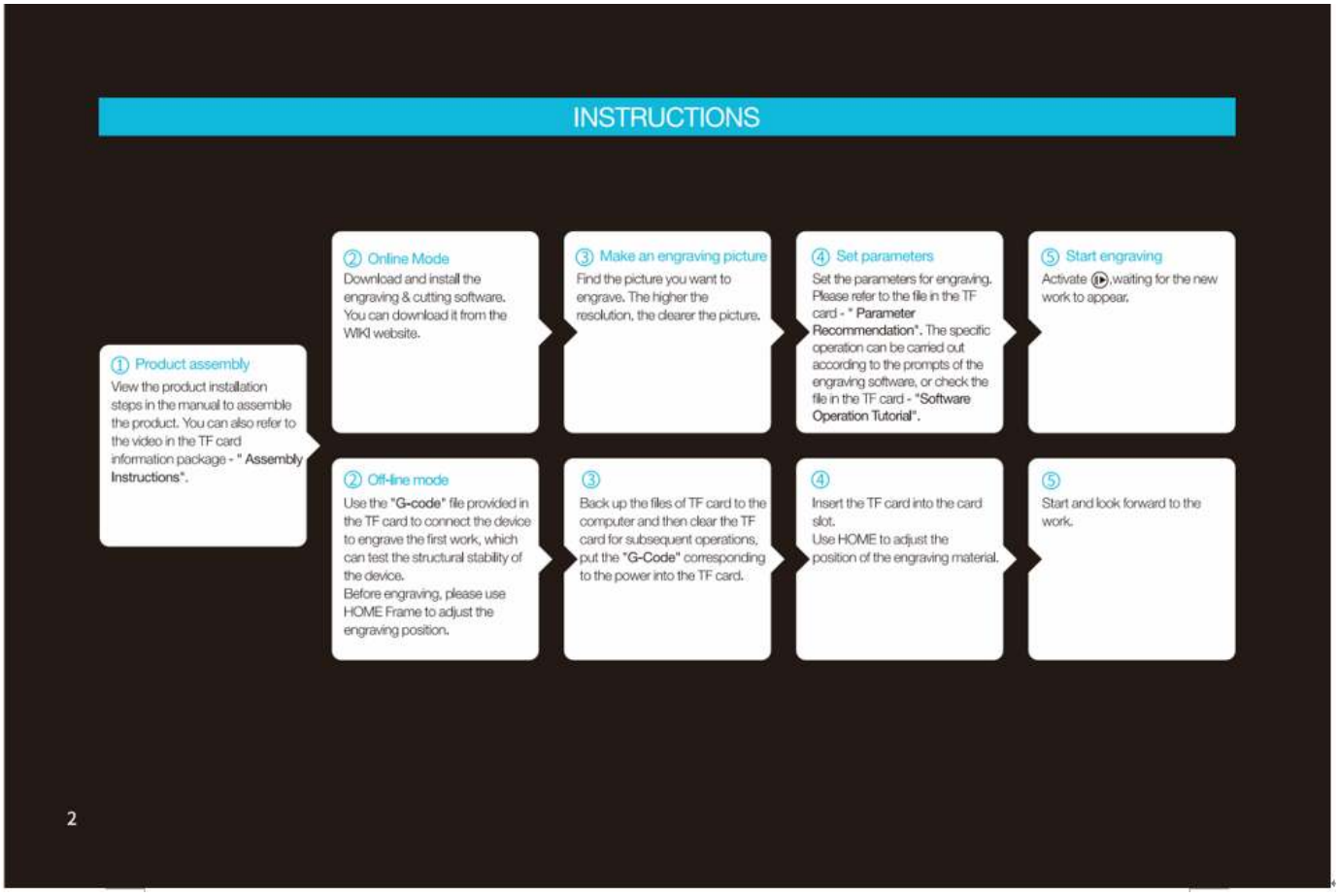
User Manual

CR-Laser Falcon



Thank You Note

Dear Users,

Thank you for choosing CrealityFalcon. For your convenience, read this manual carefully before using, and please follow the instructions. On this journey, we look forward to the endless possibilities you create. You can also share your works on Falcon Laser social media platform and learn from each other.

