CREALITY CV-Laser Intelligent CV-LaserModule User Manual

CREALITY CV-Laser Intelligent CV-LaserModule User Manual

Contents

Dear customer,

Thank you for choosing our products. For the best experience, please read the instructions before operating the product. Our team will always be ready to render you the best service. Please contact us via the phone number or e-mail address provided at the end when you encounter any problem. Visit out official website www.creality.com to find relevant software/hardware information, contact details and operation and maintenance instructions.

Notes

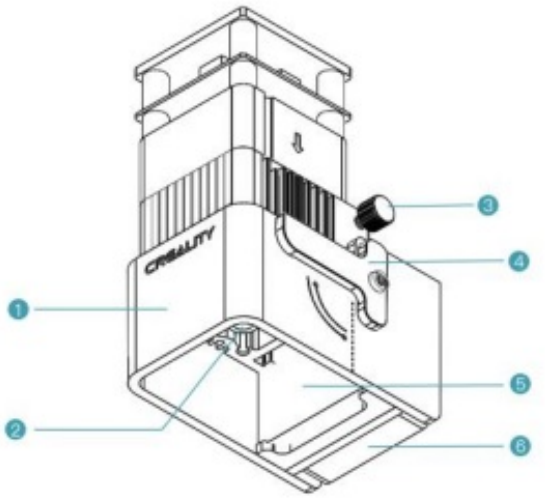
Using the hight-density laser beam to heat up the workpiece surface when engraving or cutting aims to gasify without combustion. While most workpieces are essentially combustible, which may be ignited, leading to open fire and consequently to the machine breakdown and environment contamination. Please follow the following operating principles.

1. It is prohibited to store the machine in areas close to combustible and explosive substances, volatile solvents, or source of heat. Instead, store in a well-ventilated, cool, and dust-free place.
2. Make sure that only the specific attached power cord rather than other similar power cords are used during installation.
3. Do regular maintenance. Clean the product with a dry cloth when the power isturned off, wiping away dust and foreign matter.
4. Ensure to turn the laser at 0°C-35°C. Operation at sub-zero temperature is prohibited.
5. Switch off the machine if it is offline for an extended period of time and unplug the power cord. It is prohibited to run the machine under wet environment or in thunderstorm weather.
6. It is prohibited to come in contact with electronic areas with hands or other tools when the machine is connected to power supply.
7. Touching any moving parts and laser module while the machine is running is prohibited.
8. Wear goggles to prevent vision damage arising from exposure to the laser spot during laser engraving operation.
9. It is advisable to run the machine under well ventilated condition at laser engraving may generate small amount of fume or gas.

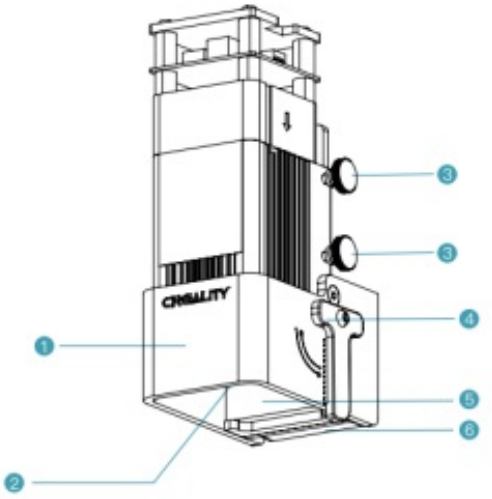
10. Children under 10 years old are not allowed to run the machine without adult presence, which otherwise may lead to personal injury.
11. Put in place fire extinguishers in case of use, which shall be regularly checked. It is prohibited to keep the machine unattended while it is running
12. Users should comply with the laws and regulations of the corresponding countries and regions where the equipment is located (used), abide by professional ethics, pay attention to safety obligations, and strictly prohibit the use of out products or equipment for any illegal purposes. Creality will not be responsible for any violators' legal liability under any circumstance.

Introduction

1.6W



5W



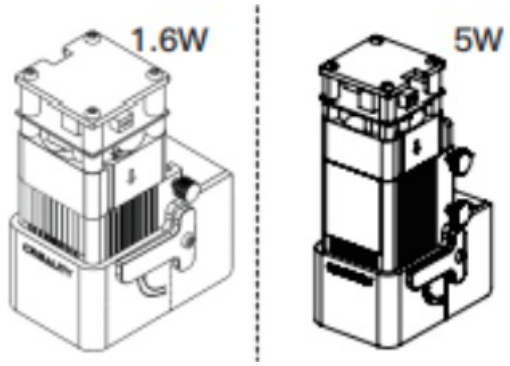
1. Eye protect exhaust hood
2. Laser head
3. Head screw
4. Focusing bar
5. Activated carbon smoking adsorption cotton
6. Axial fan

Equipment Parameters

Name: Laser Module
Model: CV-Laser Module
Size; 185mm x 180mm x 85mm
Net Weight: 400g 460g
Gross Weight: 540g 600g
Power Supply: 24V DC
Laser Source: Semiconductor laser unit
Lase wave length: 450±5nm 455±nm
Lase power: 1.6W 5W
Safety Class: Class IV (FDA classification standard)
Range of operation temperature: 0°C-35°C
Support materials: Cardboard, wood, bamboo, rubber, leather, fabric, acrylic, plastic, etc.

