文件		
Leia antes de usar		
lightburn Operation Manual-EN		
lightburn Operation Manual-PT		
lightburn Инструкция по эксплуатации программного обеспечения-RU		
LightBurn软件使用说明书		
Read it before use		
Thumbs		

2.4 Importing configuration files after successful installation

Linux	2024/10/26 11:17	文件夹	
MAC	2024/10/26 11:17	文件夹	
Windows	2024/10/26 14:33	文件夹	
配置文件	2024/10/26 11:17	文件夹	
Leia antes de usar	2024/8/20 17:21	文本文档	1 KB
lightburn Operation Manual-EN	2024/7/24 16:49	WPS PDF 文档	1,012 KB
lightburn Operation Manual-PT	2024/8/20 16:19	WPS PDF 文档	1,488 KB
lightburn Инструкция по эксплуата...	2024/10/26 15:53	PPTX 演示文稿	1,413 KB
LightBurn软件使用说明书	2024/10/26 14:18	PPTX 演示文稿	1,485 KB
Read it before use	2024/7/24 16:48	文本文档	1 KB
Thumbs	2024/7/24 16:49	Data Base File	14 KB

3. Software Usage Instructions



For your convenience in reading and using, we have provided multilingual tutorials. Please extract and use them as needed.

8. FAQ

1. No response when the machine is powered on

- 1.1 Check whether the power plug is energised or not
- 1.2 Check if the adapter plug is loose.
- 1.3 Check if the machine power switch is on.

2. Mobile APP connects to machine without response

- 2.1 Check that the machine is properly powered up and that the laser head is emitting a faint light.
(If the laser head does not emit light, please check whether the wires are loose.)
- 2.2 Check whether the mobile phone is normally open the Bluetooth function.
- 2.3 Check whether the mobile phone is normally connected to the machine
Bluetooth (Laser-XXXXXX)
- 2.4 Restart the machine/mobile phone/APP have to restart the Bluetooth connection.

3. Failure to connect to a computer

- 3.1 Check that the machine is properly powered up and that the laser head is emitting a faint light.
(If the laser head does not emit light, please check whether the wires are loose.)
- 3.2 Check whether the USB cable is loosely connected to the machine/computer.
- 3.3 Whether the computer driver software is normally installed and used.
- 3.4 The computer side of the card needs to be refreshed software to read the machine

4. Unsatisfactory engraving

- 4.1 Focusing problems: check that the laser head focus is already at the minimum point on the object
- 4.2 Whether there is any foreign matter in the laser head lens that affects the laser focus.
- 4.3 Check whether the machine and the engraving object is placed flat
(The flatter the machine and the engraving object, the better the engraving effect)
- 4.4 The ratio of engraving speed to laser power is not satisfactory.
(The higher the ignition point of the engraving object needs to burn the longer time).

5. Offline engraving issues

- 5.1 Operation process: place the engraved object, adjust the laser focus to the minimum to the engraved object, double-click the middle button to start the engraving preview, preview is correct, long press the middle button 3S to start repeat engraving. (After the machine is restarted, it is impossible to carve the engraving file offline before restarting, offline engraving only applies to the engraving file uploaded in the APP).
- 5.2 Engraving does not produce images or unclear: the picture is not clear or the colour of the picture line is too light or the parameters of engraving power and engraving speed are not set correctly. The carving process stops abnormally: the downloading of the picture file is not completed, reload the picture.

9. Security Statement



Avoid staring intently at the laser, which may damage your eyes.



Avoid touching the machine directly while it is working.



You can prevent your table from burning through by placing a metal plate underneath the object you are carving or cutting.



Avoid flammable objects or gases.



Keep away from children or pregnant women.



Do not disassemble the laser without instructions!



Do not use on materials that reflect light.



Anyone in the vicinity should wear protective eyewear when in use.