CrealityFalcon team is always here to provide you with quality services. If you encounter problems during use, please contact us by phone or email according to the information provided at the end of the manual. Besides, video instructions are available on Wikipedia(wiki.creality.com/en/laser-engraver) for your reference. You can also visit CrealityFalcon's official website (www.crealityfalcon.com) to learn more about software and hardware, contact, operation, maintenance, etc.

CATALOGUE

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01 SECURITY STATEMENT

When a laser engraver engraves or cuts materials, it casts high-density laser beam that heats the surface to vaporize materials without burning them. But most materials are inherently flammable and can be ignited, which may burn the device and the surroundings.

⚠ Warning:

1. Do not place the device near flammable and explosive materials, volatile solvents or heat sources. Please place the device in a ventilated, cool and dust-free environment;
2. Please use the adapter and power cord provided with the device;
3. Regularly clean the body and laser module with an anti-static brush or a dry cloth when the device is powered off;
4. The working temperature of the power adapter is 5°C-35°C. Avoid using this product in a humid environment, and do not use it in thunderstorm weather;
5. If the device isn't used for a long time, please turn off the device and disconnect the power cord;
6. When the device is connected to the power supply, please do not touch the electronic areas with your hands or other tools. It is forbidden to plug and unplug the laser module cable when the device is powered on;
7. When the device is running, please do not touch any part of the moving system and laser module;
8. When working, do not look directly at the laser and wear goggles to protect your eyes;
9. Smoke or smell may be produced during laser engraving and cutting. It is recommended to operate in a well-ventilated environment;
10. Children please operate under adult supervision;
11. Have a fire extinguisher ready just in case. Regularly maintain and inspect fire extinguishers;
12. It is forbidden to leave it unattended while the device is working;
13. Users should abide by the laws and regulations of the corresponding country and region where the equipment is located (where it is used), practice professional ethics and pay attention to safety obligations. It is strictly forbidden to use our products or equipment for any illegal purposes. If there is any violation, we will not be responsible for the relevant legal responsibilities;
14. Before working, place a flat object that the laser cannot penetrate, such as an aluminum plate on the workbench, and then place the processing materials.

02 PACKING LIST


The Principal Part


Laser Module


Power Supply

Basswood*2 (150*150*2mm)