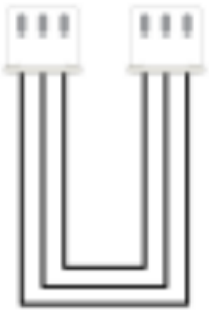
Package Content

- **Laser Module x 1**



- **Laser head fixing plate x 1**

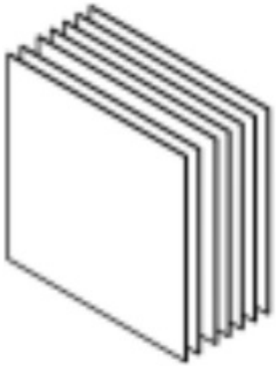
- **Laser module wire x 1**



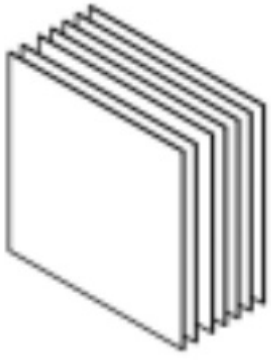
- **Wood plate x 2**

- **Brown paper x 2**

- **Colour card paper x 7**



- **Colour asphalt felt paper x 7**



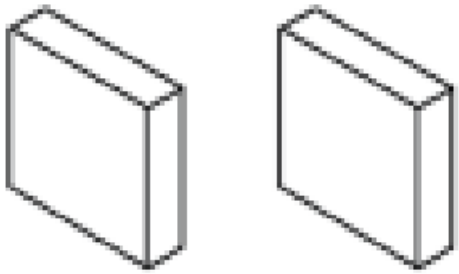
- **M2 Socket head wrench x 1**

- **Soft magnetic strip x 2**

- **Hexagon socket countersunk head screw x 4**

- **Hexagon socket**

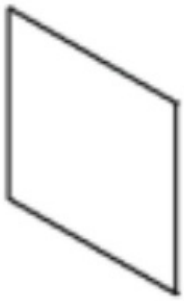
- **Activated smokingadsorption cotton x 2**



- **Safety goggles x 1**

- **Black cable tie x 3**

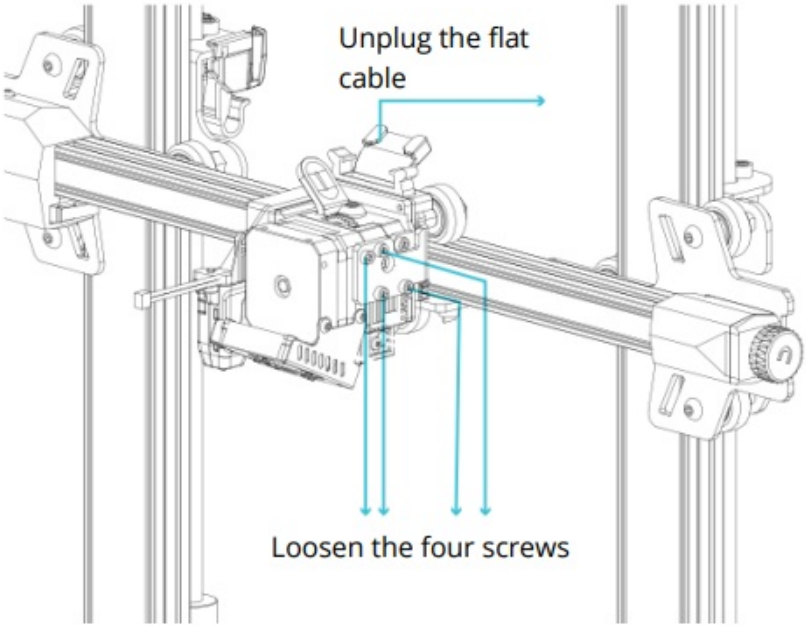
- **Dustless cloth x 1**



- **Instruction manual x 1**

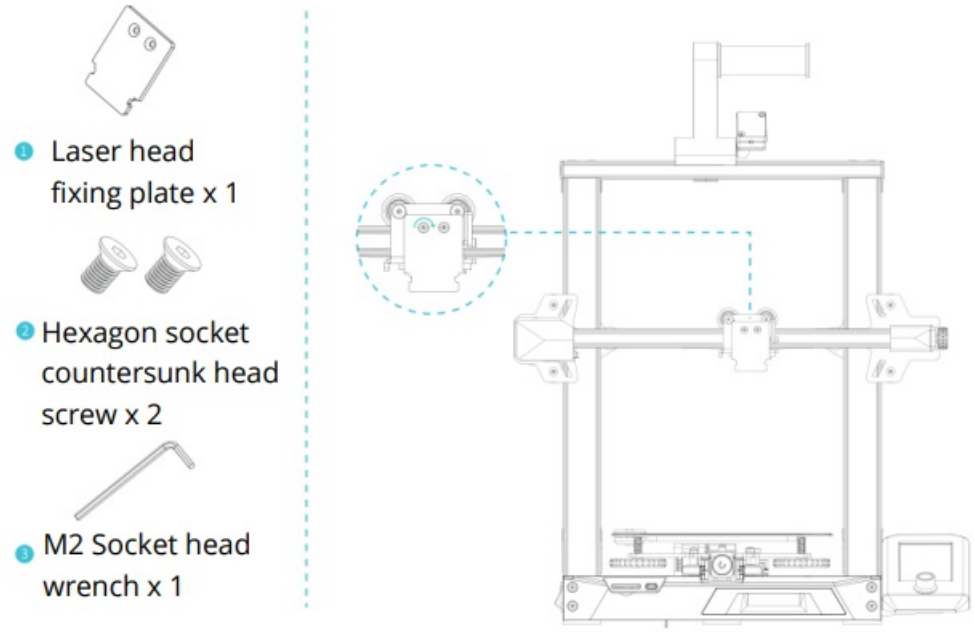
Assembling

T**ake the printer Ender-3 S1 as an example**
Remove the hotend kit
Please make sure that before removing the hotend kit, you should firstly take off the print material from the nozzle while it is heated. Disconnect the power and allow it to cool to room temperature. Unplug the cable and loosen the four screws to remove the hotend kit.