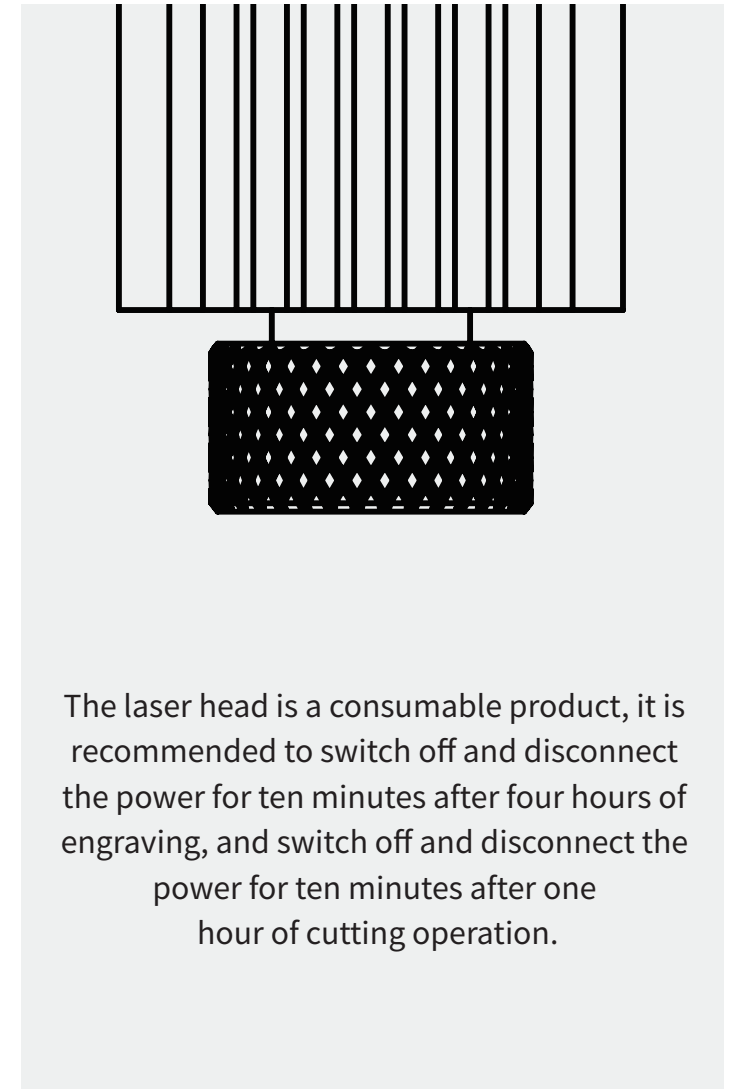


Switch off the power when not in use.



There is a risk of injury from crushing or crushing of nearby objects.

10. Maintenance & Repair



The laser head is a consumable product, it is recommended to switch off and disconnect the power for ten minutes after four hours of engraving, and switch off and disconnect the power for ten minutes after one hour of cutting operation.

11. Product Parameters

Brand	TWO TREES
Model	TS1
Material	Injection Moulded Parts + Aluminium Alloy
Support System	Windong/Android/IOS
Compatible Materials	Plywood / Density Board / Solid Wood Board / Paper / Lacquered Metal / Leather / Plastic / Bamboo
Port Type	Power Port: DC005 Data Port: USB type B
Laser Wavelength	455±5nm
Engraving Area	80X80MM
Inner Cavity Engravng Height	0-30MM
Input Power	24W
Laser Head Power	3W
Supply Voltage	12V 2A
Optimal Focusing Range	25-65MM
Maximum Focusing Distance	70MM
Operating Software	Lightburn/lasergrbl/MKSLaser (Mobile APP)
Package Weight	Estimated 1320g (±50g)
Product Size	157X157X167mm
Package Size	198x206x191mm

FCC compliance statement

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.

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

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

250224002



(For more on the machine, check out the wiki.)

After-sales consultancy:
service@twotrees3d.com