Goggles


Honeycomb Workbench


Aluminum Plate

Dust-free Cloth


Open-end Wrench

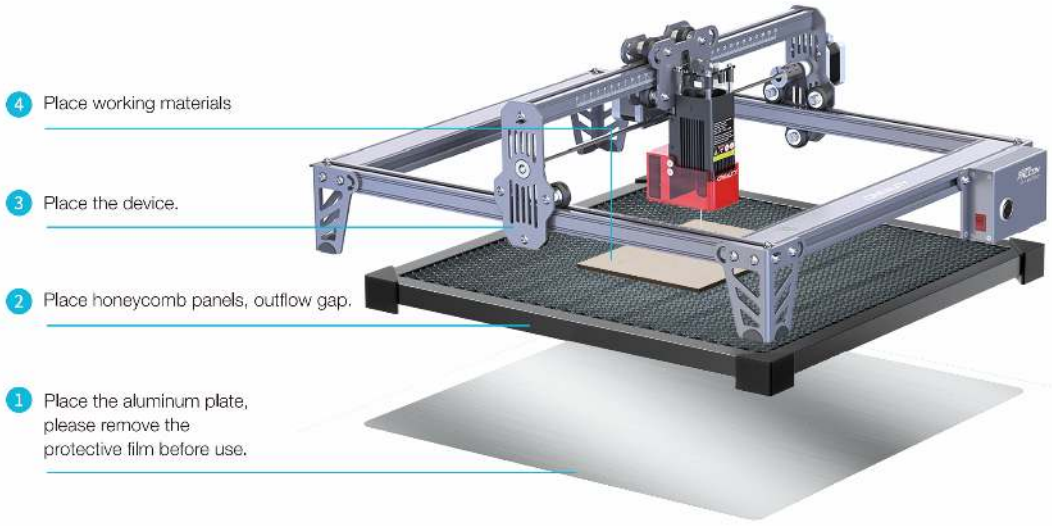

M1.5 / M2 / M2.5 / M3 Allen Wrench


TF Card


Card Reader

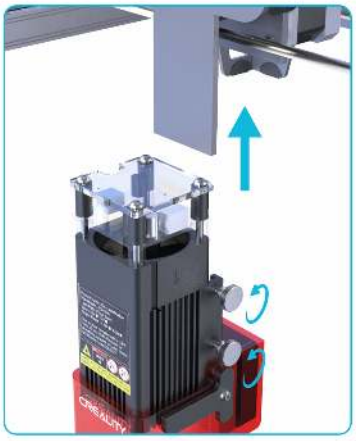

Type-C Data Cable

03 ASSEMBLE



5 Install the laser module

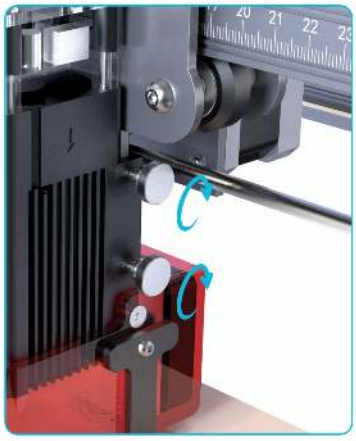
5.1. Loosen the screws on the laser module counterclockwise until it can be inserted from the fixing plate on the device.



5.2. Lift the device slightly and rotate the focus bar of the laser module to be perpendicular to the engraving & cutting material to determine the focal length.



5.3. Tighten the screws on the laser module clockwise to complete the installation and focus of the laser module.



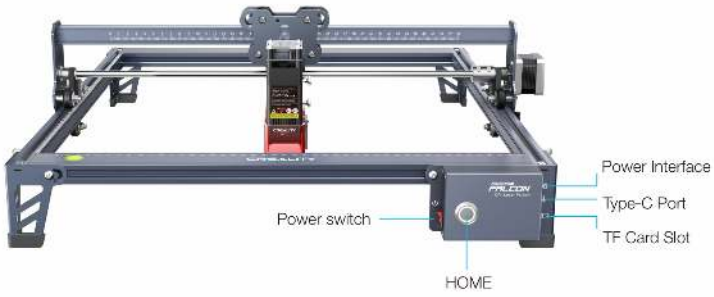
Note:
For better engraving effect, try to elevate the laser module as far away from the workbench as possible on the premise that the focal length is correct;
The laser module must be installed and removed only when the power is off.



04 SPECIFICATIONS

Product	CR-Laser Falcon 5W	Operating Temperature	5°C-35°C	Input Voltage	100-240V~ 50-60Hz
Optical Power	5W	Engraving Area	400mm*415mm	Output Voltage	DC 24.0V 3.0A
Product Size	568*632*198mm	Laser Source	Diode Laser	Operating System	Windows /MacOS
Equipment Weight	7.08KG	Laser Wavelength	455±5nm	Supported File Formats	Jpeg, jpg, png, bmp, svg, dxf, etc.
Supported Materials	Cardboard, wood, bamboo, rubber, leather, fabric, acrylic, plastic, etc	Laser Class	Class 4 (FDA)	Gross Weight	11.1KG
Certifications	IEC60825, FDA, CE, ROHS, FCC, UKCA, UL Report, PSE	Laser Engraving Software	LightBurn, LaserGRBL	Package Size	68.5*61.5*25.5CM

05 PRODUCT STRUCTURE



Power switch	Safety switches - daily work switch.
HOME	After placing the material and adjusting the focus, press once to HOME, and press the second time to start.
Type-C Port	Connect computers and devices.
TF Card Slot	Insert a TF card with "G-code" to work offline for engraving or cutting works.
Power Interface	Connect to the power supply for power supply.