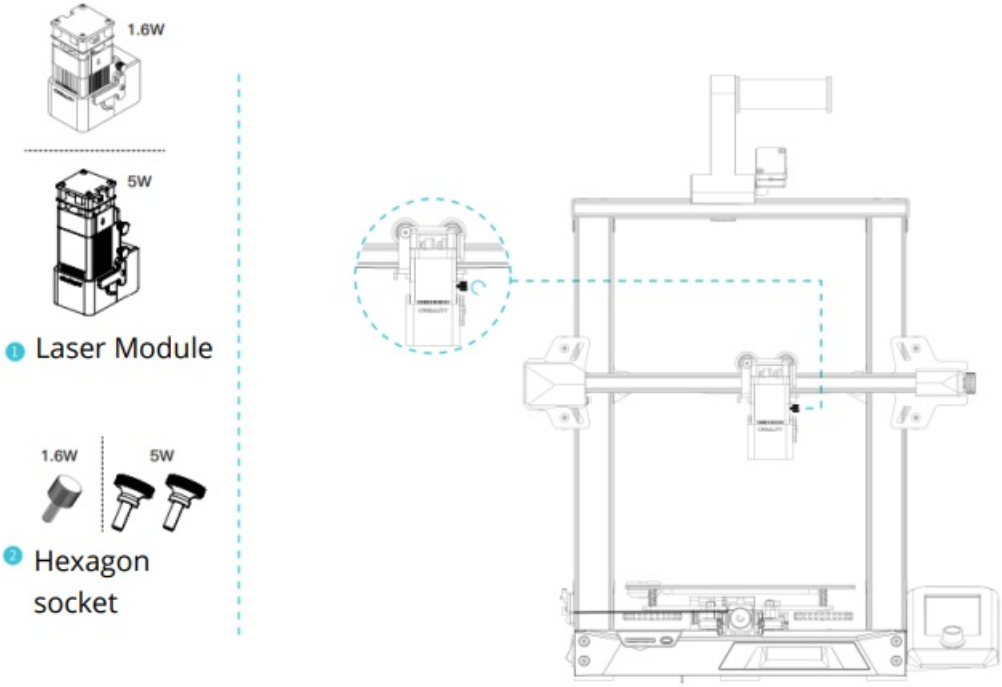
Install the laser head fixing plate

Take out the laser head fixing plate and the two Hexagon socket countersunk head screw from the box, attach the fixing plate to the machine and tighten the two countersunk screws using and Allen key (clockwise).



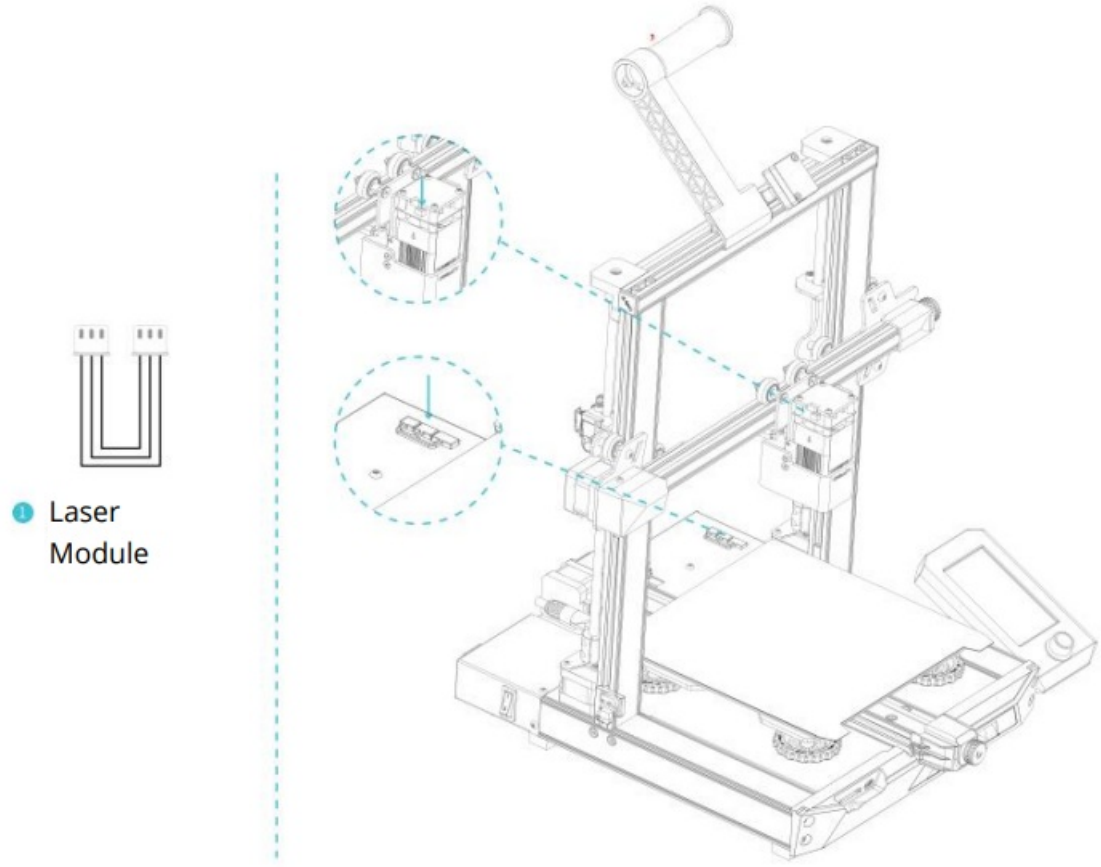
Installing the Laser Module

Take out the Laser Module and hand screw from the box, attach the Laser Module to the fixing plate and tighten it using the hand screw (clockwise direction)



One side of the laser module cable plugs into the machine's expansion port and the other side into the laser head.