⚠ Warning Light

1.Light off: The machine is in a power-off state, or the power is abnormal.
2.Breathing light: The machine is in standby mode, you can press "HOME" to enter preview mode or engraving mode. (Present a light effect with a gradual change of light and shade.)
3.Light flashes: the machine is in upgrade mode or abnormal mode, and the buzzer beeps rapidly, and it will automatically enter standby mode after the upgrade is completed or the abnormality is cleared.
4.Light always on: the machine is in preview mode or engraving mode. The laser head is working, please pay attention to safety.

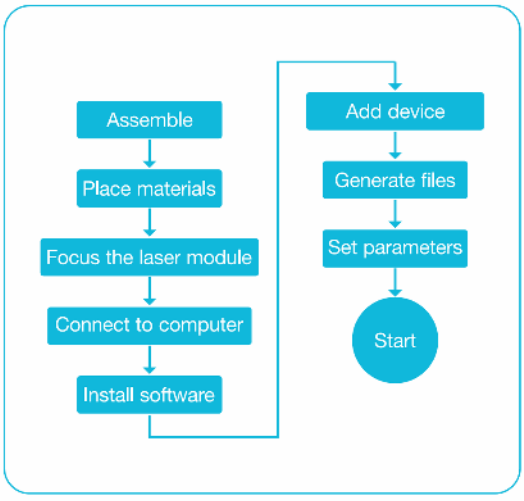
06 LASER MODULE



Power: Indicates powered on.

Laser: Shows that the laser emits a normal beam.

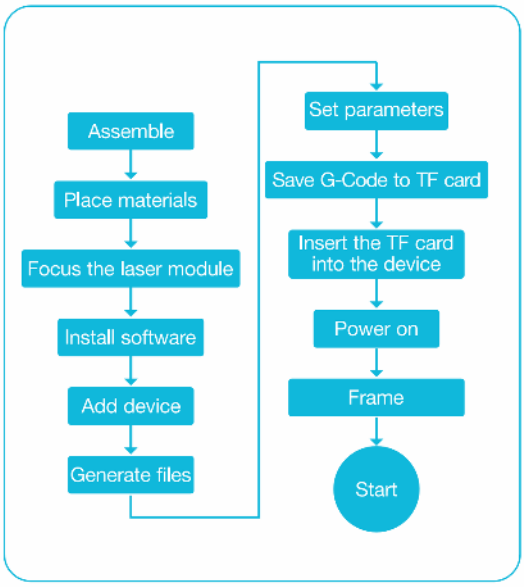
07 OPERATION



A. Control from PC

Connect the device to a PC via a USB-C cable.

Note: For real-time working by Type-C, please refer to the tutorial in the TF card. During online working, do not insert the TF card and do not press "HOME" on the control box.



B. Work with TF Card

Generate engraving or cutting files (g-code) through LightBurn and save the files to the first-level directory of the TF card. Before powering on, insert the TF card into the card slot of the device, and then confirm that the triple switch is turned on. After the power is turned on, the device will beep twice. After initialization, the device will enter standby mode and the indicator light will turn on.

1)Press "HOME" and the device will enter the preview mode from the standby mode. The laser module will emit a weak beam and move along the X/Y axis to frame the target working area. The indicator light is on. You can adjust the material to a suitable position.
2) In the preview mode, press "HOME"to enter the engraving mode, the laser module will emit a strong beam, and start working. The indicator will be lighting.
Press "HOME" to pause the device, and the indicator light will be gradient Light.
Press "HOME" again to continue working.
Press "HOME" and hold for 3 seconds to call of the device operation. The device will beep once and reset. After reset, the device will beep twice and enter standby mode. The indicator will be gradient Light.
3) After the working is completed, the device will emit three long beep and then reset. After reset the device will beep once and enter standby mode, and the indicator will be gradient Light.

Note: By default, the device reads the latest engraving files in the first-level directory of the TF card. It is recommended to delete other engraving files in the first-level directory.

08 Maintenance

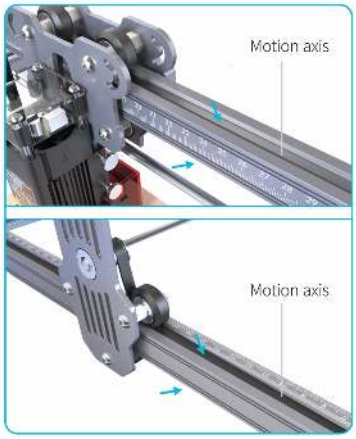
1. Laser module lens maintenance
Please wipe the laser module lens with a dust-free cloth and alcohol before starting the machine each time.

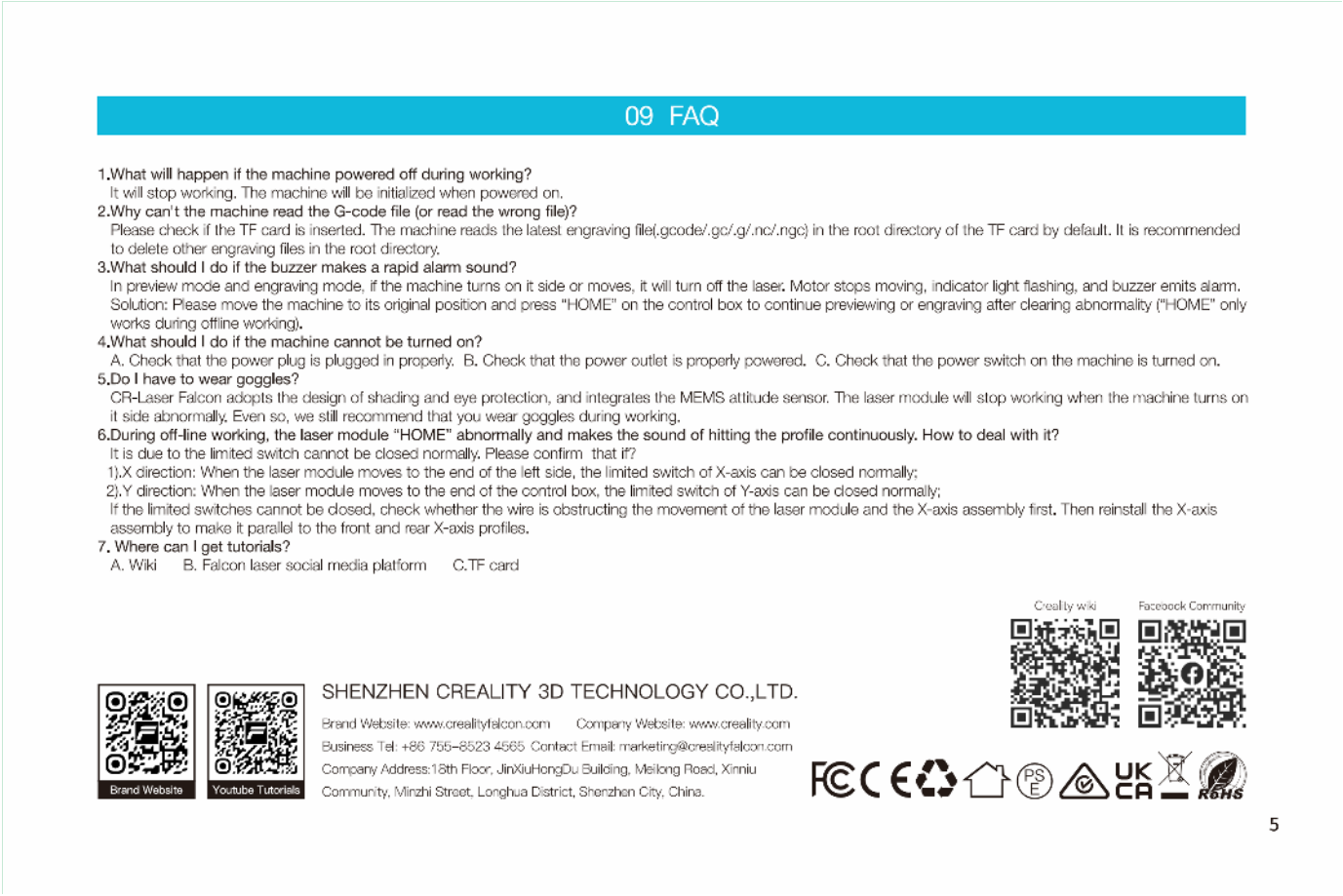


2. Regular belt inspection
It is recommended to check the belt tightness every three months.



3. Motion axis maintenance
Regularly check the cleanliness of the motion axis.





09 FAQ

1.What will happen if the machine powered off during working?
It will stop working. The machine will be initialized when powered on.
2.Why can't the machine read the G-code file (or read the wrong file)?
Please check if the TF card is inserted. The machine reads the latest engraving file(.gcode/.gc/.g/.nc/.ngc) in the root directory of the TF card by default. It is recommended to delete other engraving files in the root directory.
3.What should I do if the buzzer makes a rapid alarm sound?
In preview mode and engraving mode, if the machine turns on it side or moves, it will turn off the laser. Motor stops moving, indicator light flashing, and buzzer emits alarm. Solution: Please move the machine to its original position and press "HOME" on the control box to continue previewing or engraving after clearing abnormality ("HOME" only works during offline working).
4.What should I do if the machine cannot be turned on?
A. Check that the power plug is plugged in properly. B. Check that the power outlet is properly powered. C. Check that the power switch on the machine is turned on.
5.Do I have to wear goggles?
CR-Laser Falcon adopts the design of shading and eye protection, and integrates the MEMS attitude sensor. The laser module will stop working when the machine turns on it side abnormally. Even so, we still recommend that you wear goggles during working.
6.During off-line working, the laser module "HOME" abnormally and makes the sound of hitting the profile continuously. How to deal with it?
It is due to the limited switch cannot be closed normally. Please confirm that if?
1).X direction: When the laser module moves to the end of the left side, the limited switch of X-axis can be closed normally;