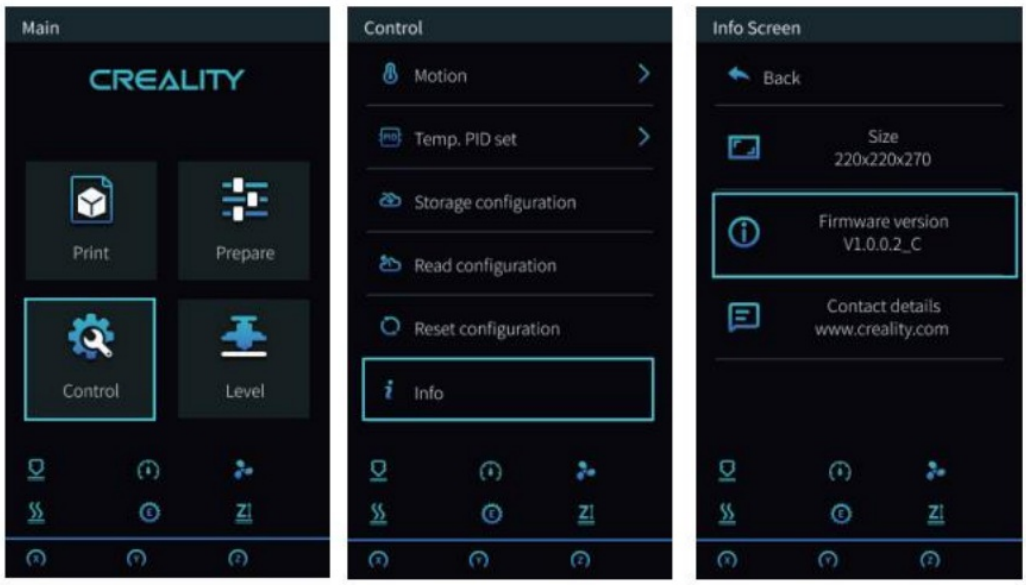
Note: Installation and removal must be carried out in a power-off state, to avoid the risk of burning out the motherboard.



Firmware update

When using the laser module on the Ender-3 S1 for the first time, please check if the motherboard firmware and the screen firmware are the applicable version respectively. The method is as follows.

Connect the machine to the power supply, turn on the power switch on the side, select “Control” – “Info”, the firmware version number should be V1.0.4 or above.



Otherwise, please download the latest version from the website link and update the firmware of motherboard and screen: **https://www.creality.com**/download -> Accessory Firmware -> CV-Laser Module Firmware

Motherboard firmware

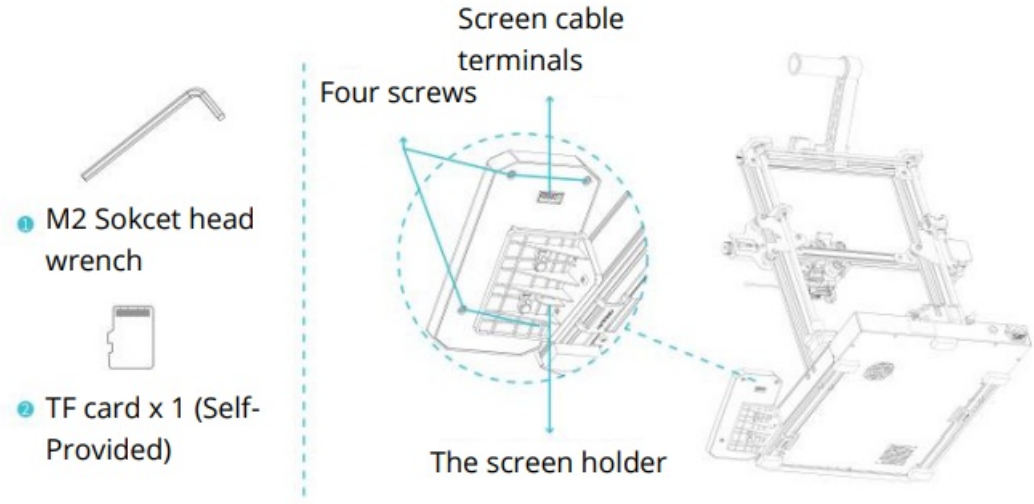
Decompress the UPDATE.rar and copy it to SD card:

Insert the SD card into the machine and turn on the power to update automatically.

Screen firmware

Copy the private file to the TF card:

1. Unplug the screen cable and then remove the screen from the screen holder.
2. Use and Allen key to unscrew the four screws on the back of the screen and remove the lower cover of the screen.
3. Insert TF card into the TF card slot of the motherboard, plug in the screen cable and power on to update automatically.
4. After the update is complete, power off, remove TF card, reinstall the screen and restart the machine.