2).Y direction: When the laser module moves to the end of the control box, the limited switch of Y-axis can be closed normally;
If the limited switches cannot be closed, check whether the wire is obstructing the movement of the laser module and the X-axis assembly first. Then reinstall the X-axis assembly to make it parallel to the front and rear X-axis profiles.
7. Where can I get tutorials?
A. Wiki B. Falcon laser social media platform C.TF card

Creality wiki
Facebook Community
Brand Website
Youtube Tutorials

SHENZHEN CREALITY 3D TECHNOLOGY CO.,LTD.
Brand Website: www.crealityfalcon.com Company Website: www.creality.com
Business Tel: +86 755-8523 4565 Contact Email: marketing@crealityfalcon.com
Company Address:18th Floor, JinXiuHongDu Building, Meilong Road, Xinniu Community, Minzhi Street, Longhua District, Shenzhen City, China.

5

Firmware Upgrade

Download the latest firmware from https://www.creaity.com/pages/download-cr-laser-falcon-laser-engraver, save the ".bin" file in the root directory of the TF card, and delete other files in TF card. Insert the TF card into the machine when powered off, and it will updade automatically when powered on. The buzzer will sound in the update process. When the update is completed, the sound will stop (do not power off in the update process).

Parameters

Product Name	CR-Laser Falcon Laser Cutter and Engraver		
Optical Power	5W	7.5W	10W
Product Size	568*632*198mm	568*632*198mm	568*632*198mm
Weight	3.2kg	3.2kg	3.2kg
Input Voltage	100-240V~50-60Hz		
Output Voltage	DC 24.0V 3.0A		
Working Temperature	5℃-35℃		
Safety Certifications	IEC60825、FDA、CE、ROHS、FCC、UKCA、UL Report、PSE		
Engraving Area	400mm*415mm		
Laser Source	Diode Laser		
Laser Wavelength	455±5nm		
Laser Class	Class IV (FDA)		

Laser Engraving Software	LightBurn、LaserGRBL
Operating System	Windows/MacOS
Supported File Formats	Jpeg, jpg, png, bmp, svg, dxf, etc.
Supported Materials	Cardboard, wood, bamboo, rubber, leather, fabric, acrylic, plastic, etc.

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