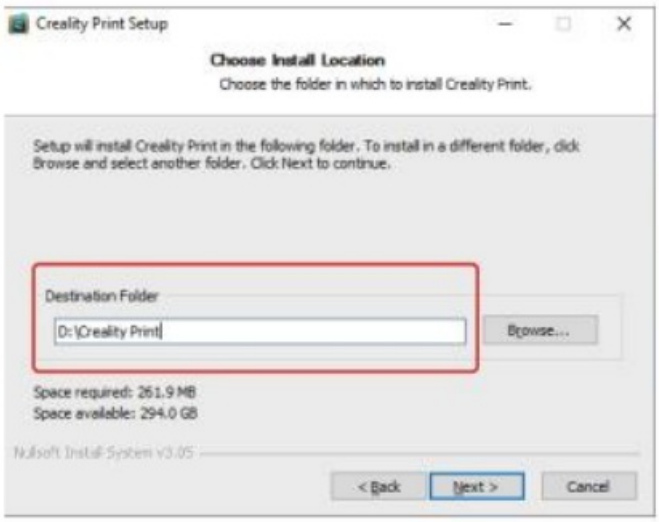


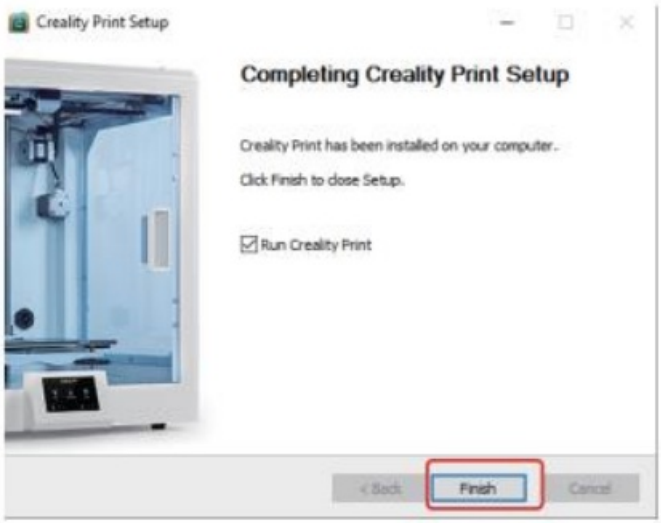
Software installation

Please visit the following weblink Creality_Print: https://www.creality.com/download

Creality_Print either Windows or Mac system, please choose the right software version when download.
D**ouble click to open the software installation package, click “Next” – “Accept”**

Confirm the installation location of the software, click “Browse…” – “Next” – “Install” (not recommended to install on C drive) – “Finish”





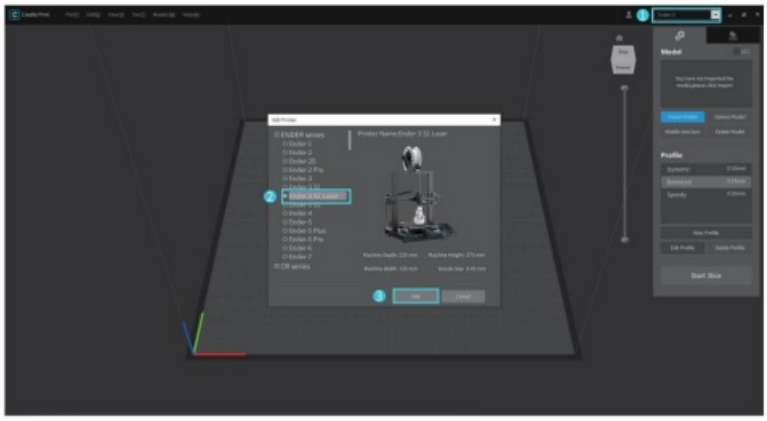
Software Intro

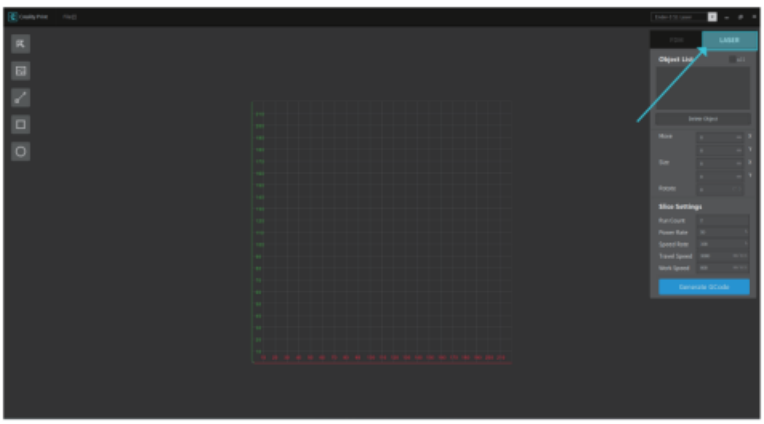
Open the Creality_Print software and click on the navigation button at the top right to see the basic features.

Software usage

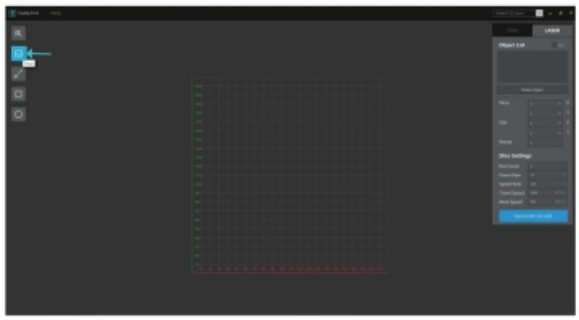
1. Add a printer

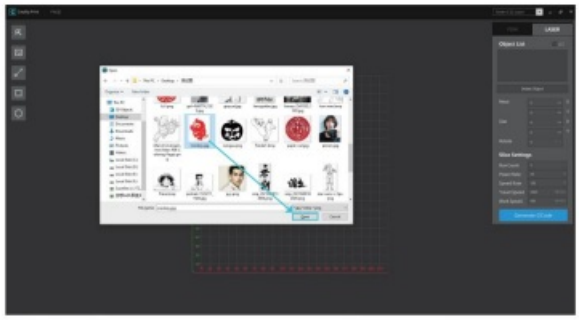
   Take the Ender-3 S1 Laser as an example, click on the locations as shown to add your machine to turn.





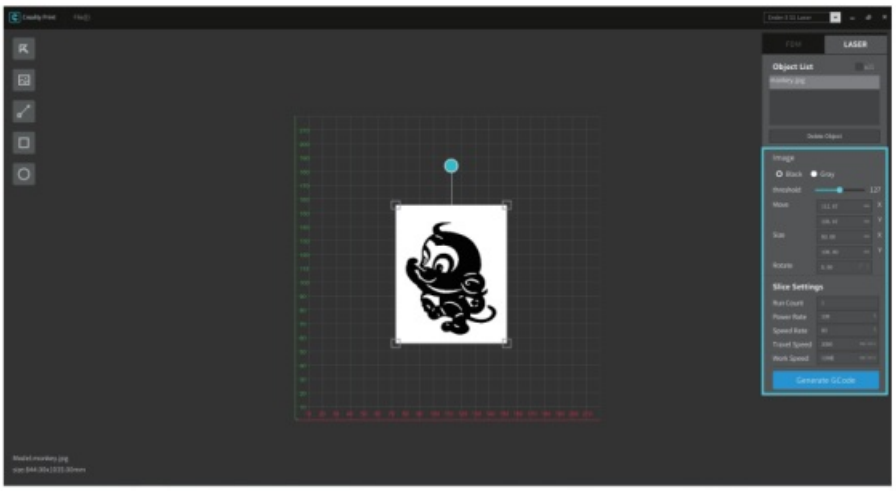
2. **Make sure the current status is “Laser”**
3. **Click on the “Picture” button on the left and find the image file you need to engrave. Open to import the**



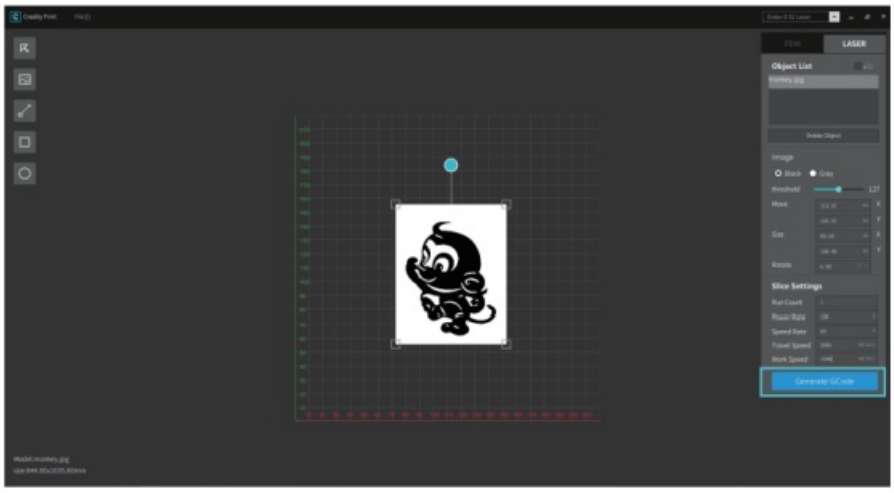


picture into the CrealityPrint software

4. **Adjust the position, size, rotation angle and other parameters of the file in the right-hand console, setting the processing mode and working parameters, finally preview the processing effect of it**

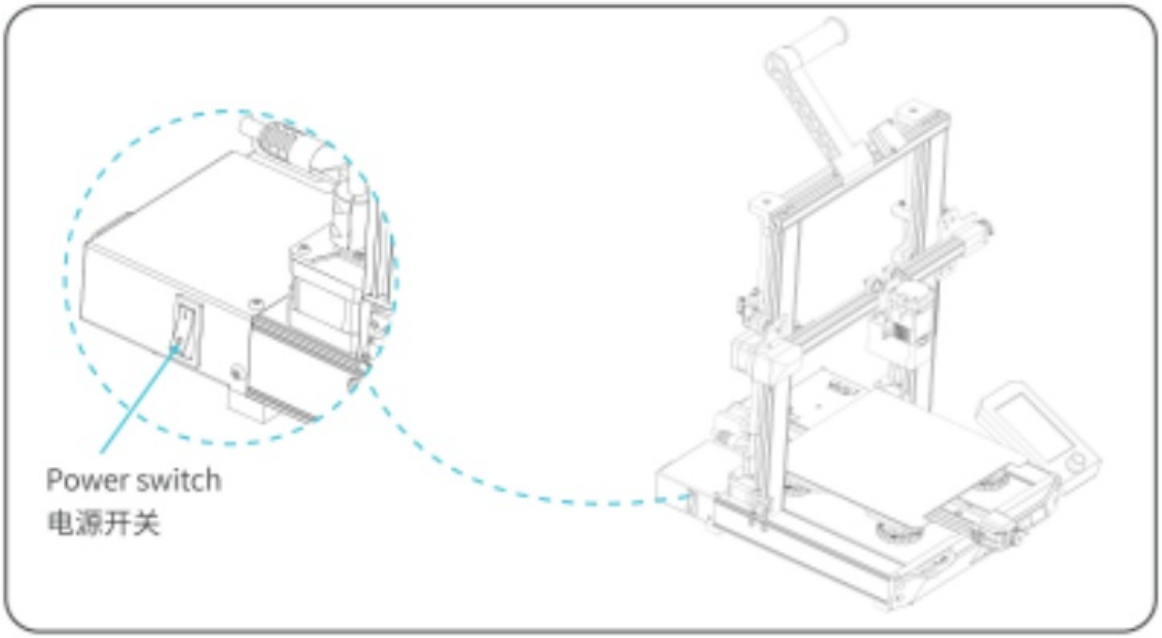


5. Finally, click on “Generate G-Code” to save the engraving file on the SD card

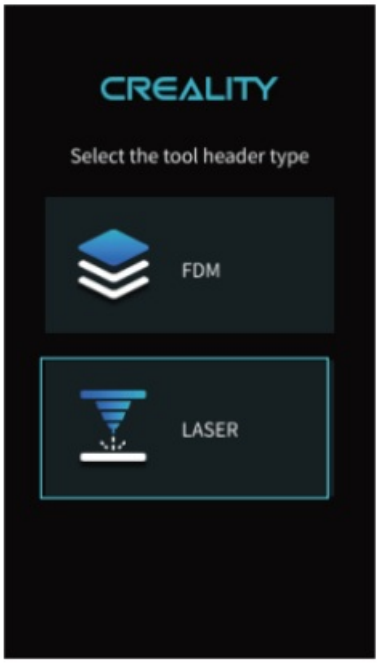


Engraving

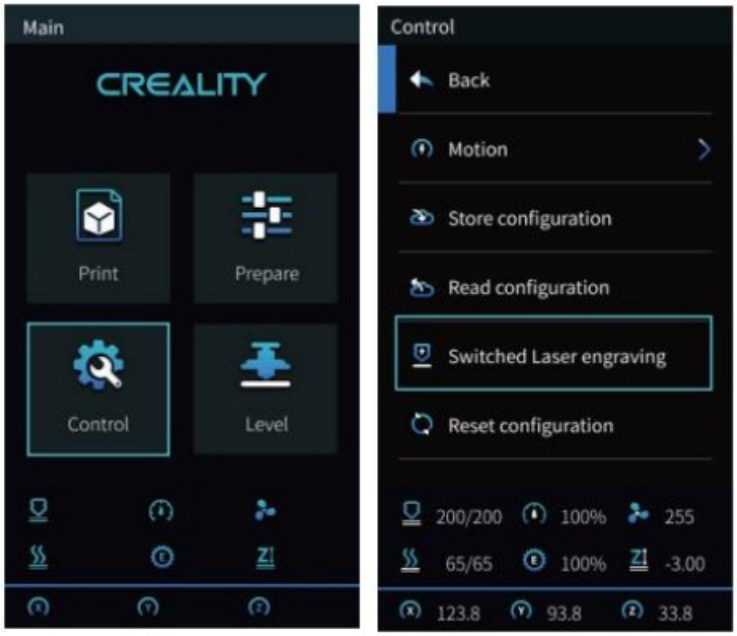
1. Insert the SD card into the machine and turn on the power switch on the side



2. **After the machine is switched on, if you are using it for the first time, please select laser engrave.**

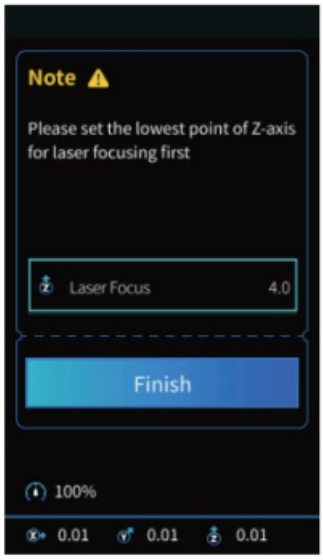


3. **To switch from fusing to laser engrave, select “Control” – “Switched Laser engraving”.**

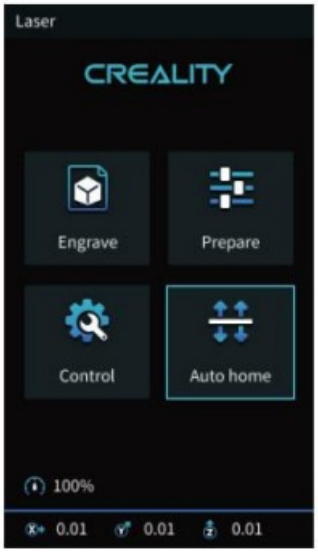


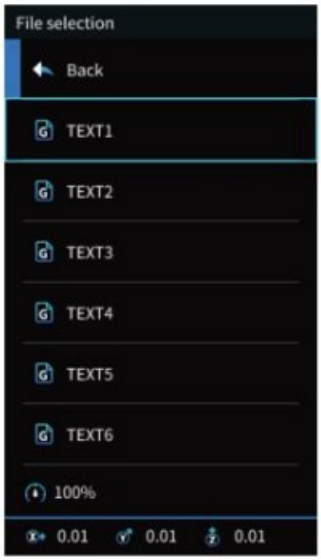
4. **The software pops up the following prompt box. Please ensure that the laser module is installed correctly (note that the laser module must be installed and removed only when the power is off) and select “Confirm**

5. **Please place the engraving material under the laser head, counter-clockwise push the fixed focus bar, adjust the laser focus to the appropriate value through the knob (different thickness of the material corresponding to different values), until the focusing bar touches the engraved material surface when natural vertical down. Finally, clockwise push the focusing bar until it is attached by the magnet, then select “Finish”.**

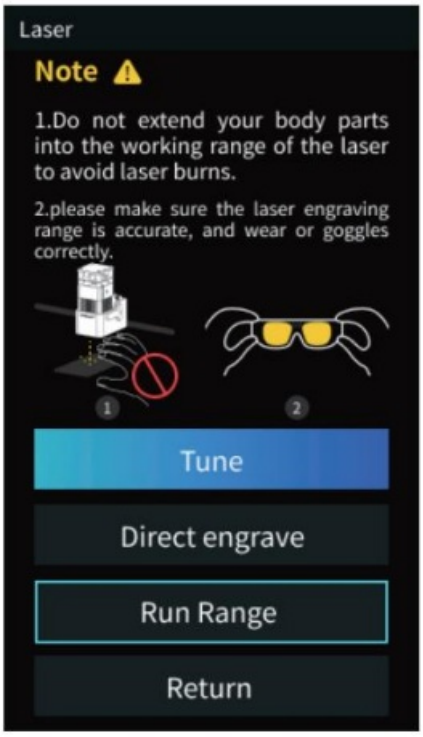


6. **Return to the main interface, select “Auto Home”, wait for the machine back to zero completed.**





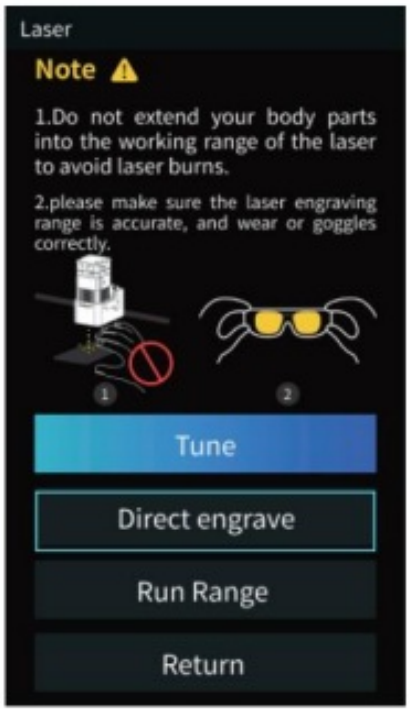
7. **Select “Engrave” and press the knob to confirm.**
8. Select “Run Range”, the laser head will move repeatedly around the maximum X and Y edges. You can adjust



the engraving material to the right position.

9. Press the “Directly Engrave” to start engraving.

   If you need to pause during engraving, please select “Pause” and select “Print” again for the machine to continue. If you need to cancel the engraving task, please select “Stop”.

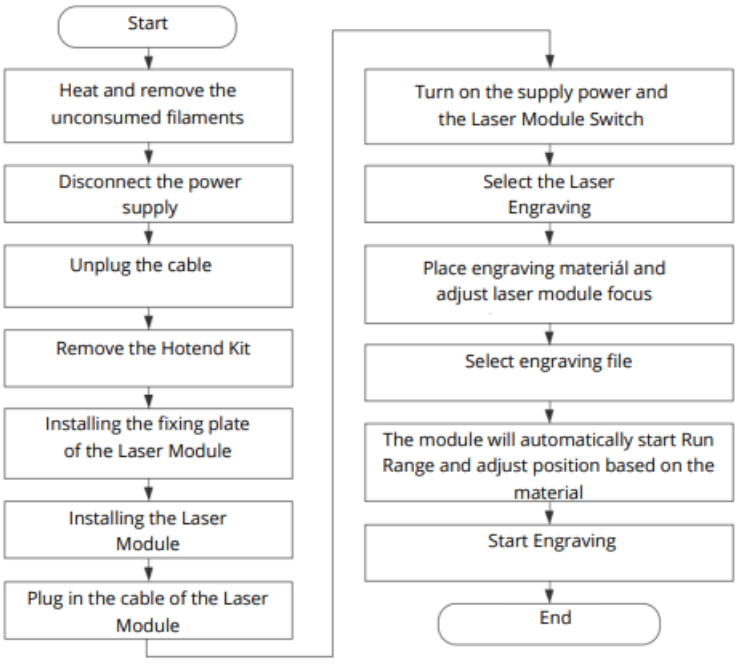


Caution

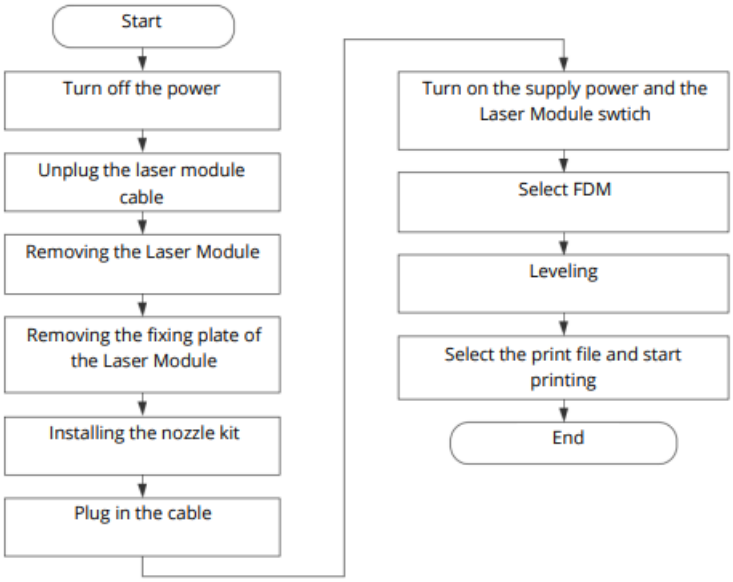
When the engraving or cutting thin objects (e.g. paper), the laser may penetrate the object and leave marks. It is recommended to put a flat object which laser cannot penetrate, such as aluminium or stainless-steel plates, before you put engraving material.

User operation guide

- FDM -> Laser Engraving



- Laser Engraving -> FDM



Warranty Conditions

A new product purchased in the Alza.cz sales network is guaranteed for 2 years. If you need repair or other services during the warranty period, contact the product seller directly, you must provide the original proof of purchase with the date of purchase.

The following are considered to be a conflict with the warranty conditions, for which the claimed claim may not be recognized:

- Using the product for any purpose other than that for which the product is intended or failing to follow the instructions for maintenance, operation, and service of the product.
- Damage to the product by a natural disaster, the intervention of an unauthorized person or mechanically through the fault of the buyer (e.g., during transport, cleaning by inappropriate means, etc.).
- Natural wear and aging of consumables or components during use (such as batteries, etc.).
- Exposure to adverse external influences, such as sunlight and other radiation or electromagnetic fields, fluid intrusion, object intrusion, mains overvoltage, electrostatic discharge voltage (including lightning), faulty supply or input voltage and inappropriate polarity of this voltage, chemical processes such as used power supplies, etc.
- If anyone has made modifications, modifications, alterations to the design or adaptation to change or extend the functions of the product compared to the purchased design or use of non-original components.

Dear customer,

Thank you for purchasing our product. Please read the following instructions carefully before first use and keep this user manual for future reference. Pay particular attention to the safety instructions. If you have any questions or comments about the device, please contact the customer line.
www.alza.co.uk/kontakt
✆ **+44 (0)203 514 4411**

Documents / Resources

	**CREALITY CV-Laser Intelligent CV-LaserModule** [pdf] User Manual CV-Laser Intelligent CV-LaserModule, CV-Laser, Intelligent CV-LaserModule, CV-LaserModule

References

- alza.at
- alza.co.uk
- alza.de
- alza.hu
- alza.sk
- CREALITY - Official Website, Leading 3D Printer Supplier & Manufacturer
- 3D Printer Slicer Software& Firmware Download - Creality 3D